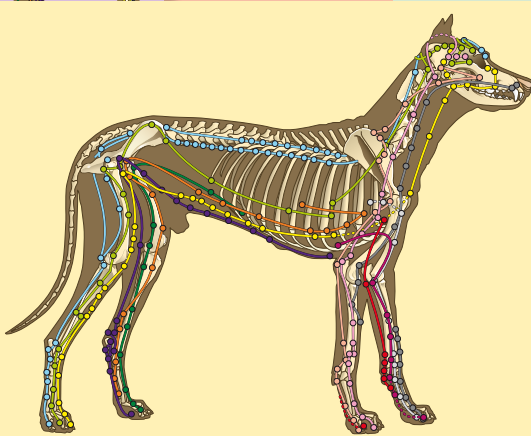
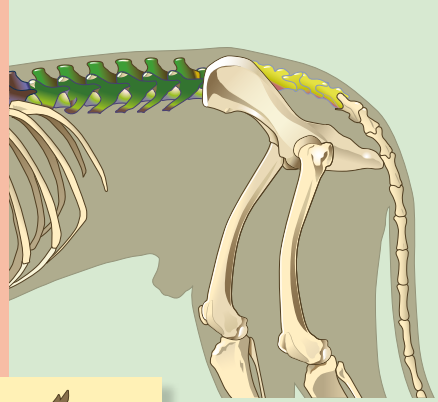
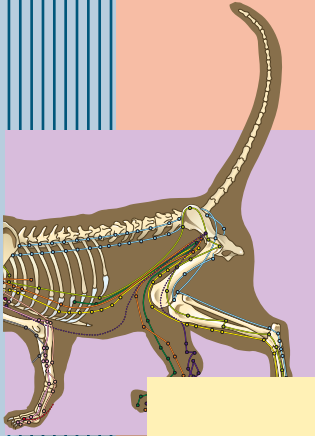


LASER THERAPY AND LASER PUNCTURE IN DOGS AND CATS

TREATMENT PLANS



ANJA FÜCHTENBUSCH
PETER ROSIN

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Important note for the therapist:

The treatment plans presented in this book are suggestions.

They are based on studies and experience reports by veterinarians over a period of 40 years, as well as the many years of practice of Peter Rosin. Nevertheless, no liability can be assumed and it cannot be guaranteed that the treatment suggestions will always provide the required results. Knowledge of laser therapy is subject to constant change through research and clinical experience, and the fundamental non-responder rate in laser treatments is around 15%. No guarantee is given for any possible misinformation due to, for example, printing errors. The therapist is not exempted from his/her responsibility for the treatment measures performed on the animal.

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Dear Laser Therapists,

Our books on lasers in veterinary medicine have been available for over ten years and are still in great demand. We have been especially pleased about the many positive responses we have received over the past few years. Our warmest thanks go to all therapists who have worked on the basis of our instructions!

Animals have no lobby. The exchange of experiences among therapists and any kind of feedback regarding recommended treatments – including, especially, critical ones – from users are all the more important.

Laser therapy and laser acupuncture in animals have gained a solid and important place on the roster of treatments of a great many veterinarians and veterinary practitioners.

For the first time we have now made important changes in this book. We have revised the recommended dosages for veterinary medicine – specifically for the treatment of horses – upward. The increase in the recommended dosages in veterinary medicine does not mean that weaker doses – which were adopted from human medicine – are not effective. Rather, it tries to account for the fact that in veterinary medicine, the range of applied doses is much larger, and that frequently the doses are twice or three times as high as in the treatment of human beings. While our previous recommended doses may be regarded as median values, we have now tried to determine average values for the recommended dosages. Especially when it comes to animals, this means that the recommendation may differ greatly from the dose that is appropriate in a specific instance. After all, the proper dosage should always be determined according to the particulars of the individual case. Yet with experience, this assessment – for which the therapist bears the responsibility – will be made with ever greater confidence.

In addition, we have also included recommendations for supertherapy with frequencies in the treatment plans for the first time. The so-called laser field therapy was developed by the VET team of COLLL (*College scientific laser medicine*) under the direction of Anja Füchtenbusch, Dr. Volkmar Kreisel and Peter Rosin and tested over the years.

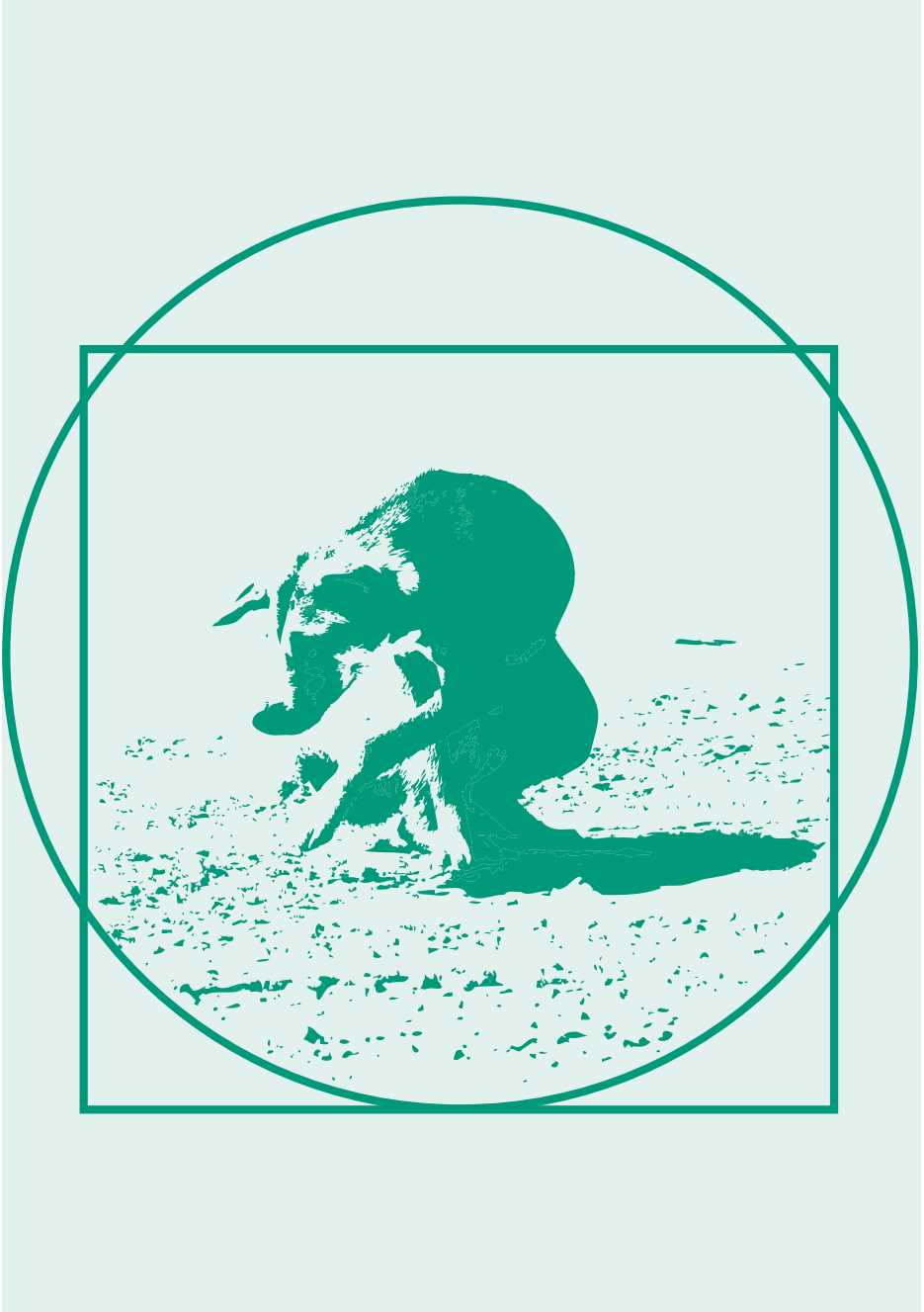
Our frequency spectrum also contains frequencies according to Prof. Frank Bahr. We would like to thank him and the Elsevier-Verlag for printing numerous Bahr frequencies.

Supertherapy with resonance frequencies can trigger the therapeutic successes again. However, it should only be used by therapists who already have sufficient experience with the classical application. This is the only way to distinguish which effects classical laser therapy already has and which results can be traced back to the additional targeted use of resonance frequencies.

We look forward to any feedback and wish you great success in your treatments!

Peter Rosin

Anja Füchtenbusch



Principles

Low level laser therapy

What is a low level laser?

The term Laser is an abbreviation for “Light Amplification by Stimulated Emission of Radiation”. Low level lasers are low energy lasers, which in contrast to the more familiar medical power lasers are not used for surgical purposes, but exclusively to stimulate the body’s own natural physiological processes. For this reason they are also called biostimulation lasers, soft lasers or healing lasers. Treatment with low level lasers could be defined as a type of intensive light therapy using directed light of a defined wavelength and various frequencies to bring about positive physiological changes in the cells and to support the body in healing itself.

In the treatment of small animals low level lasers are used for wound healing, tissue regeneration, inhibiting inflammation and soothing pain.

Little known, however, is their use in scars and the disturbance fields emanating from them. Eliminating disturbances from scars and harmonizing disturbance fields are important prerequisites for the success of stimulation therapies and acupuncture applications.

How does laser therapy work?

Laser light of a defined wavelength stimulates physiological processes at cell level. The stimulation of biological processes by light (photobiostimulation) has been familiar for thousands of years, and modern therapy lasers bundle only those portions of natural light that are most effective for healing. Today, claims relating to the effectiveness of laser therapy are based on broad scientific foundations and for quite some time have no longer belonged to the realms of medical fairy tales. They predominantly concern applications in human medicine where laser therapy has become widely established due to its endorsement in practice. Even though the explanatory models of the functional mode of action of laser therapy are still far from complete, we do know its most important action mechanisms. Repeatedly demonstrated is the increase in ATP synthesis and thereby the energy available to the cell on which all metabolic processes depend. The most important regulation mechanisms that are activated and promoted through this, and examples of diseases in which these mechanisms play a key role in the course of healing are set out in the table on the next page.

Where is laser therapy used?

Laser therapy is primarily used in human medicine – in traumatology and surgery (post-operative wound care), in orthopedics and sports medicine, in neurology, internal medicine, dermatology, ear, nose and throat medicine and in dental medicine. Its use in veterinary medicine is increasing significantly.

Local therapy and systemic therapy

The simplest use of the laser is the localized treatment of diseased body areas. However, point-directed low-energy lasers can also be used instead of acupuncture needles and other methods of point treatment. For instance, “laser puncture” activates biochemical, functional and neurological processes similar to those activated by needle acupuncture. In nearly all cases a combination

Physiological action mechanisms of low level laser therapy

Effect	Action mechanism	Examples
Inhibition of inflammation	<ul style="list-style-type: none"> Improves phagocytosis Inhibits mast cell degranulation Activates the immune cells through increased leukocyte mobilization Improves the microcirculation through vasodilation Reduces inflammatory swellings and stimulates lymphatic flow Reduces the synthesis of pro-inflammatory prostaglandins 	<ul style="list-style-type: none"> Folliculitis, abscesses, boils, carbuncles Viral dermatoses (warts, herpes simplex, zoster and genitalis) Tendonopathy, insertion desmopathy, achillodynia Tonsillitis, otitis, rhinitis
Analgesia, hypalgesia, pain inhibition	<ul style="list-style-type: none"> Promotes release of beta-endorphins Increases ATP production and thereby the cellular energy balance Increases the measurable nerve cell membrane potential Relaxes the musculature and increases the nerve sensitivity threshold to pain on pressure Reduces pain mediators (e. g. substance P) Reduces the activity of the trigger points and tender points Activates the acupuncture points 	<ul style="list-style-type: none"> Peripheral polyneuropathy Carpal and tarsal tunnel syndrome Posttraumatic and post-operative pain Needle substitute (pain-free alternative to acupuncture) Cervical and lumbar syndromes Facial neuralgia Facial paralysis
Tissue regeneration	<ul style="list-style-type: none"> Increases the rate of mitosis and collagen synthesis, activates the fibroblasts, chondrocytes, osteocytes etc. Increases the production of ATP Intensifies granulation and epithelialisation Promotes peripheral nerve regeneration following injury Reduces degenerative CNS processes Helps brain cells to survive after transient ischaemia Eliminates disturbances from and reduces scar tissue 	<ul style="list-style-type: none"> Improved posttraumatic and postoperative wound healing Burns Muscle fiber and ligament ruptures, cartilage lesions Chondropathy, atrophosis Fractures, osteosynthesis disorders
Improved circulation	<ul style="list-style-type: none"> Supports lymph drainage and thereby tissue drainage Increases the microcirculation and promotes revascularization Accelerates resorption of hematomas Reduces the release of vasoactive amines Stimulates the synthesis of hyaluronan 	<ul style="list-style-type: none"> Postthrombotic and postoperative lymph edema Chronic lymph edema Posttraumatic swelling

Principles

of local and systemic/regulative therapies, such as acupuncture, trigger, pain and reflex point treatment is worthwhile as the treatment effects can intensify and stabilize each other.

Your laser therapy system

In view of the fact that there are considerable differences between approved low-energy laser systems it is important to be familiar with your laser system as its biophysical characteristics are not only of relevance to therapeutic efficacy, but also for determining the treatment times and technique.

Biophysical characteristics

The most important characteristics of a laser system are its effective performance, the laser technology used, the area cross-section and the divergence of the emerging laser beam.

- **Effective performance**

Treatment times depend on the effective performance of your laser system, but manufacturers' instructions are often ambiguous on this point. For example, the performance indicated on the laser system itself or in the accompanying documents often refers to the maximum possible performance, the rated output of the laser diode, or, in the case of pulsed lasers, the peak pulse output. In many instances the effective performance is lower. For this reason the treatment instructions indicate the dose to be applied (= energy density = Joule/cm²) rather than the treatment duration. Dosage details in the literature always refer to the effective output. However, by using the *Equations for calculating the treatment times* set out in the next chapter or in the tables in the chapter *Therapy time, frequency and scope* you can easily find the right treatment time.

- **Laser technology**

Today, continuously emitting lasers (cw = *continuous wave*) and pulsed lasers are available. Until around 20 years ago helium-neon lasers and lasers with pulse laser diodes were mainly used in low-energy laser therapy, but these types of laser are now only rarely found on the market. *Continuous wave* laser diodes are relatively new and are currently used in nearly every low-energy laser therapy system. These laser diodes are available in various wavelengths and with a wide range of performance levels.

As *continuous wave* lasers can also be operated as pulsed and/or frequency-modulated lasers, the effective output should always be ascertained.

- **Laser performance**

The equation "powerful laser = short treatment time" is questionable

In recent years high-performance laser diodes have increasingly been used in laser therapy. The main reason for this is that it is technically possible to do so, rather there being any medical necessity for it, whereby the calculated reduction in treatment times is an attractive incentive. However, as one of the most effective stimulation methods, laser therapy must be based on physiological laws and cannot simply comply with technical logic, i. e. higher intensity = shorter treatment times. Cells require a minimum reaction time in order to absorb and integrate stimuli,

and it is on these grounds that experienced therapists do not conduct treatments of less than 10 seconds with very powerful lasers in point stimulation and surface therapy.

Strong lasers are not automatically more effective

In principle, multiple small, physiological stimuli applied in cycles are most beneficial, and stimuli outside this therapeutically effective stimulation window achieve nothing at best. In fact they can inhibit physiological processes and even destroy tissue. As the performance of the laser increases so does the risk of tissue heating up, and although in some cases this may not be a problem, or may even be helpful, in many situations heating is contraindicated (for instance in inflammations). Hence, when using a very powerful laser the therapist should carefully weigh up a theoretical time saving against these considerations.

Hair "absorbs" performance

When treating animals, high intensity losses are incurred as result of reflection due to their dense coat (as well as perspiration and dirt). For this reason a veterinary therapist cannot avoid longer treatment times. Laser combs, in which the laser light is directed onto the skin through special light guides reduce these losses in performance and are therefore more effective than area lasers in the treatment of animals.

• **Pulse frequencies**

Various therapeutic methods employ modulated lasers in which the laser pulses are emitted at special frequencies, in other words at predefined time intervals. In accordance with this theory, special frequencies have a separate and independent therapeutic effect as they are in resonance with individual biological structures (tissue types, organs etc.) and can therefore directly influence them. Modulated lasers are special lasers for precisely defined areas of application and treatment methods (e. g. Nogier and Bahr frequencies, multifrequency spectrum etc.).

• **Area cross-section and divergence of the emitted laser beam**

The radiation in low level laser therapy can be directed in point form/collimated (bundled) or diverge. Scanners usually use collimated radiation while hand-held lasers (point and area lasers) operate with divergent radiation. With divergent radiation the performance quickly drops and the scatter rate is high. A collimated laser on the other hand sends a beam to one point with hardly any loss of performance, even over great distances. Divergent lasers are safer (☞ *Safety precautions*) and through the scattering of the radiation in the tissue larger areas are covered. In order to guarantee the therapeutic energy density they are applied through contact with the skin.

Determining treatment times

As laser therapy systems come with different performance levels, the specialist literature often only states the dose to be applied when giving treatment recommendations. The following equation can be used to calculate the correct treatment time for your laser system.

Principles

Equation for calculating treatment times

Laser performance

$$\text{Power (Watt)} = \frac{\text{Energy (Joule)}}{\text{Time (sec)}}$$

$$\begin{aligned} 1 \text{ W} &= 1 \text{ J}/1 \text{ sec} \\ 1 \text{ J} &= 1 \text{ W} \times 1 \text{ sec} \\ 1 \text{ mJ} &= 1 \text{ mW} \times 1 \text{ sec} \end{aligned}$$

Pulsed laser:

$$\text{Effective performance} = \text{Peak power} \times \text{pulse duration} \times \text{frequency}$$

$$\begin{aligned} \text{mW} &= \text{Milliwatt} \\ \text{sec} &= \text{Seconds} \\ \text{ED} &= \text{Energy density} \\ \text{J} &= \text{Joule} \\ \text{W} &= \text{Watt} \end{aligned}$$

Energy density ED/Dose

$$\text{ED} = \frac{\text{Power (Watt)} \times \text{Time (sec)}}{\text{Area of treatment (cm}^2\text{)}} = \text{Joule/cm}^2$$

Time of irradiation

$$\text{Time (sec)} = \frac{\text{ED (J/cm}^2\text{)} \times \text{Area (cm}^2\text{)}}{\text{Effective performance (W)}}$$

An overview in table form of the most common doses and corresponding treatment times depending on the effective system performance is given at the end of this chapter.

Biophysical efficacy

In a good laser therapy system the biophysical characteristics are aimed at the greatest possible efficacy in achieving therapeutic results:

- Effective transmission depth and effective biological photobiostimulation in the tissue through infrared radiation at a wavelength of 780-800 nm
- High level of photo absorption and low scatter in the tissue (non-collimated diode laser, infrared spectrum).
- Precise indication of the effective system performance on the rating plates.
- Radiation technology: continuously emitting (precise radiation dose) or frequency-modulated (complex radiation dose).
- Multi-frequency spectrum: a multi-frequency spectrum is suitable for all treatment methods as it does not work with set frequencies but selects therapeutically effective frequencies (frequency band) by way of a random generator.

Laser systems for veterinary medicine

Two types of laser applicator are generally sufficient for the treatment of animals: a laser comb/area laser, and a point laser.

Laser comb/area laser

The laser comb is a variant of an area laser for treating animals in which reflection losses due to a thick coat are avoided in area irradiation. Appropriately named, a comb laser has light conductors in the comb brushes so that laser light is emitted through the comb tips.

Point laser

A point laser is used to treat small areas as well as trigger and acupuncture points etc.

Special applicators

The treatment of internal organs, teeth or oral mucus membrane is bested carried out using special attachments (autoclavable or replaceable light conductors).



Fig. Area therapy with a mobile laser comb
(e. g.: VETBEAM PowerPlus, MKW)

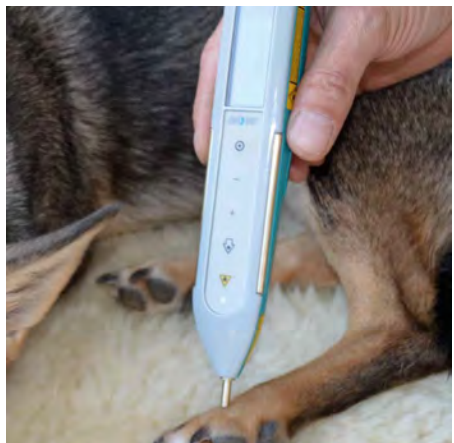


Fig. Point therapy with a cordless point applicator
(e. g.: LA-X, MKW)

Principles

Treatment tips

For effective laser therapy without complications, please observe the following treatment tips.

Preparation

Informing the owner

Explain to the owner how laser therapy works and emphasize its safety, particularly the lack of side effects.

Cleaning the skin

Clean the skin prior to treatment in order to prevent radiation reflection (15-20% if the skin has not been cleaned). To increase the effect, clean the skin with alcohol or a similar product and remove necrotic tissue and pus-containing materials.

Avoiding artificial disturbance fields

The treatment atmosphere should be relaxed. Avoid artificial disturbance fields which could reduce the therapeutic energy density in the radiation field. Keep background noise levels low and allow the animal to be held/kept in position by a person it knows.

To stabilize the effect of therapy it is recommended to observe a short period of relaxation after the treatment and to offer the animal some water.

General treatment tips

Please observe the following general tips relating to the treatment techniques:

- **Perpendicular beam**

The laser beam must be applied perpendicularly to the skin surface. An inclined angle of incidence can increase reflection and refraction of the beam by around 40-50 % and reduce transmission at the same time.

In the case of a curved skin surface (extremities etc.) ensure that the beam is perpendicular by constantly adjusting the orientation of the laser shower to the surface being irradiated, taking into consideration the fact that at the edges of the area laser the effective energy density in the tissue is slightly reduced, i. e. by around 10-15 %.

- **Optimum transmission depth**

Work in direct contact with the skin. This ensures effective transmission of the laser beams into the tissue.

- In the case of *aphthae*, *moist dermatosis*, *ulcers* and *wounds* the laser exit point can be covered with a thin, transparent film.
- Mucous membranes can be irradiated directly if there are no wound surfaces. Use moderate pressure in order to maintain optimum transmission.
- Remove *intermediate layers* (cream, gel, lotion etc.) before treatment
- When irradiating deep tissue (muscles, bone etc.) apply gentle to strong pressure with the

laser applicator. This narrows the subcutaneous layer and the blood content of the vessels is reduced. Fatty tissue and hemoglobin absorb and reduce the energy density of laser beams.

- Slightly moisturize *very dry skin* before treatment in order to improve transmission.
- When *treating joints* bony structures in front of them (kneecap etc.) can absorb the laser radiation. To guarantee the required energy density in the joint please observe the treatment guidelines for this special case (☞ *Area therapy – irradiation of joints*).

• Treatment in stages in the event of severe local irritation and disturbance fields

In acute cases local point treatment sometimes brings about too severe a stimulation reaction. Particularly in chronic nerve root irritation it can painfully activate trigger points and myofascial reaction zones. Move to general influence points or acupuncture points that are farther away and only apply laser puncture in the form of general pain treatment or observe a treatment pause.

In the event of severe nerve root irritation treat the distal acupuncture points first and thereafter the directly affected area.

Disturbance fields in the skin region, in particular scars, occasionally affect an adjoining treatment area or react painfully to its treatment. For this reason you should pretreat the disturbance field, if known, with area radiation and/or neutralize it using laser puncture (☞ *Treatment plan Scar elimination*).

In laser therapy, with points located within a disturbance field you should also weigh up whether it is better to move to distal acupuncture points and alternative points as stimulation of these points could initially activate the disturbance field.

• Improvement of lymphatic flow

In venous or lymphatic circulatory disorders (lymphatic edema, venous insufficiency, venous leg ulcers, abnormal wound healing etc.) lymphatic flow should be activated before local treatment. Stimulating lymphatic flow is an important action mechanism in laser therapy. It can be used specifically for this purpose through area irradiation of the lymphatic regions and the vessels that control it.

Stimulation of the lymphatic vessels supplying the area being treated is generally sufficient.

	25 mW	50 mW	100 mW
Neck and throat region	3:20 min	1:40 min	0:50 min
Armpit	3:20 min	1:40 min	0:50 min
Back of knee	3:20 min	1:40 min	0:50 min
Inside of lower/upper front leg	4:40 min	2:20 min	1:10 min
Inside of lower/upper hind leg	4:40 min	2:20 min	1:10 min

Principles

Point treatment

In addition to the technique of point treatment, the selection of special points is vital for effective laser therapy. As well as directly treating the problem area using the point applicator or the laser shower, you should also treat the existing pain points, trigger points and/or acupuncture points.

- **Local pain points/tender points**

Local pain points can be located by palpation. They are to be found in the cutaneous and subcutaneous skin layers, on the joint clefts and in the transition zones between the tendons and muscles as well as in the insertion zones of tendons and muscles.

Tender points are usually caused by acute or chronic trauma, tendopathies or arthropathies. Increased tissue pressure, microcirculatory disorders, degenerative or inflammatory processes as well as tissue necrosis or hypersensitivity of special nerve receptors can be seen. Characteristic signs are spontaneous or reactive local pain, tissue edema, signs of inflammation and possibly restricted joint function.

Laser therapy

- Point irradiation with 6 Joule
- corresponds to 1:00 min with a 100 mW point laser

The irradiation of the tender points is often an important prerequisite for area irradiation as it eliminates reflective tension in the region being treated. The radiation dose is between 4 and 10 J/cm². Chronic or deeper points receive a higher dose and superficial points a lower dose.

- **Trigger points**

ES Addendum chart Diagnostic points – Trigger points

Trigger points are point areas which show a sympathetic pain reaction if the reference organ is diseased. The pain can radiate out into defined reference zones.

The pain zones are not necessarily located in the triggering muscles and therefore do not always exhibit a direct segmental reference.

Most trigger points lie in the fascial and ligamentary areas of the skeletal musculature, with isolated points in the joint capsule and in the vicinity of scars.

Acute trigger points are painful on palpation or cause an intensification of pain.

Latent trigger points are sensitive to palpation, but only cause pain after stronger stimulation. They may not show symptoms for a long time and may only be detected incidentally.

Trigger points can form as a result of acute trauma, chronic microtraumas, neurological influences, general muscle weakness, poor nutrition, postoperative conditions and hormonal influences etc. They are an expression of numerous local or central imbalances.

Many trigger points can be assigned to acupuncture points. However, their location changes frequently and many muscles develop additional trigger points.

- Laser therapy**
- Point irradiation with 4 Joule
 - corresponds to 40 seconds with a 100 mW point laser

Trigger points can be located through palpation, measuring the tolerance threshold of pain on pressures (pressure gauge), measuring skin resistance (☞ *Principles – Point location with the point finder*) or by checking the pulse (☞ *Practice of small animal acupuncture – Pulse check*).

The radiation density is 2 – 6 J/cm².

Laser therapy can be combined with other methods of trigger point treatment, e. g. with local anesthetic infiltration, micromassage, moxibustion etc.

• Acupuncture points/laser puncture (LP)

☞ *Addendum Meridian charts*

In laser puncture the acupuncture needle used in traditional acupuncture is replaced with the stimulatory power of a laser beam. It is a patient-friendly and pain-free alternative, and exhibits special characteristics and advantages compared with classic needle acupuncture.

Advantages

- The simple and painless treatment technique makes laser puncture patient-friendly.
- Laser puncture is free of complications (collapsed needle, vasovagal syncope, infections, hematomas etc.).
- The rate of side effects is lower with laser puncture (approx. 0.01 %).
- Compared with needle acupuncture, laser puncture causes no microwounds which can sometimes cause problems.
- Sensitive or traumatized areas of the body can be treated without difficulty with laser puncture: acupuncture points on the head, ear points, areas affected by skin disorders (eczema, inflammation, injuries etc.).
- Laser puncture can be used in cases where needle acupuncture is contraindicated (e. g. if there is a risk of infection, in autoimmune diseases, anticoagulation treatment, negative reactions to needle stimulation etc.).

Special characteristics

- Laser puncture effectively reaches approx. 90% of the points. Around 10% of the points are deeper down in the tissue (> 3 cm) and are not sufficiently stimulated by the energy density of the laser beams in these tissue layers.
- The needle feeling (“De-Chi feeling”) which is an expression of depolarization due to injury is not so distinct in laser puncture. Some human patients report a slight tingling sensation radiating along the meridian.
- Laser puncture is rated as a “neutral needle treatment”. However, the various needle techniques for tonification and sedation can be simulated with different irradiation times and energy densities:

Principles

- Tonification: short irradiation time (< 30 sec), high energy density
= forced action potential
- Sedation: longer irradiation time (> 3 min), low energy density
= state of hyperpolarization

Only very few acupuncture points lie deeper than 3 cm in the tissue. In spite of scattering, the stimulation energy of the laser beams is usually still sufficient even with only approximate point localization. However, it is best to attempt to locate the points precisely in order to ensure an adequate energy density at the point.

Location methods

1. Description of the topographic position

☞ Therapy plans – *Point location* and *addendum – Point location*

2. Use of the proportional measurement/Cun in accordance with TCM

In the location method used in traditional Chinese needle acupuncture, in human medicine a standardized, subjective unit of measurement – the Cun – is used for describing distances between the points. One Cun is equivalent to the width of the patient's thumb at the interphalangeal joint. In small animal acupuncture an attempt to determine a corresponding proportional measurement, i. e. the rib width at a specific location has been abandoned. Given the number of breeds of dog alone, the anatomical proportions would be too imprecise. For this reason the point descriptions here almost exclusively relate to the anatomical structures.

3. Palpation

The acupuncture point is distinguished by altered consistency (indented, possibly slightly raised, and/or changes in tension) and increased sensitivity to pressure.

4. Point finder/measuring the electrical conductivity

Above the acupuncture point the resistance of the skin is reduced compared with the surrounding area, thereby increasing the conductivity of the skin. By measuring the skin resistance a point finder integrated in the point laser detects the acupuncture point and signals it optically and/or acoustically. With this method only its approximate position need be known. Inaccuracies can be caused by extremely moist skin (increased conductivity) or extremely dry skin (reduced conductivity). These factors can be compensated for by cleaning/moisturizing the skin before point location these. For the exact procedure ☞ *Principles – Point location with the point finder*

5. Biogenic pulse monitoring

Another method of checking point locations is bioenergetic pulse monitoring ☞ *Practice of small animal acupuncture – Bioenergetic pulse monitoring*

Via the anatomical description and the use of the proportional measure Cun a beginner can find around 40% of acupuncture points. For other points and for verification of the points we recommend the use of a point finder and bioenergetic pulse monitoring.

Radiation dose 3 Joule • corresponds to 30 seconds with a 100 mW point laser

Under normal conditions, laser puncture with a dose of 3 Joule is the equivalent of moderate needle acupuncture in small animals. Poorly responsive or deeper points (> 3 cm deep) should be stimulated for longer (double the treatment time). For puppies a dose of 1 J/cm² is generally sufficient.

Principles

Area therapy

Area therapy is indicated if the area in question is larger than 1 cm². It is used for traumatized areas, severe muscular tension, arthropathies, dermatoses etc.

- **Laser treatment of larger areas**

Sweep over larger areas with slow and even movements. Keep the laser in contact with the skin and where this is not possible keep it as close to the skin surface as possible.

The irradiation times given for area therapy always relate to the unit of area which is determined by the laser output surface of the laser shower. If the area to be treated is twice the size of this, the treatment time is doubled. In the event of very large areas being affected by skin diseases (eczema, neurodermatitis etc.), irradiation of 25-30 % of the overall surface is sufficient, with different areas being selected in subsequent treatments.

- **Improving lymphatic flow**

In order to improve lymphatic flow, apply constant area treatment to lymph node regions and use downstrokes for the lymph vessels. Please note that lymph stimulation is contraindicated where there is a risk of metastasization.

☞ also *Principles – Treatment techniques – Improvement of lymphatic flow*

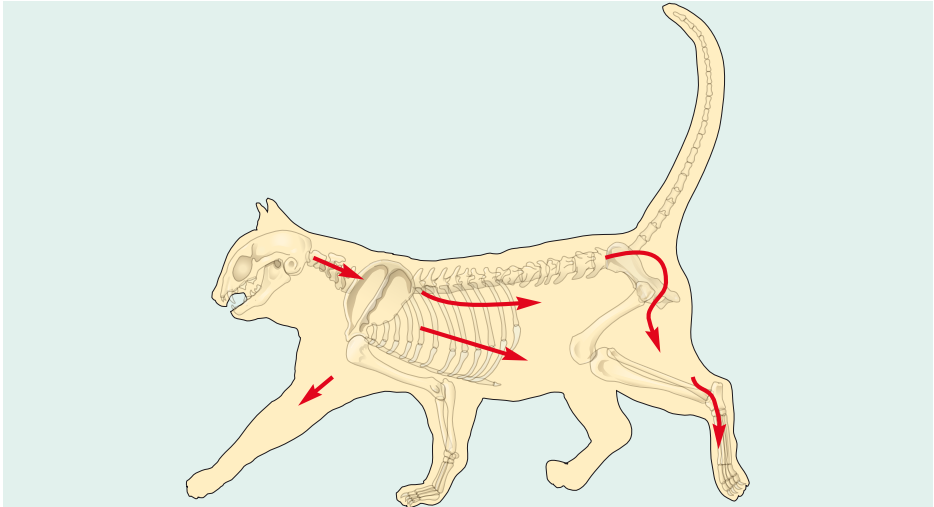
- **Scar treatment**

Scar regions should preferably be treated with the laser shower. Initiate treatment gradually, beginning with a low radiation dose. This slowly stimulates the microcirculation and leads to lasting neutralization. Too high a starting dose can negatively activate the region.

☞ also *Treatment techniques – Treatment in stages in the event of severe local irritation and disturbance fields*

The treatment and “neutralization” of acute or existing scars is extremely important. Very often scars cause disturbance fields and consequent complex problems. A scar can interrupt one or more meridians thereby disrupting their energy and Qi flow. This can inhibit the function performed by the meridian according to TCM. But scars that cause no damage to a meridian can also bring about a multitude of energy blockages, for which reason the prior neutralization of scars is an important precondition for regulative therapies to be able to work.

☞ also *Treatment plans – Wound Introduction and Scars and Disturbance fields*



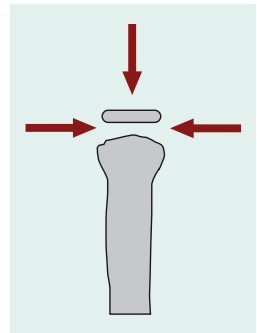
- **Curved treatment surfaces**

To assure the required energy density in the tissue, the irradiation angle must be constantly corrected on the head or on the extremities. The laser shower should be directed perpendicularly to the stroking movement. This keeps the energy loss due to large marginal areas to a minimum.

- **Irradiation of joints**

When treating joints, bone structures in the path of the laser can reduce the energy density. It is therefore best to carry out joint irradiation in several planes (e. g. in the case of the stifle joint via the inner and outer stifle region, the supra- and infrapatellar area and the back of the stifle).

Surgical osteosynthesis materials present no problems for laser therapy. As low-energy laser light is athermic, the bone does not warm up and no bone complications occur. However, the high level of energy reflection can result in overdose. Therefore, when treating structures with osteosynthesis materials it is best to carry out the treatment with only approx. 50 % of the indicated radiation dose.



Protective measures, contraindications, side effects

Protective measures

Correct use, safety measures and contraindications are specific to the system and must be set out in the relevant manufacturer's operating instructions.

📖 Operating instructions: *Therapist protection/occupational safety*

📖 Operating instructions: *Contraindications and patient protection*

Contraindications and precautionary measures

Low level laser therapy is a very low-risk treatment method. But as it is relatively new, its use only becoming widespread in the 1980s, and consequently there are few long-term studies available, the literature constantly advises against its use in special circumstances on grounds of cautiousness. Above all, the following are cited as absolute and relative contraindications:

Absolute contraindications

- Severe photosensitivity, photodermatosis
- Acute episodes of chronic skin diseases
- Skin damage due to UV light (in unpigmented animals)
- Concomitant treatment with cytostatics, immunosuppressants, high-dose corticoids (except ointments) and medicinal products containing arsenic (increased susceptibility to photoallergic reactions)
- Precancerous and malignant growths
- Use on the skull with open fontanelles and on the long tubular bones where the epiphyseal cartilage is not yet ossified (puppies)
- Untreated epilepsy (the treatment of epilepsy in dogs and cats may only be carried in strict consultation with a specialist 📖 *Epilepsy treatment protocol*)
- Decompensated heart failure
- Acute febrile infection
- Pregnancy (treatment up to the 2nd third of pregnancy may be possible)
- Thrombosis and thrombophlebitis
- Irradiation of the eye

Relative contraindications

Relative contraindications represent circumstances in which only certain parts of the body should be excluded from treatment or which would very probably make laser therapy ineffective.

- Cardiac arrhythmias and coronary insufficiency of organic origin (thorax)
- Hyperthyreosis (throat and neck area)
- Extensive inflammation of the subcutaneous tissue (phlegmons)
- Extensive post-traumatic hematoma in the acute phase (laser therapy only after acute treatment with compression dressings and cryotherapy, approx. 6-8 hours later)
- Endocrine organs

Side effects

Most side effects are mild and transient (1-5%). They can be caused by individual hypersensitivity or by an overdose.

Individual hypersensitivity

Sensitive patients may react to the first two treatments with a slight intensification of pain, redness and possibly mild tissue tension. These reactions should be seen as therapy-boosting, are transient (minutes to seconds) and fully reversible. Assumed causes include improved microcirculation and an increase in local metabolism.

In isolated cases vegetative reactions such as tiredness, increased perspiration and panting (dogs) may occur. These reactions are also temporary. They should be seen as a positive side effect as a result of neurovegetative relaxation.

Overdose

- Vascular reactions (transient edema)
- Nervous reactions (transient paraesthesia, tingling skin and temporary intensification of pain)
- Local superficial skin irritation
- Retinal damage


The incorrect use of low-energy lasers can lead to damage to the retina. For this to happen, the laser beam must hit the retina directly or through mirror reflection. In this respect non-collimated lasers (broad scattering of the laser beam) with a safety margin between the laser applicator and the eye are safe. The safety margin must be set out in the system-specific documentation.

Principles

Dosage and therapy times

Dose control

The dose control below lists the most important impact factors that on the one hand suggest lowering the recommended standard doses, and on the other increasing them considerably.

Minimum dose 1 Joule ⊕		Maximum dose 8 Joules in point therapies 40 Joules in extended area therapies ⊕⊕⊕⊕
Point therapies <ul style="list-style-type: none"> • Acupuncture <ul style="list-style-type: none"> • points near the surface • sedation • young animal • ear point • Trigger point <ul style="list-style-type: none"> • superficial muscle area • chronic point • Pain point <ul style="list-style-type: none"> • located near the surface • chronic point 		Point therapies <ul style="list-style-type: none"> • Acupuncture <ul style="list-style-type: none"> • deep-lying points • toning • adult animal • body point • Trigger point <ul style="list-style-type: none"> • deep muscle area • acute point • Pain point <ul style="list-style-type: none"> • located deep • chronic point
Extended area therapies <ul style="list-style-type: none"> • Vertical radiation • Superficial target area • With inflammation 		Extended area therapies <ul style="list-style-type: none"> • Irradiation of curved areas • Deep target area • Not inflamed
Constitution <ul style="list-style-type: none"> • Juvenile animal • Delicate animal • Multimorbid, fragile animal 		Constitution <ul style="list-style-type: none"> • Adult animal • Massive animal • Strong, healthy animal
Type of fur and skin Little absorption and reflection: <ul style="list-style-type: none"> • fur-free areas • short fur • fine, healthy fur • light fur • well-groomed fur • thin skin 		Type of fur and skin Much absorption and reflection: <ul style="list-style-type: none"> • very hairy areas • long fur • ragged, dry, dull fur • dark fur • dirty fur • moist fur • thick epidermis
Stage of the disease <ul style="list-style-type: none"> • Chronic conditions 		Stage of the disease <ul style="list-style-type: none"> • Acute conditions
Initial treatment		Follow-up treatment

The issue of the proper dosage keeps being the source of great confusion in the field of laser therapy. Especially in veterinary medicine, the range of doses that are applied is quite large. In human medicine, considerably lower doses are applied, and all clinical studies on laser therapy in human medicine were conducted with relatively low doses.

The reason for the wide range of doses in veterinary medicine is that here there are much greater differences among the factors that impact the effectiveness of a dose. When treating animals, the

recommended standard doses often must be doubled, and sometimes even tripled or, conversely, halved in specific cases. Regardless of this, two basic rules apply in veterinary laser therapy:

- **Individual dosage**

Indicated doses are recommended guideline values. They must always be adjusted to the specific case.

- **Minimal response dose and time**

Even though the doses may vary greatly from case to case, triggering photobiological effects requires a minimum dose and a minimum treatment time. The **minimum therapy dose** is not under **2 Joules** for horses and not under **1 Joule** for dogs and cats. In our experience, achieving photomodulation effects also requires a **minimum treatment time** that should always be observed. It is **10 seconds in CW mode** and **20 seconds in frequency mode**.

Therapy times

The tables below list the effective radiation time for your laser unit if the therapy instructions only recommend general doses in Joule/cm². They also contain guideline values for the dose to be applied on different tissue types.

The values indicated are guidelines that constitute the medium radiation doses as suggested by experienced therapists (last revised in June 2014).

Point therapy

Therapy time *continuous-wave-mode (cw-mode)*

Point type	Dose J	50 mW	100 mW	200 mW	300 mW	500 mW
Acupuncture points	3 (1-5)	1:00	0:30	0:15	0:10	0:10
Trigger points	4 (2-6)	1:20	0:40	0:20	0:13	0:10
Alarm points	6 (3-9)	2:00	1:00	0:30	0:20	0:12

Principles

Therapy time *frequency-mode* (alpha, multi-, Nogier-, Bahr-, Reiningger-frequencies etc.)

Point type	Dose J	50 mW	100 mW	200 mW	300 mW	500 mW
Acupuncture points	3 (1-5)	2:00	1:00	0:30	0:20	0:12
Trigger points	4 (2-6)	2:40	1:20	0:40	0:26	0:16
Pain points	6 (3-9)	4:00	2:00	1:00	0:40	0:24

Area therapy

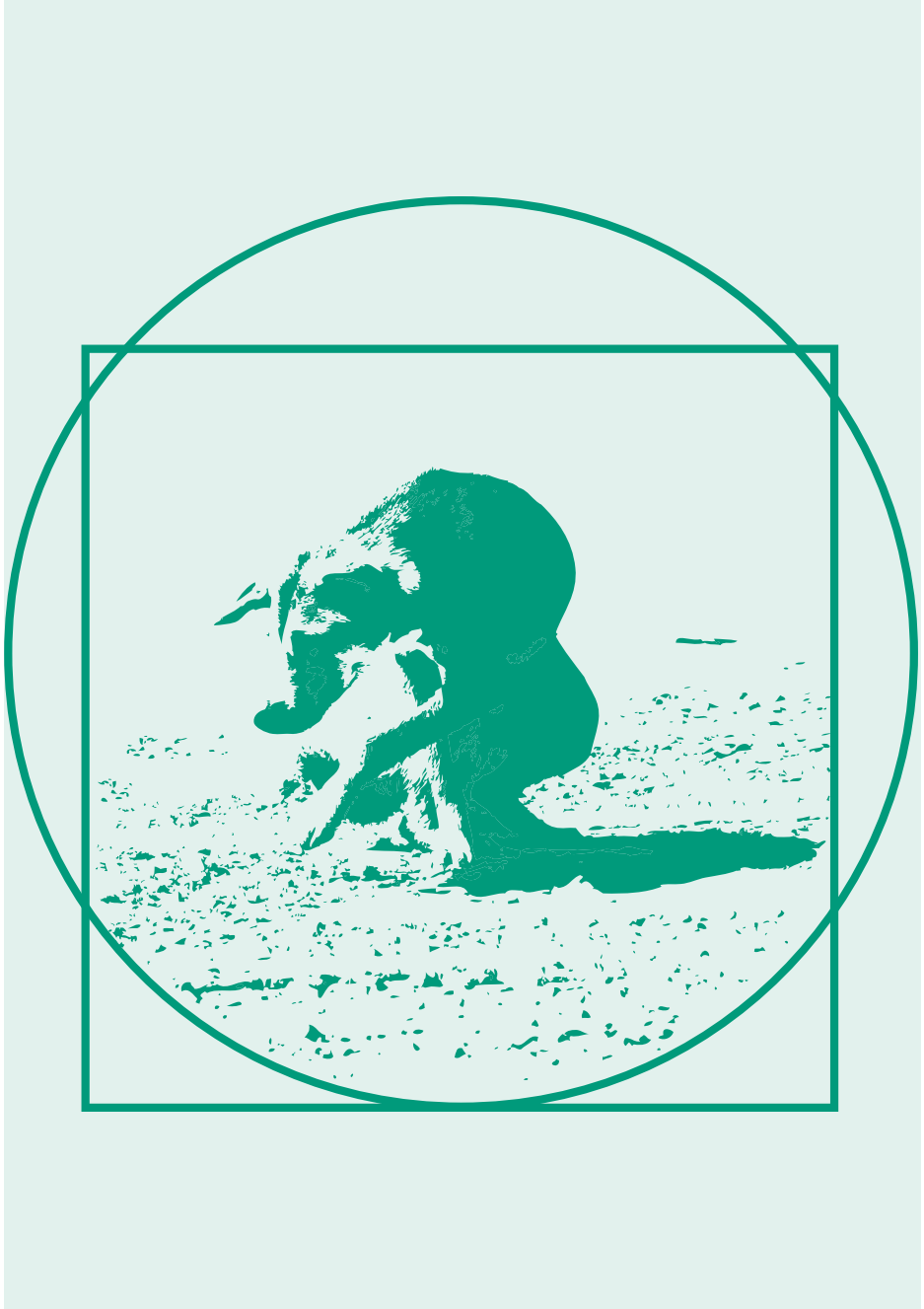
The effective output of the laser diodes of a low-level extended area laser unit is lower than that of a strong point laser device. However, the total diode output is higher. Consequently, extended-area therapy is more time-efficient than treatment with a point laser unit.

Dose and treatment time by tissue type

Tissue type	Dose J	20 mW	25 mW (Frequency-mode 50 mW)	50 mW (Frequency-mode 100 mW)	100 mW
Cutis/Subcutis	3	2:30	2:00	1:00	0:30
Lymphatic vessels	5	4:10	3:20	1:40	0:50
Muscles	7	5:50	4:40	2:20	1:10
Bones	10	8:20	6:40	3:20	1:40

Dose and treatment times at different effective performances

Dose J/cm ²	20 mW	25 mW (Frequency mode 50 mW)	50 mW (Frequency mode 50 mW)	100 mW
1	0:50	0:40	0:20	0:10
2	1:40	1:20	0:40	0:20
3	2:30	2:00	1:00	0:30
4	3:20	2:40	1:20	0:40
5	4:10	3:20	1:40	0:50
6	5:00	4:00	2:00	1:00
7	5:50	4:40	2:20	1:10
8	6:40	5:20	2:40	1:20
9	7:30	6:00	3:00	1:30
10	8:20	6:40	3:20	1:40
12	10:00	8:00	4:00	2:00
15	12:30	10:00	5:00	2:30
20	16:40	13:20	6:40	3:20
25	20:50	16:40	8:20	4:10
30	25:00	20:00	10:00	5:00
35	29:50	23:20	11:40	5:50
40	33:20	26:40	13:20	6:40



Practice of small animal acupuncture

Principles

Today there exist Chinese, Japanese, Korean and Western schools of acupuncture. Their treatment and examination traditions often vary greatly from culture to culture, and even within Western acupuncture the systems used in the English-speaking world are in sharp contrast to other Western systems on many details. For the beginner these differences can result in a great deal of confusion, as depending on the approach there are differences not only in the names and positions of points and meridians, but also in the methods of examination and treatment.

Meridian and point designations

The meridian system in small animal acupuncture comprises 12 main meridians and 8 extraordinary meridians.

Most meridian and point names in Western acupuncture sound familiar, e. g. liver meridian, stomach meridian, LI 11. The majority of the body's acupuncture points are to be found on the meridians and in the Western nomenclature they are numbered according to their position on the meridian. For example, the first point on the large intestine meridian is identified as LI 01 and the end point on the large intestine meridian as LI 20 as the large intestine meridian has a total of 20 points. In most acupuncture atlases the original Chinese point name is given with its translation, e. g. GV 14 *Da Zhui* = "Gate of the Wind". This name provides an indication of the function of the point as understood in TCM. As an example, point GV 14 *Da Zhui* "guides out wind heat" and "soothes the Shen". Without a knowledge of the TCM view of health and the origins of illness these functional descriptions sound strange, and many of the Western indications named in connection with a point will also seem to be out of context if this background information is not known. By looking at the functions associated with every meridian according to TCM, it will not take long to find the key to the various systemic effects ascribed to the stimulation of an acupuncture point. In addition to systemic effects, stimulation of an acupuncture point often also has local effects confined to its immediate vicinity.

Meridians of the body	
• Addendum – Meridian charts	
12 main meridians	
2 extraordinary meridians*	
Stomach	ST
Spleen-pancreas	SP
Kidney	KI
Bladder	BL
Liver	LIV
Gallbladder	GB
Pericardium	PC
Triple heater	TH
Heart	HT
Small intestine	SI
Lung	LU
Large intestine	LI
<hr/>	
Conception vessel	CV
Governor vessel	GV

* In this book only the two most important of the 8 extraordinary meridians, namely the conception vessel and governor vessel, are mentioned as the others use points of the 12 main meridians and the governor and conception vessels.

Meridian pathways in animals

Traditional and transpositional approaches

In the many textbooks on veterinary acupuncture there are often major differences with regard to the meridian pathways and location of acupuncture points in animals. This is due to the fact that some veterinarians use the traditional Chinese animal acupuncture charts developed in China hundreds of years ago, while others, who form the majority today, use the so-called

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“transpositional” approach. This is based on meridian pathways and point locations derived from human acupuncture and transferred to the body of animals in accordance with the corresponding anatomical positions. As in human acupuncture the meridians are named after the organs in TCM and include 12 main meridians and 8 extraordinary vessels.

Adaptation of the meridian pathways in dogs and cats

Differences in determining meridian pathways can also be due to the fact that in transposing them to the animal body in some cases only the purely anatomical similarities were used and in other, rarer, cases the altered function of anatomical structures in animals were also taken into account. An example of the altered function of an anatomical structure is the forelegs of horses, dogs or cats. The load-bearing axes of four-legged animals differ from those of humans. Dogs, for instance, use their shoulder and elbow to move around and therefore also to bear the weight of their body. In humans these regions are rarely subjected to constant loads, particularly not when walking.

If these differences are taken into account when determining the meridian pathways in four-legged animals, the position and significance of the individual acupuncture points may shift.

Examples:

- The brachial biceps muscle in dogs is particularly susceptible to loading and, contrary to the introduced literature, point LU 05 is not located on the extensor carpi radialis muscle but medially thereof and laterally to the biceps tendon base on the ulna and radius – precisely in the crook of the elbow.

In dogs and cats a similar situation applies for the pathway of the triple heater meridian. As the main load axis is predominantly concentrated in the area between metacarpal bones 3 and 4, the meridian pathway (and therefore also the location point TH 03) shifts to this region, unlike the location in human acupuncture where it lies between metacarpal bones 4 and 5.

- The pathway of the gallbladder meridian also takes on a curious form when arbitrarily transferred to the body of a four-legged animal. Usually the curve it follows around the human hip is simply extended (section between GB 29 and GB 30) without taking the altered function into account.
- A final example is point LIV 03, which is important for many treatments and in humans is closely linked to the big toe. However, for functional reasons hardly any energy flows in this area (between metatarsals 1 and 2) in cloven-hoofed and four-toed animals, as opposed to the area between metatarsal bones 2 and 3. The course of the liver meridian must therefore be adapted to this side to take the altered function into consideration.

Note: In this book the median pathways are based on the IVAS (International Veterinary Acupuncture Society) specifications, which however largely ignore the aspects described above. For this reason in some cases the meridian pathways and thereby also the location of individual points have again been adapted to the changed anatomy in dogs and cats. This adaptation is based on the findings of A.S. Thoresen or P. Rosin (☞ also *Recommended literature on acupuncture* in the addendum). The altered points are identified by the name of their “discoverer” (T = Thoresen, R = Rosin), so that the identification TH 03 (R) denotes point TH 03 shifted according to P. Rosin, which is located elsewhere in the traditional literature.

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Verifying the point location/pulse checking

For the beginner it is not easy to develop a feeling of certainty when localizing points. Acupuncture points can alter their position, e. g. depending on the functional status of the body and may then no longer be able to be found by way of the anatomical position description. Is there a way of determining whether a point is “working” or finding the right point in case of doubt? By using the simple bioenergetic method of pulse checking it is possible to feel whether, and how strongly, a point is “working” and thereby to ascertain whether the correct location has been found.

Bioenergetic pulse checking

In bioenergetic pulse checking you feel the energy field that has built up over the acupuncture or trigger point of your patient and observe whether this energy field is bringing about a change in your own energy field (for more information about the theory of bioenergetics and “energy fields” ↪ next chapter *Acupuncture points as bioenergetic nodes*). For this, both energy fields, yours and that of your patient, must be connected to each other, i. e. you must touch your patient at the points where you wish to determine the energy levels. The simplest method of verifying whether your energy field is altered by the closed energy cycle is to feel the pulse in your temporal artery.

While feeling the acupuncture or trigger points of your patient with the fingers of one hand, use the index and middle fingers of your other hand to feel the pulse in your own temple (↪ see illustration).

If the point you have located on your patient’s body is “working” your pulse will change. It can become stronger, weaker, slower, faster, pounding, thinner, irregular etc. The type of change is not initially important. What is decisive is whether you can feel a change and how strong this is, as this it is an indication of whether and to what extent your patient’s energy field is out of balance. In the event of a change the tested point is “active”, i. e. it is of therapeutic value or diagnostic significance. As has already been stated, the manner in which the pulse changes is initially of secondary importance for the purpose of pulse checking. Even though the type of change to the temporal pulse reflects the nature of the disturbance to the patient’s energy field, this has no influence on the treatment to begin with, as point therapy with the laser corrects disturbances at the acupuncture point, and thus in the patient’s energy field, helping the patient to return from a state of imbalance to one of harmonic balance. The diagnostic method suggested by this book also puts important functional acupuncture and trigger points first, and only then the diagnostic guidelines of TCM, for which a differential pulse diagnosis is of decisive significance.



Illustration: Checking the pulse at the temple using the index and middle finger

↪ also *Practice of small animal acupuncture –*

Diagnosis according to the guidelines of TCM and Diagnosis with diagnosis points

Bioenergetic pulse checking is partly based on the findings of Dr Paul Nogier and is also known as “Nogier pulse diagnosis”. It can be used to find both trigger and diagnostic points as well

Practice of small animal acupuncture

as acupuncture points of relevance to the treatment. "Active" trigger points and diagnostic points form the basis of and verify the diagnosis, and "active" acupuncture points indicate their therapeutic efficacy. In addition, you can also check the effectiveness of your acupuncture: if the tested energy fields of diagnostic and acupuncture points are in balance after treatment, the disturbances have been eliminated or become weaker and the pulse rate has normalized.

Pulse-controlled acupuncture requires a certain amount of practice and experience, but it is well worth the beginner integrating it into both diagnosis and therapy right from the start. It will quickly provide a sense of certainty during the procedure.

Acupuncture points are bioenergetic nodes

Bioenergetic point determination works because the energy fields of acupuncture points are stronger or more noticeable than those of their surroundings or other parts of the body. But why are they precisely where they are, and how can an energy field build up here? Is there a link with special characteristics of the physiological or functional structure which only occur here and can therefore explain these fields?

Indeed, there is one special characteristic which can easily be identified and checked without an in-depth knowledge of anatomy: energy fields are concentrated in places where the blood vessels divide and join, and their location matches that of strong functional points in acupuncture. The flow of bodily fluids in the vessels (vascular flow) is therefore closely linked to the formation of energy fields. Practical investigation confirms this relationship: flow disturbance cause disturbances in the energy field and disturbances in the energy field bring about flow disturbances. From this observation the conclusion can be drawn that vascular flow must play a central role in the entire energy system. It builds up energy fields at its nodal points, which we know as acupuncture points, and this means that the acupuncture system is essentially the expression of the underlying flow pattern of the vessels and electrical conductivity properties of the nerves. The energy accumulates at the joints, i. e. there where as a result of the concentration of loops of vessels the flow and turbulence are greater. The energy field here is always greater than along vessels with a linear flow. At the joints the transporting requirements are greater, more obstacles have to be overcome and more transporting energy is built up. The concentration of vessels at joints and in the vicinity of joints is anatomically easy to see. In dogs and cats too, most anastomoses are located in the paws so that it is not without reason that the strongest acupuncture points we use, known as distal points, are to be found here. The energy fields built up by the longitudinal vortices in the vessel loops are easy to find in bioenergetic terms. Bioenergetic pulse control can identify and localize flow disturbances.

For further information on the topic of "energy gain through longitudinal vortices"

☞ *Addendum – Further literature – Natural energies*

Diagnosis according to the eight guidelines of TCM

In TCM there are different diagnosis methods, each with a different emphasis. The diagnostic principle of TCM is the teaching of the 5 elements, the teaching of the so-called Zang-Fu organs

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and meridian therapy. At the heart of diagnosis is the patient's previous medical history and evaluation of the symptoms according to the basic principles of TCM.

Traditionally there are eight diagnostic guidelines with which the quality, quantity and localization of the causes of illness can be determined. Without a knowledge of these eight fundamentals TCM cannot be understood.

TCM does not describe the organs so much by their anatomy and position, but rather as functions. The functions of the twelve primary inner organs and the disturbance patterns these functions can experience form the basis of the Zang-Fu teachings, the teaching of the Yin and Yang organs and meridian therapy.

One Yin (Zang) organ and one Yang (Fu) organ form a pair in that the partners complement and support each other. The disease symptoms are ascribed to the various Zang-Fu organs and are an expression of a disorder of the affected organ pair. In turn, each organ pair is itself an expression of one of the five fundamental elements or "transformation" phases (wood, fire, earth, metal, water) which should not be understood so much in material terms, but rather as universal action principles which merge into each other in cycles and keep each other in balance. The effect of these principles is seen in many other correlations which can provide diagnostic and therapeutic information therewith.

The 8 diagnostic guidelines		
	Yang	Yin
Location	Outside	Inside
Quality	Hot	Cold
Quantity	Fullness	Deficiency
Governs	Function	Substance

The prerequisites for correct diagnosis and effective therapy are a sound understanding of these basic principles and plenty of experience. Training in diagnostics according to TCM is offered under the auspices of the following associations:

- IVAS (International Veterinary Acupuncture Society) – www.ivas.org
- DÄFGA (German Acupuncture Society) – www.daegfa.de

Zang-Fu organ pairs and their corresponding functional contexts						
Expression		Wood	Fire	Earth	Metal	Water
Organ pair	Yin	Liver	Heart	Spleen/pancreas	Lung	Kidney
	Yang	Gallbladder	Small intestine	Stomach	Large intestine	Bladder
Tissue		Tendons	Blood vessels	Muscles	Skin	Bones
Sensory organs		Eyes	Tongue	Mouth	Nose	Ears
Sense		Sight	Speech	Taste	Smell	Hearing
Season		Spring	Summer	Late summer	Fall/Autumn	Winter
Emotion		Anger	Joy	Concern	Sorrow	Fear
Expression		Rage	Laughter	Singing	Weeping	Sighing
Taste		Sour	Bitter	Sweet	Sharp	Salty
Color		Green	Red	Yellow	White	Blue/black

Diagnosis with proven diagnostic points

A pragmatic alternative to traditional diagnostics according to the guidelines of TCM is diagnosis using diagnostic points. These are found by way of palpation, bioenergetic pulse control or with the help of a point finder.

Diagnostic points

Trigger points

Trigger points can be found in various parts of the body, but mainly occur in certain closely confined areas that frequently correspond with the location of acupuncture points. External features that indicate trigger points include:

- Pronounced reactions during palpation: pain, muscle twitching, retraction of the extremity or also aggressive reactions.
- Large, painful knots in the muscles and tendons (myogeloses, tendogeloses).
- Strong pain radiation into a part of the body when applying pressure.

The palpation of trigger points causes considerable pain, and even a calm dog can react with biting or growling. The pain caused by a trigger point often radiates into areas of the body which are not necessarily linked to the dermatomes or nerve supply to the area.

A lasting improvement does not generally occur if only the pain radiation field of a trigger point is treated. The trigger point itself must be located by careful palpation, bioenergetic pulse control and/or using the pulse finder. The following criteria are indications that a painful area is the pain radiation field of a trigger point:

- The pain cannot be traced back to a joint, bone or nerve problem.
- Routine examinations lead to no findings.
- On palpation a hard area in the muscle is found which is painful when pressure is applied.
- Pain and hardening of the muscles vanish after the treatment.

Associate or Shu points

The associate or Shu points lie on the bladder meridian which runs along the entire back. Pain reactions at these points are mostly related to a disturbance in the associated organ or meridian. For example, sensitivity to pressure at point BL 13 in the eighth intercostal space indicates a lung disorder or a disturbance along the meridian pathway on the inside of the front limbs.

Alarm or Mu points

Most alarm or Mu points lie on the Conception vessel which runs over the side of the stomach. Pain reactions at these points are linked to disorders of the associated organs which are usually also anatomically located close to the point.

Ting points



In Ting point diagnostics and therapy, in the development of which A.S. Thoresen played a major role, local changes in the areas of the claw fold, at the so-called Jing source points or

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Ting points, are specifically looked for. A Ting point only exhibits noticeable changes or reacts to palpation if there is a disturbance in the associated meridian. This meridian is related to an organ, a specific function and defined body layer so that a reactive, i. e. noticeable or painful, Ting point can reflect a variety of symptoms or disturbances. Treatment has a regulating effect on the symptom or disturbance with which the active Ting point is correlated. Examples of disturbances or symptoms that can be influenced in this way and the action mechanism of a Ting point are set out in the treatments plans in this book in which Ting points are recommended as therapeutically effective points. In dogs and cats 5 Ting points are of special relevance in therapeutic terms (☞ Table *Ting points*).



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Alarm points

Alarm points chart  *Addendum*
 Alarm points location  *Addendum*


Organ	Alarm point
Bladder	CV 03
Small intestine	CV 04
Triple heater	CV 05
Stomach	CV 12
Heart	CV 14
Pericardium	CV 17
Large intestine	ST 25
Gallbladder	GB 24
Kidneys	KI 25
Spleen	LIV 13
Liver	LIV 14
Lung	LU 01

Shu points

Shu points chart  *Addendum*
 Shu points location  *Addendum*



Organ	Shu point
Bones	BL 11
Trachea	BL 12
Lung	BL 13
Pericardium	BL 14
Heart	BL 15
Governor vessel	BL 16
Diaphragm	BL 17
Liver	BL 18
Gallbladder	BL 19
Spleen	BL 20
Stomach	BL 21
Triple heater	BL 22
Kidneys	BL 23
Large intestine	BL 25
Small intestine	BL 27
Bladder	BL 28

Ting points

Ting points chart  *Addendum*

Ting point	General function
KI 01	Feeds the Qi
BL 67	Drains off excess energy in the bladder meridian
ST 45	Regulates the energy balance of the stomach meridian
HT 09	Regulates physical-emotional disharmonies
GB 44	Drains off excess energy in the gallbladder meridian

Trigger points

Trigger points chart  *Addendum*
 Trigger point location  *Addendum*

Part of the body/ symptom	Trigger point
Spinal column	"Facet pressure points" and points GV 03, GV 04, GV 06, GV 09 and BL 10
Hip	LIV 11
Sacroiliac joint	GB 27
Shoulder	LI 14
Triceps	TH 12
Elbow	LU 05
Stifle	BL 40

Practice of small animal acupuncture


Treatment through stimulation of points relevant to pain

There are many and complex methods with which an experienced therapist trained in TCM can select the acupuncture points of relevance to the treatment. In the presented treatment plans, this book follows a pragmatic approach that has been tried and tested in everyday practice. For example, in the case of painful orthopedic conditions, the primary selection criterion for the recommended acupuncture points is their relevance to the pain. A point is relevant to pain if stimulating it significantly contributes to alleviating the pain in the most cases.


Orthopedic pain

We are recommending the points suggested for laser stimulation in the treatment plans on the basis of the effect which has been proven with experience and with which these points are described. Determining them in the context of TCM is not therefore contradictory. However, for carrying out a successful treatment plan for pain, this knowledge of principles of TCM is not absolutely necessary.


The points that are important for treatment in the case of orthopedic pain are therefore only defined as “relevant to pain”. The functional explanation for their action is always derived from the comparative anatomical connection – the “biomechanics of the locomotor system”. The functional principles of these biomechanics are described in the foreword to the treatment plans for the locomotor system.

 *Locomotor system – Foreword – Treatment according to the principles of biomechanics*

On the following page there is an overview of all pain-relevant points suggested in this book in the treatment plans for orthopedic pain and the parts of the locomotor system on which they have a regulating influence when stimulated.

 *Table Pain-relevant points on the next page*

An overview of the location of all pain-relevant points can also be found in the addendum.

 *Chart Pain-relevant points in the addendum & Location in the addendum*


Sometimes the points of relevance to pain are also important diagnostic trigger points. In certain therapies these trigger points are also included in the treatment plan.

Regulatory or functional disorders

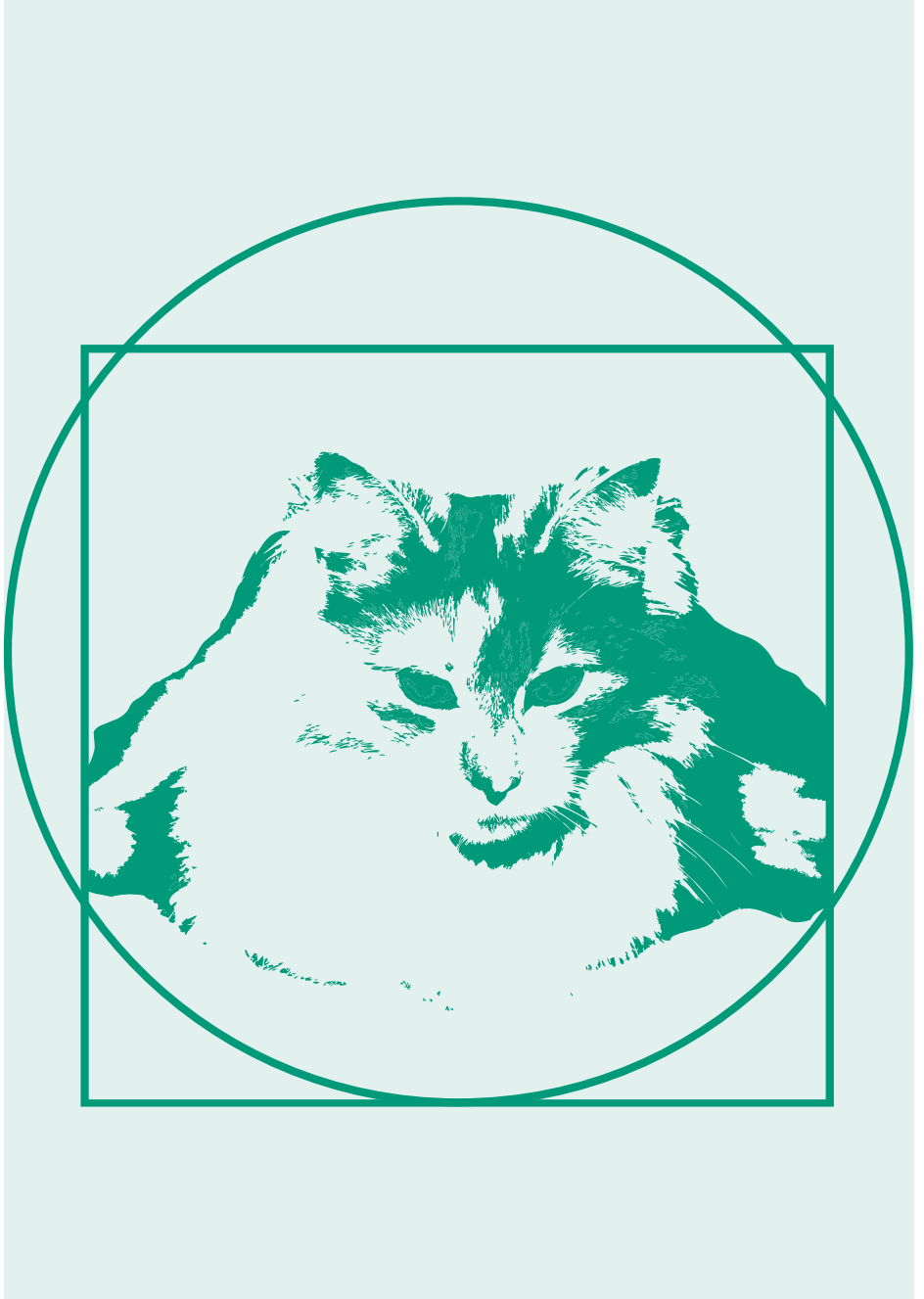
In the case of regulatory or functional disorders in which pain is not at the forefront, i. e. problems of the internal organs, in line with TCM we also set out treatment plans based purely on medical experience.

Practice of small animal acupuncture

Pain-relevant point

 Chart Pain-relevant points & Location in the addendum

LI 04	Carpus, elbow, biceps/relaxes the radial biceps tendon/analgesia point
LI 11	Elbow/local point
LI 14	Shoulder/local point
SI 03	Back/drain point for excess (filling, congestion) from the Governor vessel/relaxes the lateral structures of the front limbs
SI 09	Shoulder/local point
TH 03 (R)	Carpus, elbow, shoulder/relaxes the caudolateral musculature of the front limbs
TH 10	Elbow, local point
TH 11 (R)	Elbow/strongest tonification point on the TH meridian/insertion point of the triceps tendon
PC 08	Carpus, elbow/relaxes the usually shortened lower arm flexor muscles
BL 39	Stifle/relaxes the lateral collateral ligament
BL 40	Stifle/local point for relaxing the structures of the femorotibial joint
BL 54	Hip/local point of the dorsal hip-moving muscles
BL 60	Ankle joint, stifle/relaxes the caudal calf muscles
GB 29	Hip/local point of the cranial hip-moving muscles
GB 30	Hip/local point of the caudal hip-moving muscles
GB 34	Stifle/relaxes the lateral lower leg muscles/according to TCM: moves Qi
LIV 03	Ankle,stifle,hip/general distal point for the hip/maximum deficiency point/relaxes the muscle fusion chain of the craniomedial hind leg muscles
GV 03	Spinal column, lumbosacral transition (LST)/central point for relaxing the lumbosacral joint
GV 06	Spinal column, thoracolumbar transition (TLT)
GV 09	Spinal column, 10th thoracic vertebra
GV 12	Spinal column: 2nd/3rd thoracic vertebra, relaxes the rhomboid muscle
GV 14	Spinal column, transition cervical-thoracic spine/relaxes the neck and nape area
GV 17	Functional intersection between head and cervical vertebra
LU 05	Elbow/local point
LU 07	Elbow, biceps, cervical spine/distal point in cervical spine disorders/relaxes the ulnar biceps tendon
LU 09	Carpus/local point
ST 34	(Upper eye of the stifle), stifle/relaxes the lateral upper leg distally
ST 35	(Lateral eye of the stifle – Dubi), stifle/local point to reduce leverage pressure on the stifle/relaxes the tensor fasciae latae muscle
Xiyan	(Medial eye of the stifle – special point Xiyan), Stifle/local point to reduce leverage pressure on the stifle
ST 36	Stifle/relaxes the lateral muscles of the hind legs and moves blood
ST 40	Stifle/ moves phlegm
SP 06	Ankle joint, stifle/relaxes the medial muscles of the hind legs/additional point in the case of intervertebral disk disorders and CECS
KI 03	Ankle joint, Stifle/relaxes the medial calf muscles and the gracilis muscle





Guidelines

Diagnosis guidelines

Always start with a detailed medical history. After carrying out a traditional routine examination of the patient based on Western scientific criteria, complete the diagnosis with the aid of the following tips:

1. Symptoms

Does your patient have the same symptoms as described in the introduction to relevant treatment plan?

2. Diagnostic points

Are the trigger, Shu and alarm points that are to be examined painful?

Locate these trigger, Shu and alarm points using the anatomical description and the illustrations in the treatment plans, and verify them with the following methods:

- **Palpation**

☞ *Principles – Location methods – Palpation*

- **Bioenergetic pulse control**

☞ *Practice of small animal acupuncture – Bioenergetic pulse control*

- **Point finder**

☞ *Principles – Point location with the point finder*

3. Comprehensive diagnosis using diagnostic points

If diagnosis with the suggested diagnosis points produces an unclear result, carry out a complete diagnosis point examination with the ☞ *Charts Diagnosis points* in the addendum (Shu points, alarm points, trigger points, meridian diagnosis points). For orthopedic pain a comprehensive trigger point examination is set out in the introduction to the treatment plans for the locomotor system.

4. Further diagnostic tips

Carry out any further examinations recommended in the treatment plans. In the case of orthopedic conditions these include gait analysis for example (☞ *Foreword to the treatment plans for the locomotor system*).

5. Living environment

“External” factors, i. e. the living environment of the animal, should be included in the medical history. This includes care, feeding and any disruptive influences on the location or social environment. Aspects of this so-called “micro” or “macro climate” often play an important part in many conditions involving pain (☞ *Treatment plan psyche*).

6. Disturbance fields

In order to arrive at a correct diagnosis using the diagnostic points, disturbance fields caused by scars must in many cases be neutralized and harmonized first. Disturbance fields influence diagnostic investigations and can lead to false examination results. Indeed, the checking of scars is an important stage of every treatment. (Motto: “Treat scars first, ask questions later!”).

7. Tips in the event of inadequate treatment success

In each treatment plan there are tips on how to adapt or continue the therapy if the recommended treatment does not provide satisfactory results.

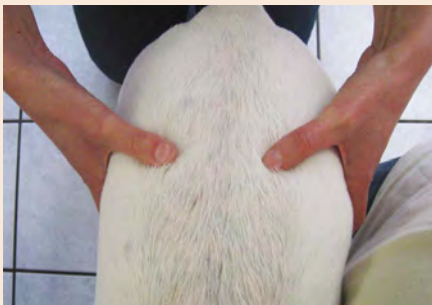


Illustration: Examination of the Shu points along the bladder meridian



Illustration: Trigger point examination of BL 40 (stifle trigger point)

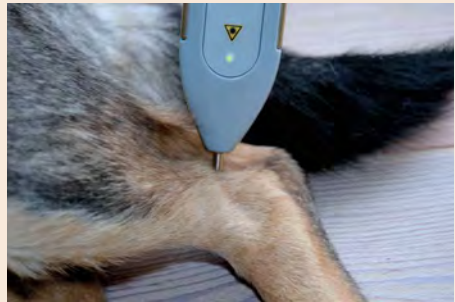


Illustration: Therapy of the left ankle joint with a point laser



Illustration: Laser puncture of (LIV 03)



Illustration: Looking for disturbance fields with an area laser and pulse control

Guidelines

Treatment guidelines

Before starting treatment, neutralize all disturbance fields and all scar disturbance fields on the body of the animal, irrespective of whether they are new or have been present for some time.

☞ Treatment plan – *Scars and disturbance fields – Scar neutralization*

After neutralizing the disturbance fields, start the treatment recommended in the plan. The therapy usually consists of two parts, local treatment (area therapy) and a regulative treatment approach (acupuncture). It does not matter which you begin with.

At the end of most treatment plans there are also recommended additional and accompanying measures which are intended to promote and support the success of the therapy and supplement the action mechanism of laser therapy and acupuncture.

1. Area therapy

The treatment time for area therapy is usually indicated for 2 standard settings – a laser power 50 mW and a laser power of 100 mW. If your laser system is equipped with a lower power rating, refer to the dosage specifications of the therapy plan.

For calculating the treatment time: ☞ *Principles – Treatment times/tables*

2. Trigger point therapy

Treat the trigger points (3 J/cm^2) that have reacted during your examination.

- 100 mW point laser: 1:20 minutes (cw-mode) or 2:40 minutes (frequency mode)
- 200 mW point laser: 0:40 minutes (cw-mode) or 1:20 minutes (frequency mode)
- 500 mW point laser: 0:16 minutes (cw-mode) or 0:32 minutes (frequency mode)

☞ also *Principles – Treatment times for point therapy*

3. Acupuncture

Verify all the recommended acupuncture points by way of palpation, bioenergetic pulse control and/or with the point finder.

Stimulate each confirmed point for the treatment time recommended for acupuncture points:

- 100 mW point laser: 1:00 minutes (cw-mode) or 2:00 minutes (frequency mode)
- 200 mW point laser: 0:30 minutes (cw-mode) or 1:00 minutes (frequency mode)
- 500 mW point laser: 0:12 minutes (cw-mode) or 0:24 minutes (frequency mode)

☞ also *Principles – Treatment times for point therapy*

After successful treatment the patient is usually much more relaxed or even falls asleep, the trigger points are partially or completely pain-free and pulse control indicates a normal pulse. The muscles are much softer and less painful, while wound pains subside considerably. If you have not achieved these treatment results, you should double-check your diagnosis.

How to read the treatment plans

In this book you will find therapy plans for more than 30 important indications for the laser therapy of dogs and cats.

1 Therapy tables

The therapy plans contain the parameters for area therapy: (1st column) for the age of the animal (adult, juvenil), (2nd column) for the state (acute, chronic), (3rd column) for the maximum dose to be applied, (4th column) for the maximum laser power to be applied and (5th column) for the corresponding therapy times in cw mode (continuous wave) and fm mode (frequency-modulated mode).

In the last column you will find the recommended acupuncture points for laser acupuncture. You will find further recommendations under the therapy plans:

2 Choice of possible resonance frequencies = supertherapy with frequencies.

You will have to program the individual frequencies into your frequency modulated laser. The so-called FI bands (frequency-integrated bands) are frequency series, which so far have only been preprogrammed for the lasers of the German manufacturer MKW (mkw-laser.de).

3 Therapy intervals and the total number of treatments

Please note the following 5 notes:

1. Total treatments

This is the guideline value for the average number of treatments required for disorders of the ankle.

Severe and chronic problems will of course require more frequent treatment, while one single treatment is often sufficient for mild and acute problems.

2. Number of treatments per week

Experienced therapists have achieved good results with this treatment cycle. However, the treatment intervals should always be matched to the individual situation and constitution of your patient.

3. Treatment dose (area therapy)

The irradiation dose can be given either in Joule/cm², or if the effective laser power is known, as the treatment time. Recommended treatment times therefore always relate to the effective laser performance.

All the treatment plans contain details of the treatment time for two effective laser powers: 25 mW and 50 mW.

Please note: The effective power depends on the set treatment mode (CW or frequency program). In frequency-modulated CW lasers, i. e. lasers with multifrequency, Nogier, Bahr or similar frequency programs, the effective power is half the maximum CW performance shown on the rating plate or in the technical specifications.

Guidelines

Example: For a laser device with a CW output of 50 mW the effective power in multi-frequency operating mode is only 25 mW.

☞ *Principles – Treatment times for area therapy*

4. Treatment time

The suggested treatment times are based on our experience and should initially be strictly observed. However, experienced therapists can adjust the treatment times to suit the individual case.

5. Acupuncture/laser puncture

The treatment plan includes a suggestion as to how you can extend and supplement your treatment with the help of effective acupuncture points.

The recommended acupuncture points can either be treated with acupuncture needles (if tolerated by the animal!) or by way of laser puncture.

☞ *also Principles – Advantages of laser puncture*

A maximum of eight acupuncture points per indication are suggested. When working exclusively with acupuncture you can add further points, preferably local points.

Acupuncture can be performed either before or after area therapy.

In acupuncture too the treatment times should be adjusted according to the patient's situation:

- In acute "Yang"-accentuated states (hot, tension, over-tonification, inflammation, overactive function etc.) introduce acupuncture slowly by starting with a shorter treatment time at each point, and only using the recommended time during the second treatment.
- In chronic "Yin"-accentuated states (cold, fatigue, weak function, stagnation etc.) you can start with a higher stimulation dose for the first treatment and then continue with the recommended dose for the second treatment.

The location of the recommended acupuncture points can be found with the aid of the illustrations and the point descriptions in the individual treatment plans.








All diagnostic and therapeutically relevant points used in our treatment plans, such as Shu points, alarm points, trigger points and pain-relevant points etc., are also summarized in the form of overviews in the charts and/or point descriptions in the addendum:
















☞ *Addendum – Diagnosis points: Shu points, alarm points, trigger points*

☞ *Addendum – Pain-relevant points*

☞ *Addendum – Meridian diagnosis points*

☞ *Addendum – Diagnosis points/point location: Trigger points, Shu points, alarm points, Ting points, pain-relevant points etc.*

Symbols used in the therapy schemes	
Diagnosis	
Therapy time	
Continuous wave mode	cw
Fm ist the mode used in supertherapy with resonance frequencies.	fm
Trigger points	
Laser puncture (LP) und Chinese medicine	
Additional measures	
Area therapy	
Point location	

Abbreviations for meridians and acupuncture points		
	Stomach	ST
	Spleen-Pancreas	SP
	Kidney	KI
	Bladder	BL
	Liver	LIV
	Gallbladder	GB
	Pericardium	PC
	Triple heater	TH
	Heart	HT
	Small intestine	SI
	Conception vessel	CV
	Lung	LU
	Large intestine	LI
	Governor vessel	GV
	Extra point	EX

Abbreviations used in location descriptions	
C	Cervical vertebra
T	Thoracic vertebra
L	Lumbar vertebra
S	Sacral vertebra
ICS	Intercostal space

Super therapy with frequencies	
Single frequencies	
FI-Bands	

Other abbreviations	
TCM	Traditional Chinese medicine
TCVM	Traditional Chinese veterinary medicine
TP	Trigger point
LP	Laser puncture
LT	Laser therapy (in this book laser therapy always means low level laser therapy)
PRP	Pain-relevant acupuncture point
SIJ	Sacroiliac joint
TLT	Thoracolumbar transition
LST	Lumbosacral transition
cw	continuous wave
fm	frequency modulated

Terms based on the teachings of TCM are written with a capital letter and in italics. In Western medical and colloquial use they usually have a different meaning (for example *Blood, Stomach, Essence* etc.) or are original TCM terms (e. g. *Qi, Shen*).

Wounds, scars, disturbance fields

Foreword

Wounds

Wounds can be caused by external factors (e. g. injuries and effects of external force), or by internal factors (e. g. metabolic disorders), but how a wound is caused is largely unimportant as far as laser therapy is concerned. Laser therapy promotes wound healing and compensates for disruptive influences which could complicate, hinder or delay the healing process.

Disrupted wound healing

Wound healing is considered as disrupted if it cannot take place under optimum conditions. The main reasons for disruption to wound healing are inadequate supply of the surrounding tissue with oxygen and the body's own anti-inflammatory substances, wound infections, contamination of the wound or the effect of exogenous substances such as chemicals.

Disturbance fields

Disruption to wound healing has an effect on the entire wound area. Even if the disturbance only brings about a delay and the wound finally heals, the surrounding tissue can remain permanently damaged. A lasting change in the vascular supply (capillary supply) and therefore in the blood circulation in the wound area, or a change in nerve functions as a result of inflammations or postoperative or post-traumatic adhesions can also affect larger structures. As well as damage to the connective tissue, which is always involved, bones and muscles, tendons, ligaments, blood vessels and nerves can also remain permanently impaired.

A long-term change in the bioinformative matrix in an area of tissue subject to disrupted wound healing generally also disturbs the energy flow of the meridians passing through this area. This produces a disturbance field which not only causes local symptoms but also acts systemically. It can therefore cause problems that at first glance have nothing to do with the wound and which cannot even always be explained by way of the functional circuits of TCM with which the affected meridians are connected.

Laser therapy for wound healing and scar neutralization

Laser therapy can normalize and accelerate delayed wound healing and activate blocked wound healing. It can compensate for and neutralize the factors leading to disrupted wound healing and thereby prevent lasting damage to the tissue structures.

With laser therapy fresh and chronic wounds as well as old and already scarred wounds can be treated. Laser therapy can also be used specifically for the neutralization of scar disturbance fields.

Laser therapy promotes wound healing (☞ *Principles – Action principles*).



Nahtdehiszenz und Wundheilungsstörung nach Schnittverletzung der Hintergliedmaße plantar bei einer Katze: vor und nach Lasertherapie

Wounds, scars, disturbance fields

Wound treatment

All type of wounds – fresh cuts, contusions, lacerations, tears and abrasions – as well as old wounds that are not healing can be treated with the laser.

In the event of surgery too (wound suturing etc.) laser treatment can be of benefit:

- 1) pre-operatively to alleviate pain
- 2) postoperatively to prevent wound edema and to speed up or activate wound healing, and last but not least
- 3) to prevent the formation of disturbance fields (☞ also Treatment plan: *Scars and disturbance fields*).

Treatment plan

Age	Wound Depth	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>☞☞ Treatment basics – point therapy</small>
				cw	fm	
Dog	superficial	3	100	0:30	1:00	Depends on location
Dog	deep	5	100	0:50	1:40	
Puppy	superficial	2	50	0:40	1:20	
Puppy	deep	3	50	1:00	2:00	

Supertherapy with frequencies (fm)

Single frequencies: 10 Hz (ALPHA), 285 Hz (SOL 2), 4,625 Hz (SELF HEAL), 528 HZ (SOL MI), 3,632 Hz (ANTI-DEGENERATION)

FI-Bands: FI-Band REGENERATION

In case of wound infection additionally:

Single frequencies: 699 Hz (INTERFERON), 787 Hz (INFLAMMATION) 728 Hz (STAPHYLOCOCCI, MRSA), 880 Hz (STREPTOCOCCI)

FI-Bands: FI-Band INFECTION

Sweeps: PURR-Sweep

Treatments: Acute wound: daily • Chronic wound: every three days

Treatments total: Individual, depending on healing progress



Wound cleaning and initial care

The wound is carefully cleaned of dirt, foreign matter and necrotic tissue. Any bleeding should be stopped before treatment with the laser to prevent beam reflection.

If necessary, initial treatment is carried out with surgical, antibiotic and possibly also antiphlogistic methods and preparations.

In the case of old wounds which have not healed, with a breaking crust and too much granulation tissue (☞ Course of healing of old, non-scarred wounds) the excess granulation tissue and wound edges have to be removed first.

Area therapy

The wound edges and base of the wound undergo area therapy with the laser, if possible with direct skin contact or at distance of only a few millimeters. A thin film can also be applied around the area laser for protection, but using it without a film is more practical and efficient. After treatment the laser face should be cleaned thoroughly.

Treatment with the point laser is possible but laborious. The distance between the irradiated points should not exceed 1 cm (☞ Illustration on the following page) and the wound edges as well as the wound base must also be covered in this way.

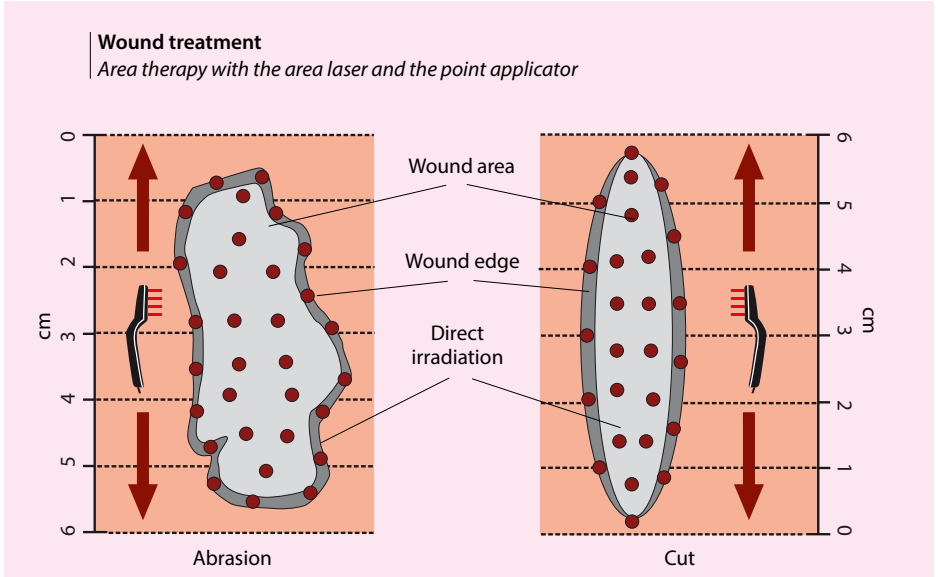
In order to stimulate reepithelialization effectively, the wound edges and granulation areas must be treated with particular care.

Additional measures

☞ Homeopathy: Arnica C 30, Calendula C 30

Wounds, scars, disturbance fields

Fresh and old wounds



Course of healing in fresh wounds

Areas that have been sutured normally form a scar within 10-14 days, generally as of the 6/7th day. Antibiotics are not usually required.

In the case of large wounds very little is seen to happen over the first ten days. Only then does the wound area become smaller.

With very large wounds this may be followed by further 10-day periods, during which, however, the laser therapy should be continued consistently.

If wound healing stagnates ("retracting scar", usually white to gray), the wound edge must be surgically revived before laser treatment is continued.

Course of healing in old wounds which have not scarred over

Old wounds are often caused by loss of tissue over a large area with interruption of the vascular supply necessary for healing. The marginal scars are often bulging, non-elastic and "retracted" into the wound edge. Non-elastic crusts break quickly and the wounds are susceptible to recurrent infection.

With old wounds it is advisable to measure the wound and to document the slow healing process. After wound edges and hypergranulation areas have been removed, old wounds continue to be irradiated on a daily basis. Initial successes are often measured and seen after ten days. Surgical measures are repeated as necessary.

Every traumatized region can develop into a disturbance field. Disturbance fields are usually the result of functional disturbances in the body (internal and external scars), effusion (e. g. hematoma) or foreign bodies (traumatic or through surgical material). But external sources, such as

Wounds, scars, disturbance fields

Scars and disturbance fields

electro-smog or water courses, can also cause disturbance fields which are usually associated with less obvious functional disorders. Psychological stress and energetic disharmonies, such as laterality disorders, can bring about disturbance fields too.

The effects on the body can range from minimal to severe.

They can be limited to the area around the disturbance field, cause imbalance in one or more associated organs, or they can affect whole regions or even the entire body.

A disturbed scar can be detected through pulse diagnosis. In most cases the cranial and caudal pole of the scar are affected. In cases of doubt, if you are unable to perform pulse diagnosis you should assume that a scar disturbance is present, based on the motto: "Treat scars first – ask questions later!". Which disturbances will be caused by a scar can never be predicted accurately, so treatment is carried out first in order to then see which disturbances still remain and in which areas. Disturbances caused by scars can be eliminated within a few seconds.

It is best to begin every examination by checking any scars and only then testing the suggested diagnosis points.

Typical scars in dogs and cats

1. Castration scars

Very often a castration scar will disrupt the kidney energy in male and female cats and dogs. Usually the scar feels numb and not particularly painful. Point BL 23 (Shu point of the kidney) and KI 01 (emergency point of the kidney) are pulse-detectable. One of the effects of kidney Yin disturbance is incontinence, and it is often also associated with hip problems.

2. Navel and/or umbilical hernia operation

3. Scars due to dewclaw operations

Quite a few, usually very young puppies have undergone dewclaw operations. The scars are quickly no longer visible, but they can still cause complex disturbances.

4. Docking scars

5. Surgical scars

A medical history detailing previous operations and anesthesia will provide an early indication of any scars that may be present.

Wounds, scars, disturbance fields

Scars and disturbance fields

Treatment plan

Age	Type of scar	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	6	100	1:00	2:00	Depends on location LI 11, ST 36, GB 34
Dog	chronic	5	100	0:50	1:40	
Puppy	acute	5	100	0:50	1:40	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: 9,592 Hz (STABILITY), 584 Hz (NOGIER B')

FI-Bands: FI-Band INTERFERENCE

Sweeps: PURR-Sweep

Treatments: Fresh scar: daily (immediately after trauma or operation) • Old scar: 1 x/week

Treatments total: Individual, depending on healing progress



Diagnosis

Disturbance fields are most easily detected with bioenergetic test methods, e. g. pulse diagnosis. Normally the scar poles are particularly noticeable. This conspicuousness disappears if the scar has been treated properly.



Area therapy

Laser the entire scar and surrounding area with the laser shower.

Laser puncture

1. Scar poles

In the case of severely disturbed scars, in addition to area therapy, which treats all scar areas, the scar poles should undergo follow-up treatment with a strong point laser

2. Meridian neutralization

Stimulate the start, end and tonification points of the meridians that pass through the disturbance field. ↳ Addendum p. 155 – *Tonification points*

3. General points

The following points support neutralization as they bring movement to the Qi and/or the blood:

LI 11 Clears the blood and regulates Qi and blood

ST 36 Strengthens the Qi and moves the blood

GB 34 Supports the regular flow of Qi in the body-soul-spirit system

Caution! Stimulation of these points can harm the patient if the scar has previously not been properly neutralized, i. e. made passable for energy (area therapy and steps 1 and 2 of the laser puncture plan). It can be dangerous to stimulate the flow of Qi and blood if it is blocked and cannot move and disperse in the natural pathways. The success of neutralization must therefore always be checked before step 3.



Point location

LI 11 On the flexion crease of the elbow before the lateral epicondyle

ST 36 On the outer side of the tibia, laterally to the distal tibial tuberosity (before the tibial cranial muscle)

GB 34 Halfway between ST 36 and the head of the fibula (behind the tibial cranial muscle)

Effect

The success of the treatment can vary greatly. In some cases a single laser treatment is sufficient and a complex disturbance pattern is rectified in seconds. The success rate is around 30%. In other cases the result is only temporary and the treatment has to be repeated regularly until neutralization has been achieved. There are also cases in which laser therapy has no effect at all. Whether the treatment works or not depends on factors which can only be evaluated in advance in the rarest of cases.

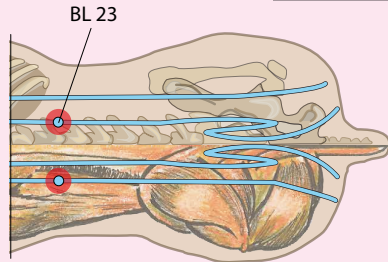
Additional measures

- Physiotherapy, neural therapy, platinum implantation, Silicea D 12 (Schüssler salts) added to drinking water over a longer period.

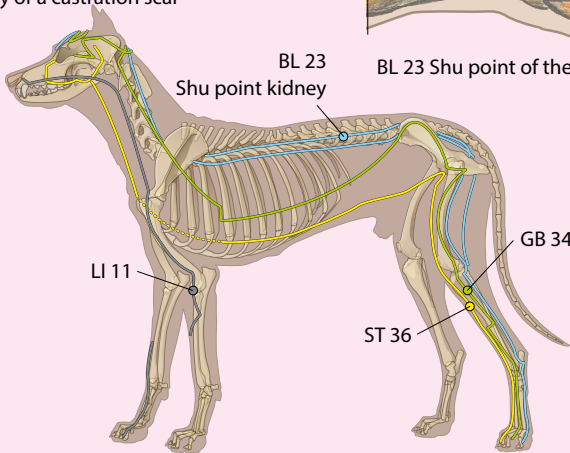
Treatment plan – Scars and disturbance fields



Area therapy of a castration scar



BL 23 Shu point of the kidney, dorsal view



LI 11

BL 23
Shu point kidney

GB 34

ST 36

GB 34

ST 36

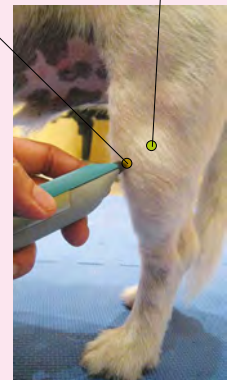


Laser puncture LI 11
Right foreleg laterally

Laser puncture BL 23
Shu point of the kidney



BL 23



Laser puncture ST 36
Left hind leg laterally

Pain

Irrespective of the cause of the pain, low level laser therapy can contribute to the alleviation or complete elimination of almost any localized pain.

Although local pain therapy is of course no substitute for good diagnostics, it does contribute to stopping the pain becoming something that is simply taken for granted and chronic, and thereby helps to shorten the duration of the condition.

Laser puncture can also be used as non-specific pain therapy as a general initial measure. Depending on the location of the pain, local points, master points and/or specific pain points are recommended.

Treatment plan

Age	Pain	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	superficial or chronic	6	100	1:00	2:00	Master points and special pain points
Dog	deep or acute	8	100	1:20	2:40	
Puppy	superficial or chronic	4	100	0:40	1:20	
Puppy	deep or acute	6	100	1:00	2:00	

Supertherapy with frequencies (fm)

Single frequencies: 599 Hz (PAIN acc. to Bahr), 285 Hz (SOL 2), 174 Hz (SOL 1), 3,895 (PAIN acc. to Reiningger)

FI-Bands: FI-Band PAIN

Sweeps: ALPHA-Sweep, PURR-Sweep

Treatments: Acute pain: daily • Chronic pain: 1 x/week

Treatments total: Individual, depending on healing progress



Area therapy

Area therapy of the painful regions is carried out. In the case of small, clearly defined areas of pain a point applicator can also be used. The intensity and frequency of low level laser use depends on how the pain develops. The deeper the location of the pain, the longer the treatment time will be.



Laser puncture

Local area therapy is combined with stimulation of so-called master points and/or specific pain points.

Master points “master” certain areas of the body, i. e. they regulate their energy thereby contributing to alleviating pain.

- **Master points** ↳ Table
- **Special pain points**

GV 03 Pain in the entire hind quarters

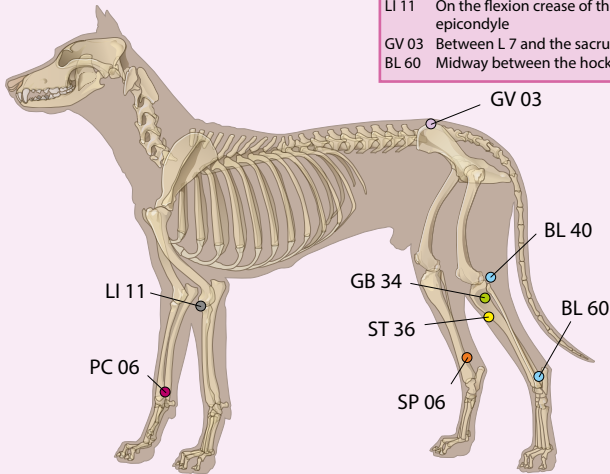
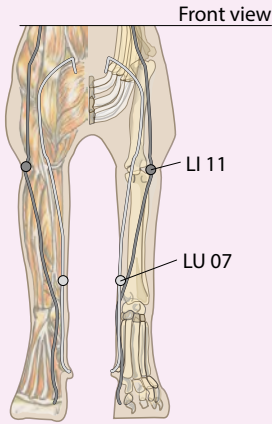
LI 11 Pain in the elbow

BL 60 Master point for pain (also known as the “Aspirin point”).

Effect

The action mechanisms of laser therapy in alleviating pain are described in the principles. Good analgesic acupuncture releases endogenous pain-relieving transmitters, such as endorphins, and, by relaxing the musculature it neutralizes the effects of diseased muscular feedback mechanisms. This breaks the vicious circle between muscles and neural regulation and reflex arcs, resulting in considerable alleviation of the pain.

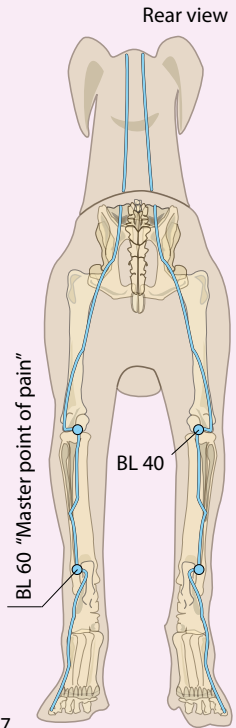
Treatment plan – Pain



Area therapy GV 03 for pain in the entire hind quarters



Point therapy LU 07



Master point	Body region
LU 07	Head and neck
PC 06	Chest and front of the abdomen
BL 40	Back and hips
ST 36	Abdomen and gastrointestinal tract
SP 06	Rear of the abdomen & urogenital tract
GB 34	Tendons

Location

- LU 07 At the craniomedial edge of the radius, directly proximal to the medial styloid process
- PC 06 2 finger-widths proximally of the palmar transverse wrist crease between the tendons
- BL 40 In the middle of the hollow of the stifle between the muscles
- ST 36 On the outer side of the tibia, laterally of the distal tibial tuberosity (before the tibial cranial muscle)
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; on the medial tibia edge at the boundary of the gastrocnemius muscle
- GB 34 Halfway between ST 36 and the head of the fibula (behind the tibial cranial muscle)
- LI 11 On the flexion crease of the elbow, before the lateral epicondyle
- GV 03 Between L 7 and the sacrum on the dorsal midline
- BL 60 Midway between the hock and the ankle

Locomotor system

Foreword

Diagnosis of orthopedic conditions

Traditional and complementary diagnosis methods

A comprehensive orthopedic diagnosis does not only include evident symptoms of the locomotor system, but all aspects of the patient's pain. Hence it often turns out that the reason for the original consultation is more likely to be a secondary consequence of a more or less subtle underlying condition, such as a primary disease of another joint for example. The prerequisites for a good holistic orthopedic diagnosis and therapy are accurate anatomical knowledge, an understanding of pain and expertise in acupuncture and the significance of trigger points and pain-relevant points.

To diagnose problems of the locomotor system, methods used in complementary medicine should supplement conventional scientific methods:

Traditional examination methods:

- General and more detailed clinical examination (if necessary also including imaging methods such as X-rays, ultrasound, CT, MRI, scintigraphy etc.).
- Lameness examination (if necessary using provocation tests, anesthesia).
- Joint function tests (rotation, flexion, extension).

Complementary examination methods:

- Gait analysis.
- Trigger point examination.
- Examination of disturbance fields and pulse control.

Clinical examinations using imaging methods are very costly, while traditional lameness examination is often inadequate. With the aid of a thorough gait and trigger point examination, a holistic diagnostician will usually arrive at a result earlier, and also gain more extensive knowledge with regard to the pain the patient is suffering.

Gait analysis

Gait analysis provides important clues for determining functional disorders in the case of all three basic types of gait – even if there is no obvious lameness.

The activity of the joints can be assessed in detail during flexion and extension, particularly when walking. Walking and running also provide detailed information about relief postures or relief movements long before the development of obvious lameness.

Examples:

Moving an elbow out to one side is always an early sign of functional overloading of the biceps muscle. In dogs “swinging-hips”, the mannequin-like swaying of the hips from one side to the other, indicates a painful hip, as does the way the dog sits down (→ see Fig. 1)

Trigger point examination

The findings obtained in the gait analysis can be verified by way of the corresponding trigger

points. To evaluate the pain as a whole a complete trigger point examination, which requires a certain amount of practice, should also be carried out. The trigger points are identified by means of pain on pressure in accordance with the following plan:

1. Spinal column

Check for pain in the spinal column using the Kibler's skin folds and the trigger points for the spine, known as the "facet pressure points", as well as points GV 03, GV 04, GV 06, GV 09 and BL 10.

Kibler's skin fold

Using the thumb and index finger of both hands take up a decent fold of skin (Kibler's skin fold) to the right and left of the midline over the separate segments of the spine. Look out for swellings, areas of thickening and pain in the dermatome along the spinal column which can be an indication of a segmental disorder.

Facet pressure points (segment palpation) and points GV 03, 04, 06, GV 09, BL 10)

On both sides of the spine feel and exert slight pressure on one facet pressure point after the other. Examining the facet pressure points for pain is also known as segment palpation.

Then test the trigger points on the midline of the back, GV 04, GV 04, GV 06 and GV 09, for pain, whereby you are testing the transitions of the spine for functional overloading. In the case of problems of the cervical spine the trigger point BL 10 is painful, and it also often indicates problems of the sacroiliac joint (SIJ), with which this area is reflexively connected.

2. Hips

Trigger point LIV 11

Grasp the lateral upper leg muscles from behind and move your index finger from cranial to caudal in the direction of the acetabulum. At the acetabulum exert indirect pressure on the origin of the rectus femoris muscle.

3. Sacroiliac joint

Trigger point GB 27

On the side to be examined place the thumb and ball of the thumb on the wing of the ileum from the dorsal side so that the tip of the thumb comes to rest on the cranial pole of the body of the ileum. Then exert pressure on the wing of the ileum in cranioventral direction.



Fig. 1: Front: Dog with hip problems; in the background: a dog with intact hips

Locomotor system

4. Shoulder

Trigger point LI 14 (shoulder)

Check the tendon of the supraspinatus muscle for pain either by way of compression between the index finger and the thumb and/or by pulling the tendon horizontally to caudal.

Trigger point TH 12 (triceps)

Check the triceps group for pain by pressing in the thumb caudally and applying 4 fingers laterally with subsequent compression of the muscle group.

5. Elbow

Trigger point LU 05

Grasp the triceps tendon caudally as if holding a pistol and check the joint structures for pain by pressing the index finger into the crook of the elbow.

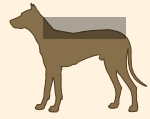
6. Stifle

Trigger point BL 40

To check the stifle for pain, use the stifle clasp grip: grasp the patella caudally with four fingers, and with the thumb exert pressure on the hollow of the stifle and thereby on point BL 40. A pain-free stifle will not yield even to stronger pressure.

Animals have very different individual reactions to painful trigger points. They can stop panting, sometimes even turning round in an instant to look at the point, and react aggressively or fearfully and evasively with snapping, growling or emitting other sounds. After successful treatment the trigger points are more or less pain-free, thereby indicating whether the diagnosis and therapy were appropriate.

Trigger point examination procedure, page 1



Making a Kibler's skin crease



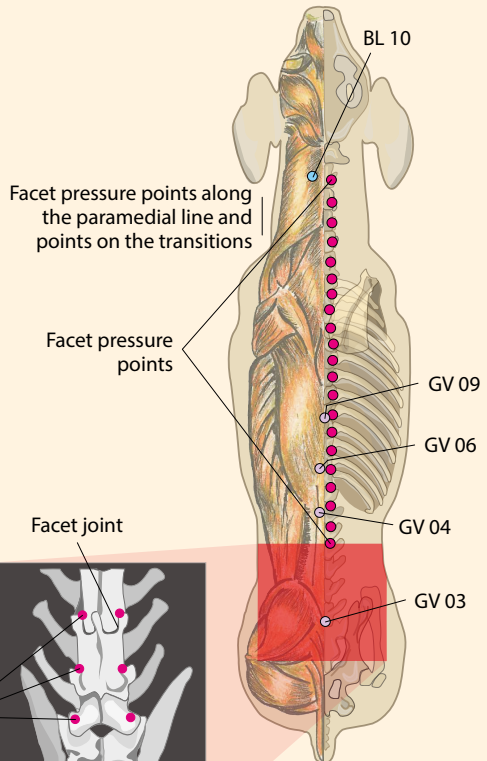
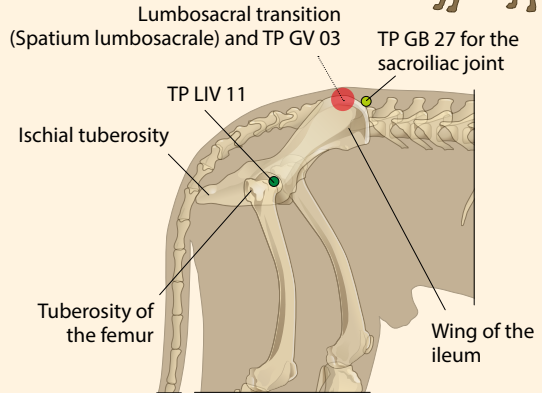
Segment palpation of the back



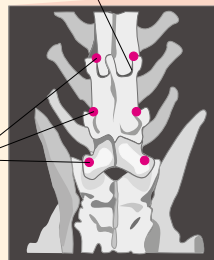
Trigger point examination of GB 27 for the sacroiliac joint



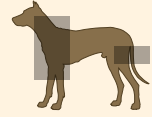
Palpation of point GV 03 at the lumbosacral transition



Pressure points of the facet joints "Huatuojiaji" points (except: transition L - sacrum)



Trigger point examination procedure, page 2



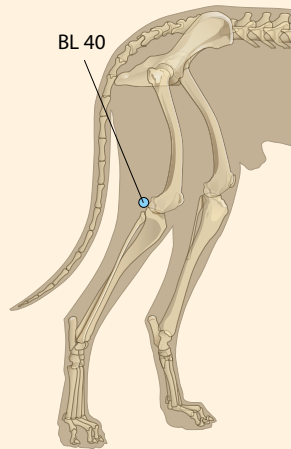
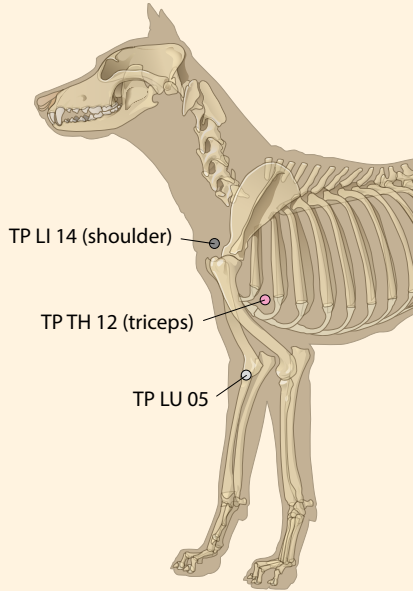
Palpation of the trigger point LIV 11 at the hip



Palpation of the trigger point LI 14 at the shoulder



Palpation of the trigger point LU 05 on the elbow



"Stifle clasp grip", palpation of the trigger point BL 40 on the stifle

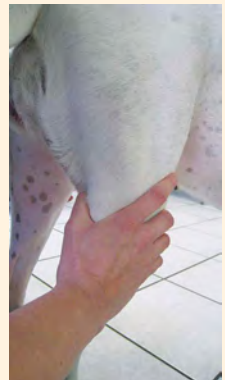


Table: Location of the trigger points

GV 03	“Baihui”/between L 7 and the sacral bone on the midline of the back
GV 04	Between the spinous process and 2nd and 3rd lumbar vertebrae on the dorsal midline
GV 06	Median between the spinous process of the 12th thoracic vertebra on the dorsal midline
GV 09	Median between the spinous process of the 10th thoracic vertebra on the dorsal midline
BL 10	Between the spinous processes of the 1st and 2nd cervical vertebrae on the lateral side of the trapezius muscle, cranially of the wing of the atlas
LIV 11	At the origin of the femoris rectus muscle
GB 27	Before the upper edge of the iliac crest
LI 14	At the tip of the deltoid muscle at the insertion of the shoulder section of the muscle
TH 12	In the middle of the dorsal edge of the lateral muscle head of the triceps muscle (midway between the caput longum and caput laterale)
LU 05	In the middle of the crook of the elbow, on the inner edge of the brachioradialis muscle
BL 40	In the middle of the hollow of the stifle at the stifle joint

Checking of disturbance fields and pulse control

Check any disturbance fields and scars by way of pulse control (↪ *Introduction: Practice of small animal acupuncture*) and treat in accordance with the suggested treatment plan (↪ *Treatment plan – Disturbance fields and scars*).

Therapy according to the principles of biomechanics

The majority of disorders of the locomotor system can be very positively influenced with laser therapy and laser puncture. Acupuncture points which when stimulated by laser bring about a considerable improvement in pain are in most cases recommended as “pain-relevant points” in the laser puncture treatment plans. Their effect is not explained in the context of TCM, but by way of the “biomechanics of the joints”, as the most important points used in acupuncture for disorders of the locomotor system are mostly to be found in the centre of overloaded structures in the joint area, on which the greatest tensile forces act according to the laws of biomechanics.

One of the most important functional principles of the locomotor system for movement is the “transfer of load” by means of a lever, i. e. a force transmission system. “Give me the place to stand and I shall move the Earth” said Archimedes, who first established the principle of levers. The biomechanical stresses on structures associated with the joints can be explained on the basis of these laws of leverage, according to which bone protuberances act as lever arms and the joints as rotation or support points. Biomechanically a joint is always built up on the same principle: the load to be overcome is transferred via an extended lever, while the joint itself is predominantly the point of rotation. The levers can be bone protuberances or also individual bone arranged before the joint, such as the sesamoid bones. In order to be moved every joint may require several levers, depending on the stress and function.

The following table shows examples of the most frequently overloaded joints in cats and dogs, along with their “main lever”, with the exception of the spine.

Locomotor system

Joint	Main lever
Hip	Trochaner major, tronchanter minor
Stifle	Patella
Ankle	Calcaneus
Shoulder	Acromion
Elbow	Olecranon
Antebrachioacarpal joint	Accessory carpal bone

The levers ensure that stresses on the locomotor system are sparingly handled and at the same time that the sensitive joint structures are protected. The force effects are directed away from the joints via the lever extensions.

Against this background it is understandable that arthroses in the form of capsular and periarticular calcifications often develop within a very short period of time after surgical procedures on joints, which actually only act as points of rotation and are not in the first instance designed to cope with loads.

Even today the dominant location of pain is still presumed to be the joint, which of course is often afflicted by associated synovialitis. However, in most veterinary orthopedic cases the damaged and very painful insertions, including these levers, are all too often disregarded. But it is the levers which are initially exposed to painful overloading, a fact which is often overlooked in veterinary orthopedics. Using CT images of these areas it can easily be demonstrated that the majority of cases involve insertion desmopathies. An example of a calcified insertion desmopathy in human medicine is the heel spur, for instance.

The therapeutic consequence of these observations consists in treatment that relieves and reduces inflammation in the lever structures, and which in most orthopedic cases is also the most effective treatment for pain (apart from necessary surgical indications of course!). It has been shown that stimulation of the recommended pain-relevant points make a decisive contribution to this treatment objective. They are mostly located at central overload points of lever extensions and stimulating them promotes physiological regeneration, counters inflammation and strengthens the structures surrounding the joints. In this way the tendons, tendon attachments and muscle structures associated with the levers are relieved and can regenerate, which in most cases results in a considerable alleviation of pain.

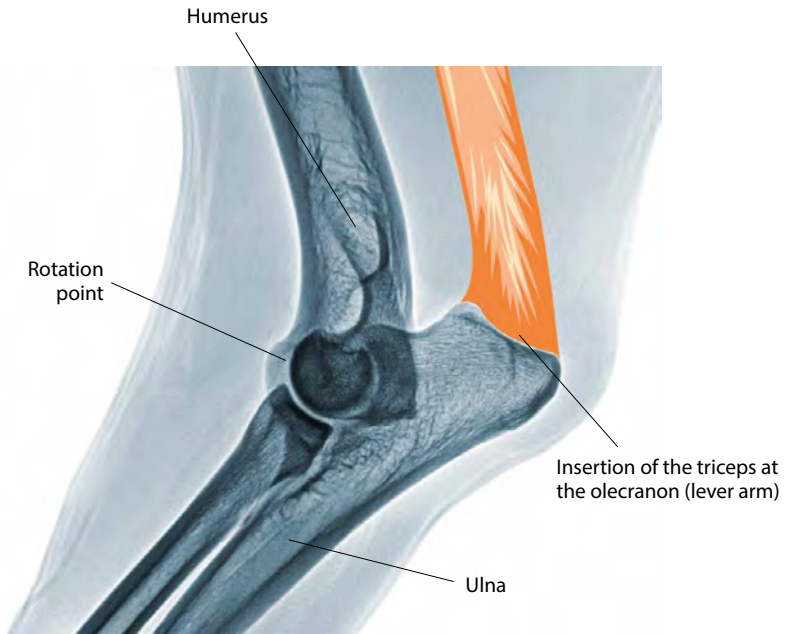


Fig. Lever mechanism at the elbow joint (dog)

Locomotor system

Characteristics of the indications

Spinal column

Laser therapy of spinal disorders

Preliminary note

There are many types and causes of spinal disorders. Their laser treatment does not reflect this variety, but rather is based on a single, comprehensive treatment plan, which is only slightly modified in individual cases and adapted to the indication. This basic treatment will eventually always achieve the same maximum effect for the patient. Thus, in the case of a more minor disorder it represents not only a treatment attempt, but at the same time a prophylactic measure which is intended to prevent further deterioration and degeneration.

Although the treatment approaches to spinal disorders are similar, the prognosis can be very different depending on the diagnosis, whereby the motto “No good treatment without a good diagnosis” applies here too. Therefore, a precondition for the laser therapy of disorders of the spinal column is always a good differential diagnosis, which has, more than anything, ruled out tumors as well as the need for an operation.

Laser therapy

☞ Treatment plan – *Spinal column* at the end of this chapter.

General effect of laser therapy on disorders of the spine

Laser therapy is the most effective, non-surgical pain-alleviating therapy available to us for the treatment of spinal disorders, and it is often more successful than any treatment with analgesics. Area irradiation soothes pain at the facet joints along the spine and reduces the hypertonus of tensed up back muscles. It lowers the nerve stimulation threshold for pressure pain, reduces the release of pain mediators and activity of trigger points and tender points. It has an anti-inflammatory effect and counteracts degeneration.

Laser puncture stimulates the release of endogenous pain-regulating substances and relaxes tense muscles. It strengthens the nerves and eliminates the congestion of Qi and blood (known as “Bi-syndrome” in TCM) and can thereby prevent arthrotic changes.

Spondylosis, ankylosis and spondylarthritis

Preliminary note

Spondyloses are proliferative changes to the vertebrae and intervertebral spaces. Spondylarthroses are changes in the area of the facet joints. X-rays show new growth at the endplates of the vertebra or on the facet joints. Ankyloses denote the formation of complete bone bridges between the endplates of the vertebrae.

Contrary to popular opinion, spondyloses and ankyloses are an expression of a sometimes severe and painful spinal disorder.

Causes

Usual there is genetic predisposition in breeds which have had their tails docked over many

generations (e. g. Boxers). Easing in the case of primary disorders of other areas of the locomotor system, such as a deformed hip, can chronically overstress the spinal column. Symptoms mostly occur in the transitional zones of the spine, especially at the thoracolumbar or lumbosacral transition. Spondylarthroses and ankyloses can be a sign of a segmental disorder, i. e. through the action principle of the segmental-reflector complex they can also involve or originate from the inner organs (1). An almost classic case, with spondyloses and ankyloses on lumbar vertebra two and three is a disorder at the cranial pole of the castration scar in bitches (↪ see also Treatment plan – *Disturbance fields and scars*).

Laser therapy

↪ Treatment plan – *Spinal column* at the end of this chapter.

The treatment intervals depend on the severity of the disorder. It is best to carry out treatment two to three times per week, in the event of severe pain also up to twice a day, until the pain subsides. With acute disorders laser treatment should be repeated at regular intervals after the pain symptoms have receded and also be used for prophylaxis. For chronic disorders a long-term supporting program of laser therapy is necessary and the treatment should be carried out continuously every two weeks or adjusted to the individual pain pattern of the patient. There are two alternatives for this regular treatment of pain patients in chronic cases: permanent acupuncture (gold acupuncture) or the acquisition of a small laser therapy system for use at home. The latter variant offers the bonus of versatile use, i. e. it can also be used for other purposes. The advantage of properly performed gold acupuncture is that follow-up treatments for treated areas are often no longer, or only rarely necessary.

Effect of laser therapy

Particularly through relieving the multifidi muscles tension between the individual vertebrae is eliminated and the local metabolism stimulated. This also results in a reduction in inflammation in the area of intervertebral foramina and a reduction in neuropathic pain. If there is no pressing need for surgery to rectify the disorder, laser therapy is one of the most suitable therapeutic measures, as it combines analgesia and easing of tension in one treatment.

Intervertebral disc disorders

Preliminary remarks

Intervertebral disc disorders occur very frequently in dogs, but less so in cats. A classic case is “Dachshund paralysis”. In general, breeds with very short legs and a spinal column that is very long in proportion to them are particularly at risk. If the hips are also in poor condition the spine becomes so overloaded due to the wagging of the hindquarters (LST twist) that disc problems are sooner or later unavoidable.

The pathogenesis makes a distinction between disc protusion and disc prolapse. If they are of a severity that impairs the central spinal canal and/or the nerve exits (foraminal form), both types can result in complex pain and/or dysfunction symptoms. In clinical terms there are five degrees of severity:

Locomotor system

- Grade I* Subtle pain in the spinal column with slightly impaired movements, e. g. “pause for thought” when standing up, lying or sitting down.
- Grade II* The symptoms of grade I are more pronounced and are accompanied by tenderness when the affected area is touched and episodes of pain with expressions of pain (yelping, howling).
- Grade III* The symptoms of grade II are more pronounced with additional reduction in neurological functions, above all surface sensitivity of the limbs (slight numbness, reduced postural reflex, slightly uncertain gait etc.).
- Grade IV* The symptoms of grade III are more pronounced with additional partial or full absence of deep sensitivity, atactic gait.
- Grade V* Paralysis, sometimes severe pain in the affected area of the spine, complete or partial failure of the sphincter muscle reflex and/or bladder muscles.

Laser therapy

☞ Treatment plan – *Spinal column* at the end of this chapter (including point SP 06).

Effect of laser therapy

Treatment can achieve a considerable improvement or even freedom from symptoms in the case of grades I to III.

Patients in grade IV require a precise evaluation of all the therapeutic options. A balance has to be found between “conservative” and complementary interventions/treatment approaches. Here, laser therapy is an excellent supporting tool in pain-relief and for strengthening and relaxation, but at the same time the possible necessity for an operation must not be ignored. In the case of grade V surgery is absolutely necessary, even in the early stages.

Laser treatment is a suitable concomitant therapy that is used preoperatively to alleviate pain and to strength and relax the muscles. Postoperatively, laser therapy should be started approx. 14 days after surgery for the purpose of tissue regeneration, scar healing and neutralization, as well as to promote peripheral nerve generation.

Caution! Starting laser therapy too soon after an operation can provoke undesirable post-operative bleeding which can build up pressure in the area that has been operated on.

CECS - Cauda Equina Compression Syndrome

Preliminary remarks

A compression of the cauda equina, the rearmost part of the myelon can have various causes. Often, as a result of the subsequent gait abnormalities and functional overloading of the lumbosacral transition (LST), a hip dysplasia provides fertile grounds for the development of CECS. Dogs suffering from CECS hardly ever have symptom-free hip joints.

The lumbosacral transition is the point at which pain, tension and functional deficits build up. This pathological process is generally accompanied by constriction of the spinal canal and the

spinal nerves in the intervertebral foramina and consequently corresponding neurological symptoms which can affect sphincter muscle and bladder control, tail function and the motor system and/or sensitivity of the hind quarters.

It is often asserted that CECS is not painful. However, trigger point examination usually indicates severe pain. As in humans, spinal constrictions in animals are also associated with strong pain, and the pathogenesis of CECS is usually anything but pain-free.

German Shepherds and Rottweilers are particularly affected.

Laser therapy

☞ Treatment plan – *Spinal column* at the end of this chapter.

Effect of laser therapy

The effect depends on the severity of damage to the nerves. In the initial stages a stable improvement and even absence of symptoms can be achieved with laser therapy. Even in more advanced stages a considerable reduction in symptoms can be bought about and further deterioration prevented. In chronic, very severe cases, laser therapy is an excellent bridging treatment for pain alleviation and preventative stabilization in the event of nerve function loss. After surgery it is the best concomitant therapy for rapid, complication-free recovery.

Other disorders of the spinal column

Degenerative myelopathy

Degenerative myelopathy is characterized by the demyelination of the nerve sheathes and results in progressive functional loss until paralysis. It tends to be rare in dogs and cats.

Laser therapy, which among other things increases the mitosis rate, can be successfully used here as adjuvant therapy, though prognoses can only be made with caution.

Shoulder

Preliminary remarks

Painful shoulder problems can be explained by the muscles that support and move the shoulder (with the exception of OCD and advanced arthroses). Disorders of the biceps tendon, often in conjunction with a damaged tendon channel, torn ligaments of the infra or supraspinatus muscle and contraction of the triceps muscle are very often the cause of most shoulder pain. Muscular dogs (Labradors, Rottweilers etc.) are particularly affected, while dogs with long functional muscles and a less strongly developed muscular system (Dobermans, Dalmatians etc.) are not so susceptible. Shoulder problems are considerably rarer than elbow problems, for example, although there is close interaction between the two areas. Accordingly, 30-40% of chronic elbow disorders bring about shoulder problems. The distal influence points for acupuncture are identical for elbow and shoulder problems as the anatomical reflex arcs are the same.

Locomotor system

Laser therapy

☞ Treatment plan – *Shoulder* at the end of this chapter.

Effect of laser therapy

Laser treatment usually works well and acts primarily through relaxation of the muscles. Outwardly the shoulder is comparatively well packed by muscles and pain in the shoulder is mostly characterized by muscle pain.

Elbow

Preliminary remarks

Patients with a lame front leg and painful elbow are routinely seen in veterinary practice. Disorders of the classic problem joint, the elbow, are various and complex. Traditionally diagnosis is carried out by palpating the medio-distal area of the elbow and in the event of pain, a disorder of the coronoid process deduced, with the consequence that far too many elbows are operated on. This diagnosis is often wrong as the ulnar section of the biceps tendon is also inserted at the same point, and in many cases it is not an inflammation in the area of the coronoid process that is involved, but an insertion desmopathy of the biceps tendon. This in turn is usually the result of overloaded muscle ligaments and tendon structures due to pain-related redistribution of the bodyweight of patients primarily suffering a problem in the hind quarters, often a hip dysplasia. Especially affected by this are young dogs which are frequently brought in for treatment at the age of 6 months with a lame front leg, and then often undergo surgery.

Most elbow problems can be traced back to inflammatory processes in the soft tissues (muscles, ligaments, tendons) and can therefore be optimally influenced by laser therapy. By way of contrast, genuine surgical cases, for example periarticularly or intra-articularly located free joint bodies or bone fragments that painfully hinder joint function, tend to be rare.

Laser therapy

☞ Treatment plan – *Elbow* at the end of this chapter.

Effect of laser therapy

Laser therapy has a high success rate if an arthrosis or other mechanical defect (i. e. genuine surgical cases) is not involved. In most cases it works better than a conventional or homeopathic analgesic, and with arthroses laser therapy is an excellent concomitant therapy to alleviate pain, maintain mobility and thereby to prevent further degeneration or proliferation.

Carpal joint

Preliminary remarks

The most common cause of carpal joint disorders, such as blockage of the accessory carpal bone, relative contraction of the lower arm flexor muscles, inflammations and arthroses, is the redistribution of the bodyweight from the back to the front. Normally the elbow and shoulder are then functionally overloaded before the carpal joint. Primary causes for relieving the elbow are more rarely mechanical impairments due to a damaged and/or previously operated elbow joint (OCD, ICP = isolated coronoid process, IAP = isolated anconeal process etc.).

With functional overloading of the front limbs and with a primarily damaged or surgically treated elbow it makes sense to treat the elbow joint at the same time. Only in the event of acute trauma can irradiation be restricted to the carpal joint. It is nearly always reported that the dog often licks its front paws and/or lower arm and this can frequently also be directly seen through discoloration of the dog's coat.

Laser therapy

☞ Treatment plan – *Carpal joint* at the end of this chapter.

Effect of laser therapy

Laser therapy relaxes the ligaments, tendons and muscles and also relieves pain. The analgesic effect is considerably better than that of conventional painkillers.

Hip

Preliminary remarks

Dogs: Most hip problems in dogs are due to a deformed and/or arthrotic hip. Hip dysplasia (HD) and its degree of severity are usually diagnosed by means of a standardized X-ray program in which by means of an image taken in a defined supine position with overextended joints and a vertical beam, the "Norberg-Olsson angle" is determined.

However, this standard method is far from adequate for ruling out a HD medically, with the result that a mild to moderate HD is often not recognized or is downplayed, and is also ruled out as the primary cause of problems in other joints. The consequences of this are:

1. The dog or cat suffers from chronic, undiagnosed hip pain.
2. The animals relieve the hip and as a result overload other joints, which generally leads to chronic problems and lameness at other points of the locomotor system.
3. Not infrequently these patients undergo unnecessary surgery on secondary overloaded joints.
4. This conceals the risk of surgical sequelae such as arthroses, lameness, chronic pain and contraction of the muscles.
5. In the long-term a complex pain syndrome can develop which can only managed at great cost and to a limited extent.

Locomotor system

Through certain diagnosis of HD as early as possible (after the age of six months (2)) this pain cascade can nearly always be avoided and the dog is able to lead a normal life. In general X-rays findings should be evaluated critically and supplemented with other conventional and complementary medical investigations (including further X-ray images, particularly taken laterally, gait analysis, trigger point diagnosis). Early diagnosis is useful in the case of Rottweilers and Labradors for example, which often come in at the age of only 6 months with lameness in a front leg. Pain therapy can be started early, secondary overload syndromes prevented and above all superfluous operations can be avoided. The treatment plan for hips is successful both in young dogs with HD as well in the case of chronic hip trouble and arthrotic, previously surgically treated hips.

Cats: HD and arthrosis of the hip are only rarely diagnosed in cats. However, in pure breeds (Persians, Carthusian cats etc.) they occur more commonly than would be expected. The reason why hip problems in cats are hardly noticeable is simple: cats rarely accompany their owner on walks, and a loss of mobility, particularly in house cats, tends to be seen as sign of coziness. Cats too take care of themselves by spending a great deal of time lying down, and their owner normally only reacts when the cat no longer jumps onto the kitchen table or windowsill. In general cats suffer far fewer orthopedic problems than dogs, but if they do, then it is primarily, and not infrequently, the hip that is affected. Consequent problems in other joints due to the redistribution of weight are much less common than in dogs.

Laser therapy

☞ Treatment plan – *Hip* at the end of this chapter.

Effect of laser therapy

In over 90% of cases the pain and gait improve enormously. Laser therapy is frequently more effective than veterinary treatment with analgesics. A disturbance in the area of LIV 11, the trigger point for the hip, is neutralized by treating LIV 03, but if LIV 03 is not treated the area of LIV 11 usually remains painful. Even if the treatment can otherwise work very well, this residual pain can be so troublesome that the hip disorder does not improve or rapidly becomes painful again.

Stifle

Preliminary remarks

As long as a surgical indication (such as a torn cruciate ligament or most meniscus lesions) is not involved, most painful processes in the stifle respond very well to laser therapy. These include stretched and torn ligaments, contusions, inflammations of the stifle joint (synovitis) and arthroses of the stifle. Laser therapy is contraindicated in the treatment of bacterial stifle infections. Before the start of laser therapy it must be precisely determined whether a functional overload, an inflammation of the stifle joint, a cruciate ligament lesion, with or without the involvement of the meniscus, overstretching of the collateral ligaments or another traumatic event is involved. Laser therapy is used, if possible immediately, after surgery to speed up the healing process and

to alleviate pain. It is also an important regeneration-promoting, preparatory and concomitant measure for postoperative physiotherapy.

Laser therapy

☞ Treatment plan – *Stifle* at the end of this chapter.

Effect of laser therapy

In over 90% of cases the pain and gait improve enormously. Laser therapy is frequently more effective than veterinary treatment with analgesics. In the case of purely surgical indications laser therapy is in the first instance an excellent concomitant therapy for pain alleviation and rapid, complication-free healing. If surgery can no longer help (e. g. in the case of an arthrotic stifle), laser therapy helps the existing impairments very effectively.

Ankle joint

Preliminary remarks

All painful processes in the ankle joint, including torn ligaments, arthroses and inflammation of the ankle, respond very well to laser therapy. If the cause lies in a trauma, laser therapy accelerates the course of healing and relieves the pain. In secondary overload, for example as a result of a stifle problem or HD, the primarily affected joint must be treated at the same time. On the other hand, in the case of cartilage defects which are not of alimentary, but other origin (e. g. OCD, osteochondrosis dessicans) laser therapy has no lasting effect and is only used as pain-alleviating concomitant treatment.

Laser therapy

☞ Treatment plan – *Ankle joint* at the end of this chapter.

Effect of laser therapy

A decisive effect is achieved through relaxation of the Achilles tendon and the rear calf muscles. The treatment usually works better than the administration of non-steroidal painkillers (NSAIDs).

Spinal column

Disorders of the spinal column are treated in accordance with the following treatment plan.

Concomitant measures

🌐 Physiotherapy and other therapies involving movement, such as swimming; therapeutic ultrasound; magnetic field therapy

Locomotor system



Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	KI 01, BL 60, ST 36, GB 34, SI 03, GV 14, LU 07, GV 03, GV 06, GV 09 + possibly SP 06, GV 12*
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: 599 Hz (PAIN acc. to Bahr), 285 Hz (SOL 2), 174 Hz (SOL 1), 3,895 (PAIN acc. to Reinger)

FI-Bands: FI-Band PAIN, FI-Band NERVES

Sweeps: ALPHA-Sweep, PURR-Sweep

Treatments: Acute pain: daily • Chronic pain: 1-2 x/week

Treatments total: Individual, depending on healing progress



Diagnosis

Trigger points GV 03, GV 04, GV 06, GV 09, GV 12; facet pressure points ("Huatuojiaji" points); for location → *Examination plan – Trigger points*



Area therapy

Treat the areas over the painful facet pressure points and painful trigger points GV 03, GV 04, GV 06, GV 09, GV 12 with the laser shower.

In this way you are treating the spinal transitions which are subjected to the strongest shear forces and are therefore potential or manifest neuralgic points.



Laser puncture

KI 01 Supplies the *Qi* and supports nerve function.

BL 60 Alleviates pain ("aspirin point"); relaxes the long, painfully contracted muscle groups in the rear legs.

ST 36 Moves *Blood* (according to TCM arthroses represent the "Bi syndrome" which is caused by the congestion of *Qi* and *Blood*)/relaxes the lateral muscles in the rear legs.

GB 34 Moves *Qi*/relaxes the lateral lower leg muscles.

SI 03 Releases excesses (filling, congestion) from the *Governor vessel*/relaxes the lateral structures in the front limbs.

GV 14 Relaxes the head and neck area.

LU 07 Distal point in disorders of the cervical spine (including spondyloses, ankyloses)/relaxes the medial bicep segment.

SP 06 Additional point in the case of spinal disorders and CECS (Cauda Equina Compression Syndrome)/stabilizes the vertebral disc support system/relaxes the medial muscle sections of the rear legs.



Point location

KI 01 Centrally under the foot pads of the rear limbs.

BL 60 Midway between the ankle hock and the outer ankle bone.

ST 36 On the outside of the tibia, laterally of the distal tibial tuberosity (before the tibial cranial muscle).

GB 34 Midway between ST 36 and the head of the fibula (after the tibial cranial muscle).

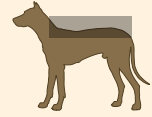
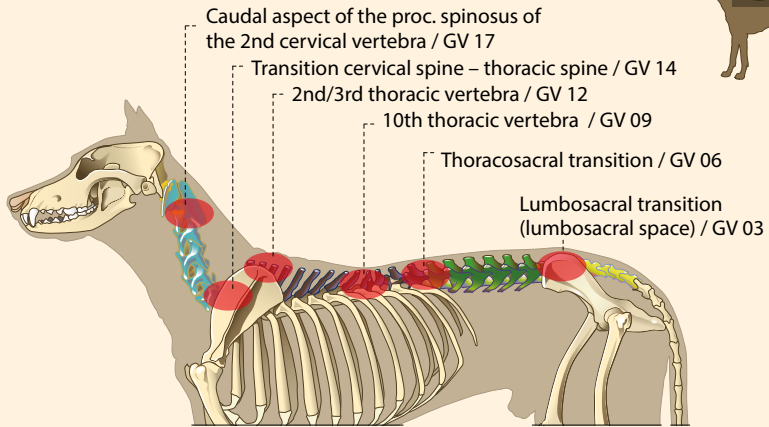
SI 03 At the start of the distal third of the 5th metacarpal bone, laterally.

GV 14 Cranial of the spinous process of the 1st thoracic vertebra.

LU 07 On the craniomedial edge of the radius, directly proximal of the medial styloid process.

SP 06 On the inside of the lower leg at the boundary of the lower quarter; at the medial tibia edge at the boundary to the gastrocnemius muscle.

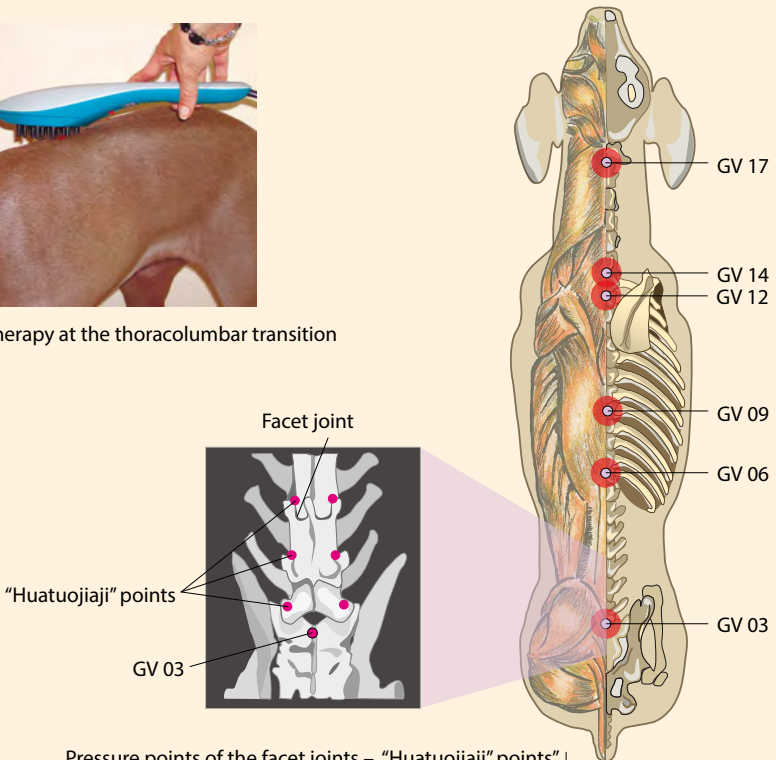
Treatment plan – Spinal column (1)



Transitions of the spinal column
Area therapy at the centers of influence of shear forces

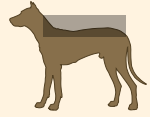


Area therapy at the thoracolumbar transition



Pressure points of the facet joints – "Huatuojiaji" points |
(excerpt: transition lumbar spine – sacrum, dorsal view)

Treatment plan – Spinal column (2)

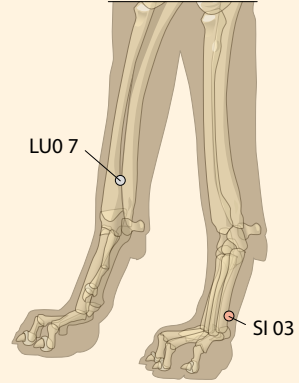


Front legs



Laser puncture LU 07

Front right paw, dorsal

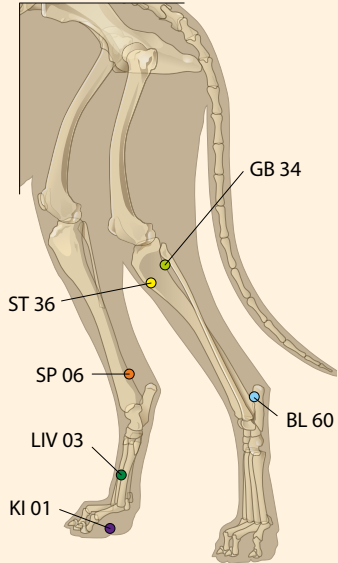
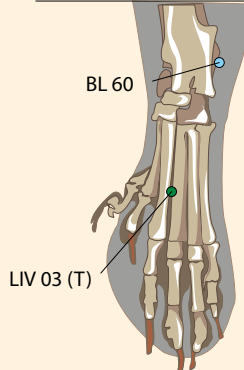


Rear legs



Laser puncture LIV 03

Rear left paw, dorsal



Locomotor system

Shoulder

Disorders of the shoulder are treated according to the following treatment plan. For information about types and causes of disorders, differential diagnosis, any contraindications and action mechanism of laser therapy ↗ *Characteristics of the indications.*

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture ↗ <i>Treatment basics – point therapy</i>
				cw	fm	
Dog	acute	8	100	1:20	2:40	LI 14, TH 12, SI 09, TH 03 (R), SI 03, LI 04, LU 07, PC 08, GV 12
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: 599 Hz (PAIN acc. to Bahr), 285 Hz (SOL 2), 174 Hz (SOL 1), 3,895 (PAIN acc. to Reiningger)

FI-Bands: FI-Band PAIN, FI-Band NERVES

Treatments: Acute pain: daily • Chronic pain: 1-2 x/week

Treatments total: Individual, depending on healing progress up to 12



Diagnosis TP LI 14, TP TH 12



Area therapy Irradiate the painful shoulder areas with the laser shower.



Laser puncture

Local points

- LI 14 Local point shoulder.
- TH 12 Local point shoulder and TP triceps.
- SI 09 Local point shoulder.

Distal points

- GV 12 Relaxes the rhomboid muscle.
- TH 03 (R) Relaxes the caudo-lateral muscles of the front limb.
 - SI 03 According to TCM: releases excesses (filling, congestion) from the *Governor vessel*. Anatomically: relaxes the lateral structures of the front limbs.
- LI 04 Analgesia point/relaxes the radial part of the biceps.
- LU 07 Relaxes the medial part of the biceps.
- PC 08 Relaxes the lower arm flexors.




Point localization


- GV 12 Between the processi spinosi of the 2nd and 3rd thoracic vertebra.
- LI 14 At the cranial edge of the shoulder joint, laterally of the supraspinatus muscle tendon.
- TH 12 Midway along the dorsal edge of the lateral muscle head of the triceps (midway between the long head and the lateral head).
- SI 09 In a recess between the deltoid muscle (pars scapularis) and the dorsal edge of the lateral head of the triceps muscle.
- TH 03 (R) Between metacarpal bones 3 and 4 (not, as conventionally described, between metacarpal bones 4 and 5).
 - SI 03 At the start of the distal third of the 5th metacarpal bone, laterally.
 - LI 04 At the medial edge of the 2nd metacarpal bone, in the center of the fold formed after spreading the thumb away from the 2nd toe.
 - LU 07 At the craniomedial edge of the radius, directly proximal to the medial styloid process.
 - PC 08 Centrally under the foot pads.

Concomitant measures


- 🌐 Physiotherapy; other therapies involving movement, such as swimming etc.; therapeutic ultrasound; joint injections if necessary.



Area therapy of the shoulder


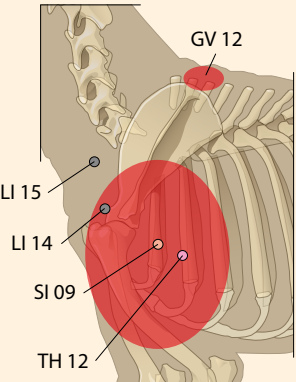
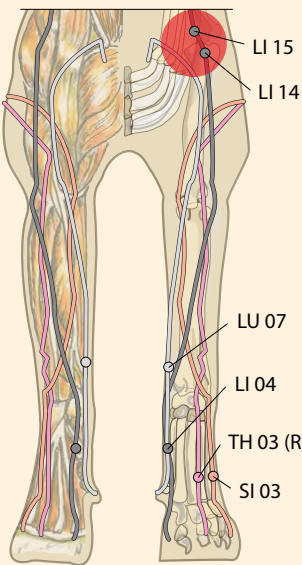


Laser puncture PC 08, front left paw, palmar

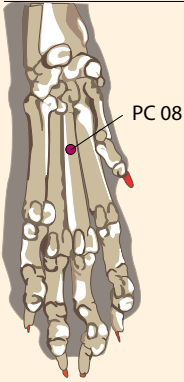


Laser puncture TH 03 (R), front left paw, dorsal

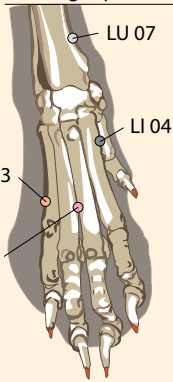
Treatment plan – Shoulder

Left front paw, palmar




Front right paw, dorsal




Locomotor system

Elbow

Disorders of the elbow are treated in accordance with the following treatment plan. For information about types and causes of disorders, differential diagnosis, any contraindications and action mechanism of laser therapy  *Characteristics of the indications*

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture  <i>Treatment basics – point therapy</i>
				cw	fm	
Dog	acute	6	100	1:00	2:00	LU 05 (R), LI 11, TH 11 (R), TH 10, PC 03, TH 03 (R), SI 03, LI 04, LU 07, PC 08, GV 12*
Dog	chronic	4	100	0:40	1:20	
Puppy	acute	4	100	0:40	1:20	
Puppy	chronic	3	100	0:30	1:00	

Supertherapy with frequencies (fm)

Single frequencies: 599 Hz (PAIN acc. to Bahr), 3,895 (PAIN acc. to Reininger), 9,592 Hz (STABILITY acc. to Bahr), 4,625 Hz (Self Heal)

FI-Bands: FI-Band PAIN, FI-Band NERVES, FI-Band BONES


Treatments: Acute pain: daily • Chronic pain: 1-2 x/week

Treatments total: Individual, depending on healing progress up to 12



Diagnosis TP LU 05 (R)



Area therapy Laser the elbow joint from all sides (lateral, cranial and medial);  also *Principles, Area therapy – Joint irradiation*



Laser puncture

Local points

- LU 05 TP LU 05 is also treated/local point elbow.
- LI 11 Local point elbow.
- TH 11 (R) Anatomically: insertion point of the triceps tendon (strong pain point at which the transferred load is focused).
- TH 10 Local point elbow.
- PC 03 Local point elbow.

Distal points

- TH 03 (R) Relaxes the caudo-lateral muscles of the front limbs.
- SI 03 According to TCM: Releases excesses (filling, congestion) from the *Governor vessel*/ anatomically: relaxes the lateral structures of the front limbs.
- LI 04 Analgesia point/relaxes the radial part of the biceps.
- LU 07 Relaxes the medial part of the biceps.
- PC 08 Relaxes the lower arm flexors.



Point location

- LU 05 In the center of the crook of the elbow, laterally of the biceps insertion tendon.
- LI 11 On the out-going bending crease of the elbow, before the lateral epicondyle.
- TH 11 (R) Exactly midway between the lateral epicondyle of the humerus and olecranon.
- TH 10 Directly on the olecranon.
- PC 03 In the center of the medial bending crease of the elbow joint.
- TH 03 (R) Between metacarpal bone 3 and 4 (not, as conventionally described, between metacarpal bones 4 and 5!).
- SI 03 At the start of the distal third of the 5th metacarpal bone, laterally.
- LI 04 At the medial edge of the 2nd metacarpal bone, in the center of the fold formed after spreading the thumb away from the 2nd toe.
- LU 07 At the craniomedial edge of the radius, directly proximal to the medial styloid process.
- PC 08 Centrally under the foot pads.

Concomitant measures

- ⊕ Physiotherapy and other therapies involving movement, phytotherapy (Devil's claw, ginger); Traumeel; joint injections.

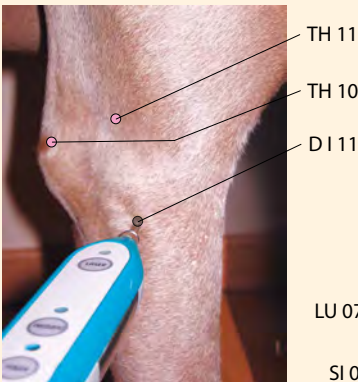
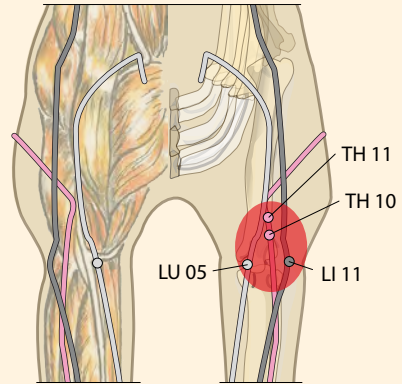
Treatment plan – Elbow



Front legs (dog)



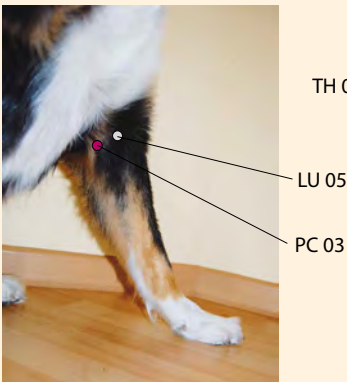
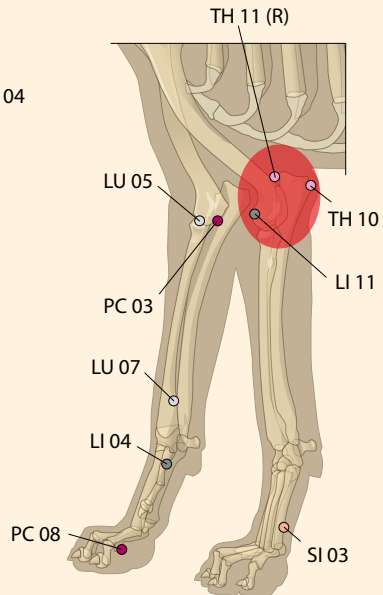
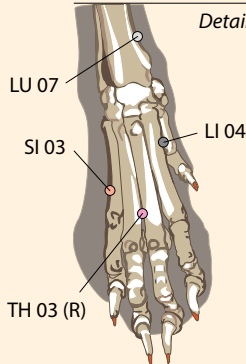
Area therapy of the elbow



Laser puncture of LI 11, right elbow, lateral

Front right paw, dorsal

Details ↷ Carpal joint



Left elbow, medial

Locomotor system

Carpal joint

Disorders of the carpal joint are treated in accordance with the following treatment plan. For information about types and causes of disorders, differential diagnosis, any contraindications and action mechanism of laser therapy *Characteristics of the indications*

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <i>Treatment basics – point therapy</i>
				cw	fm	
Dog	acute	6	100	1:00	2:00	TH 03 (R), SI 03, LI 04, LU 09, LU 07, PC 08
Dog	chronic	4	100	0:40	1:20	
Puppy	acute	4	100	0:40	1:20	
Puppy	chronic	3	100	0:30	1:00	
Supertherapy with frequencies (fm) Single frequencies: 1,152 Hz (PROSTAGLANDIN E1), 599 Hz (PAIN acc. to Bahr), 4,625 Hz (SELF HEAL), 25 Hz (PURR-frequency) FI-Bands: FI-Band INFECTION, FI-Band PAIN, FI-Band BONES						

Treatments: Acute pain: daily • Chronic pain: 1-2 x/week
Treatments total: Individual, depending on healing progress up to 15



Area therapy

Laser the carpal joint from all sides (lateral, cranial and medial); also *Principles, Area therapy – Joint irradiation*.



Laser puncture (on the carpal joint the influence points are also the local points).

- TH 03 (R) Relaxes the caudo-lateral muscles of the front limbs.
- SI 03 Anatomically: relaxes the lateral structures/according to TCM: releases excesses (filling, congestion) from the *Governor vessel*.
- SI 04 Analgesia point/relaxes the radial part of the biceps.
- LU 07 Relaxes the medial part of the biceps.
- LU 09 Local point for the carpal joint.
- PC 08 Relaxes the lower arm flexors.



Point location

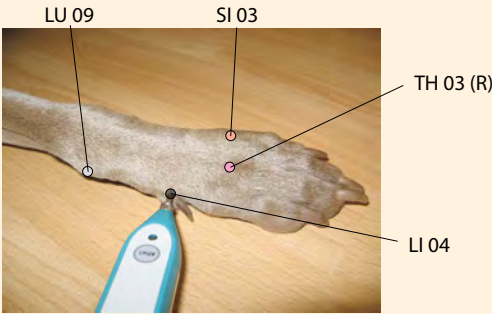
- TH 03 (R) Between metacarpal bone 3 and 4 (not, as conventionally described, between metacarpal bones 4 and 5!).
- SI 03 At the start of the distal third of the 5th metacarpal bone, laterally.
- LI 04 At the medial edge of the 2nd metacarpal bone, in the center of the fold formed after spreading the thumb away from the 2nd toe.
- LU 07 At the craniomedial edge of the radius, directly proximal to the medial styloid process.
- PC 08 Centrally under the foot pads.
- LU 09 Medially of the metacarpus.

Concomitant measures



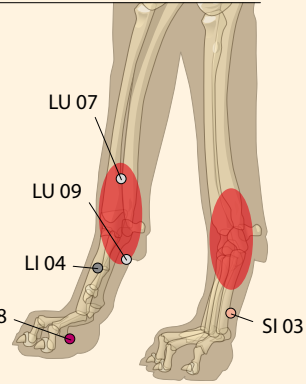
Physiotherapy, homoeopathy (Harpagophytum D12), phytotherapy (Devil's claw, ginger), joint injections, Traumeel.

Treatment plan – Carpal joint



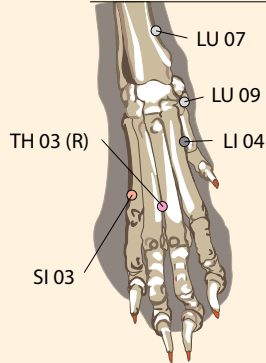
Laser puncture LI 04

Area and point therapy on the ankle joint

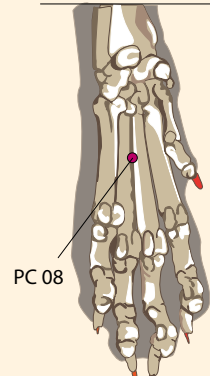


Front paws

Front right paw, dorsal



Front left paw, palmar



Front right paw, palmar

Locomotor system

Hip

Disorders of the hip are treated in accordance with the following treatment plan. For information about types and causes of disorders, differential diagnosis, any contraindications and action mechanism of laser therapy \rightarrow *Characteristics of the indications*

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture \rightarrow <i>Treatment basics – point therapy</i>
				cw	fm	
Dog	acute	8	100	1:20	2:40	GV 03, GB 29, GB 30, BL 27, BL 54, LIV 03 (T)
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: 599 Hz (PAIN acc. to Bahr), 4,625 Hz (SELF HEAL), 25 Hz (PURR-frequency)

FI-Bands: FI-Band PAIN, FI-Band BONES

Treatments: Acute pain: daily until recovery (1-3) • Chronic pain: 2 x/week constantly

Treatments total: Individual, depending on healing progress up to 10



Diagnosis

Trigger point LIV 11 (\rightarrow *Foreword – Trigger point examination – Hip*)



Area therapy

Area laser the neuralgic region above the lumbosacral transition (LST). This area suffers particularly from the effects of the LST twist and point GV 03 is frequently the most painful secondary location in disorders of the hip and an important pain point for the follow-on effects of hip disorders.



Laser puncture

- GV 03 Central point for relaxing the lumbosacral joint.
- GB 29 Local point of the cranial hip-moving muscles.
- BL 27 Relaxes the sacroiliac joints.
- GB 30 Local point of the caudal hip-moving muscles.
- BL 54 Local point of the dorsal hip-moving muscles.
- LIV 03 (T) General distal point for the hip / maximum "deficit point".
"Deficit point" LIV 03 has deficit by way of compensation, whereas at points BL 54, GB 29 and GB 30 there is an excess. An excess is expressed in the form of pain, swelling, increased blood supply etc., for instance. By stimulating the "dead" point LIV 03 energy can be balanced out. Relaxes the muscle function chain of the cranio-medial rear limb muscles.



Point location

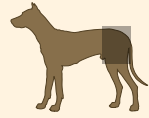
- GB 29 Starting from the trochanter major feel along the axis to the middle of the wing of the ilium as far as the acetabulum and slightly to the left a recess (GB 29); \rightarrow graphics (on the "ilium axis" before the acetabulum).
- GB 30 On the "pubic axis"; \rightarrow graphics (behind the acetabulum).
- BL 54 On the femur axis on the roof of the acetabulum; \rightarrow graphics.
- LIV 03 (T) Between metatarsal bones 2 and 3 at the distal end of the second third.
- LIV 03 original In dogs in which the 1st toe – phalange no. 1 – is bony, LIV 03 is between metatarsal bones 1 and 2.
- BL 27 Paramedian, medially of the cranial margin of the wing of the ileum.
- GV 03 "Baihui"/between L 7 and the sacrum on the meridians.

Concomitant measures



Physiotherapy and other therapies involving movement; therapeutic ultrasound; joint injections if necessary.

Treatment plan – Hip

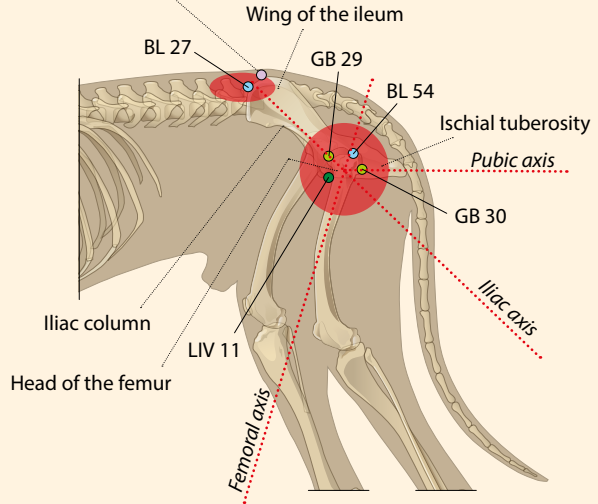


Lumbosacral transition/GV 03
Area therapy

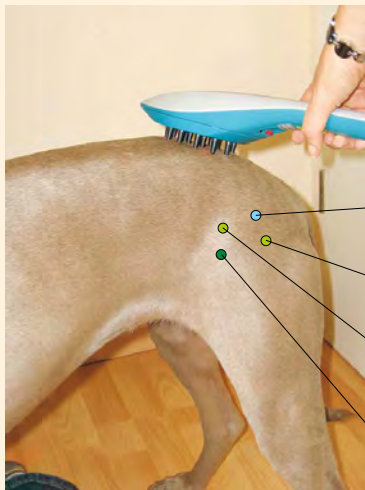


LIV 03 (T)

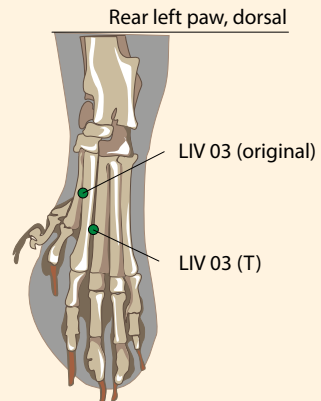
Rear left paw, dorsal



Area and point therapy over GV 03
and on the hip joint




Area therapy via GV 03




Locomotor system

Stifle

Disorders of the stifle are treated in accordance with the following treatment plan. For information about types and causes of disorders, differential diagnosis, any contraindications and action mechanism of laser therapy  *Characteristics of the indications*

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture  <i>Treatment basics – point therapy</i>
				cw	fm	
Dog	acute	6	100	1:00	2:00	LIV 03, BL 60, KI 03, ST 36, GB 34, BL 39, BL 40, eyes of the stifle Anti-inflammatory points: GB 41, 3E 05
Dog	chronic	4	100	0:40	1:20	
Puppy	acute	4	100	0:40	1:20	
Puppy	chronic	3	100	0:30	1:00	

Supertherapy with frequencies (fm)

Single frequencies: 174 Hz (SOL 1), 285 Hz (SOL 2), 5,743 Hz (Cortison), 1,152 Hz (PROSTAGLANDIN E1), 4,625 Hz (SELF HEAL)

FI-Bands: FI-Band REGENERATION, FI-Band INFECTION

Sweeps: ALPHA-Sweep

Treatments: Acute pain: daily until recovery • Chronic pain: 2-3 x/week up to 28 times

Treatments total: Individual, depending on healing progress




Diagnosis

Stifle clasp grip (trigger point BL 40), gait analysis.



Area therapy




Laser the stifle joint from all directions (lateral, medial, caudal, cranial).
 *Principles, Area therapy – Joint irradiation*



Laser puncture

- LIV 03 According to TCM: tonifies the *Liver Qi*; maximum deficit point / Anatomically: relaxes the muscle function chain of the crano-medial rear limb muscles, especially the rectus femoris muscle which is particularly strongly involved in the pain.
- BL 60 Relaxes the caudal calf muscles.
- KI 03 Relaxes the medial calf muscles.
- ST 36 Relaxes the lateral muscles of the hind quarters.
- GB 34 Relaxes the lateral lower leg muscles.
- BL 39 Relaxes the lateral collateral ligament.
- BL 40 Local point to relax the stifle joint structures.

Eyes of the stifle The “eyes of the stifle” are local points for pressure relief of the leverage on the stifle.

-  ST 34, “Upper eye of the stifle” / relaxes the lateral upper leg in the distal area.
-  ST 35, “Lateral eye of the stifle” – *Dubi*.
-  *Xiyan*, “medial eye of the stifle” – special point.



Point location

- LIV 03 (T) Between metatarsal bones 2 and 3 at the distal end of the second third.
- BL 60 Lateral, midway between the ankle hock and outer ankle bone.
- KI 03 Medial, midway between the ankle hock and inner ankle bone.
- ST 36 On the outside of the tibia, to the side of the distal tibial tuberosity (before the tibial cranial muscle).
- GB 34 Midway between ST 36 and the head of the fibula (behind the tibial cranial muscle).
- BL 39 Laterally above the head of the fibula in the prolongation axis of the tibial plateau.
- BL 40 At the center of the bend of the stifle between the muscles in a recess (popliteal fossa).

“EYES OF THE STIFLE” The eyes of the stifle are precisely medial and lateral of the tendon insertion point on the edge of the patella between the stifle-cap and start of the shin bone (lateral: *Dubi*, medial: *Xiyan*); point ST 34 is located proximo-laterally of the patella.

Concomitant therapy

☯ Physiotherapy, homeopathy (Harpagophytum D12), phytotherapy (Devil's claw, ginger), joint injections.

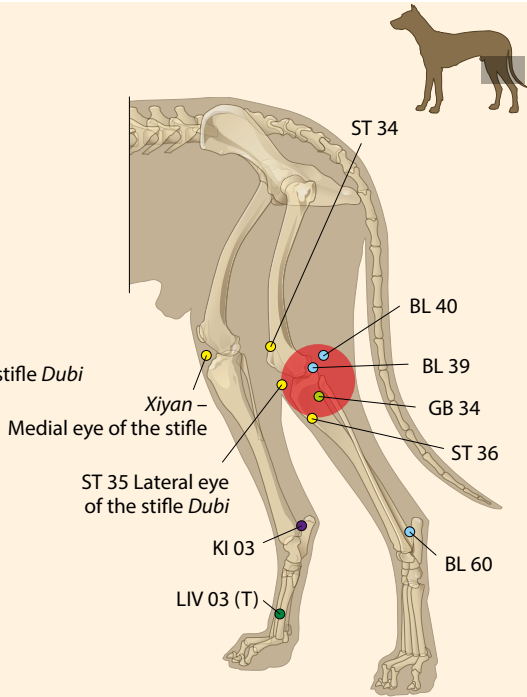
Treatment plan – Stifle



Laser puncture of the lateral eye of the stifle *Dubi*



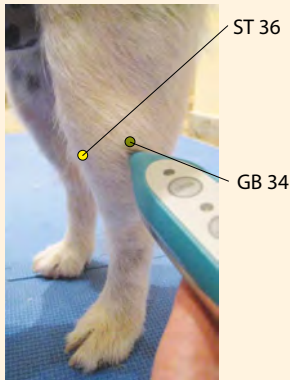
Laser puncture of the medial eye of the stifle *Xiyan*



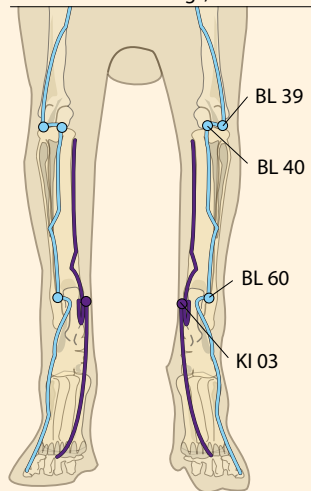
Area and point therapy on the stifle



Laser puncture of ST 36 and GB 34 hind left leg lateral




Rear legs, caudal view




Locomotor system

Ankle joint

Disorders of the ankle joint are treated in accordance with the following treatment plan. For information about types and causes of disorders, differential diagnosis, any contraindications and action mechanism of laser therapy  *Characteristics of the indications*

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture  <i>Treatment basics – point therapy</i>
				cw	fm	
Dog	acute	6	100	1:00	2:00	
Dog	chronic	4	100	0:40	1:20	KI 03, BL 60, LIV 03, GB 41, GB 34, ST 36, SP 06
Puppy	acute	4	100	0:40	1:20	(also anti-inflammatory points: GB 41, TH 05)
Puppy	chronic	3	100	0:30	1:00	

Supertherapy with frequencies (fm)

Single frequencies: 1,152 Hz (PROSTAGLANDIN E1), 599 Hz (PAIN acc. to Bahr), 4,625 Hz (SELF HEAL), 25 Hz (PURR-frequency)

FI-Bands: FI-Band INFECTION, FI-Band PAIN, FI-Band BONES


Sweeps: PURR-Sweep

Treatments: Acute pain: daily • Chronic pain: 1-2 x/week

Treatments total: Individual, depending on healing progress up to 15



Area therapy

Laser the ankle joint from all sides (lateral, cranial and medial); see also  *Principles, Area therapy – Joint irradiation*. In this way you also include local points KI 03 and BL 60, which can also be specially point lasered in the event of severe pain.



Laser puncture

- KI 01 Relaxes the medial calf muscles.
- BL 60 Relaxes the caudal calf muscles.
- LIV 03 Maximum deficit point/relaxes the muscle function chain of the cranio-medial rear leg muscles.
- GB 41 Relaxes the lateral muscles of the calf musculature.
- GB 34 According to TCM: moves Qi. Anatomically: relaxes the lateral lower leg muscles.
- ST 36 Relaxes the lateral muscles of the rear legs.
- SP 06 Anatomically: relaxes the medial muscles of the rear legs.



Point location

- KI 03 Medial, midway between the ankle hock and inner ankle bone.
- BL 60 Lateral, midway between the ankle hock and outer ankle bone.
- LIV 03 (T) Between metatarsal bones 2 and 3 at the distal end of the second third.
- GB 41 Midway between metatarsal bones 4 and 5, in a recess distal of the 4th and 5th tarso-metatarsal joint.
- GB 34 Midway between ST 36 and the head of the fibula (after the tibial cranial muscle).
- ST 36 On the outside of the tibia, lateral of the distal tibial tuberosity (before the tibial cranial muscle).
- SP 06 On the inside of the lower leg at the boundary to the lower quarter; on the medial tibia edge at the boundary to the gastrocnemius muscle.

Concomitant measures

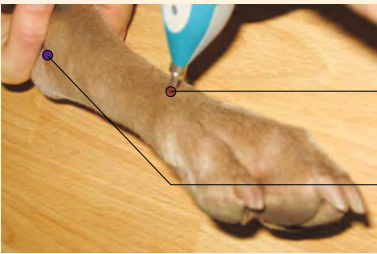


Physiotherapy, homoeopathy (Harpagophytum D12), phytotherapy (Devil's claw, ginger), joint injections, Traumeel.

Treatment plan – Ankle joint



Area therapy of the ankle joint



LIV 03 (T)

KI 03

Laser puncture LIV 03 (T), rear left paw

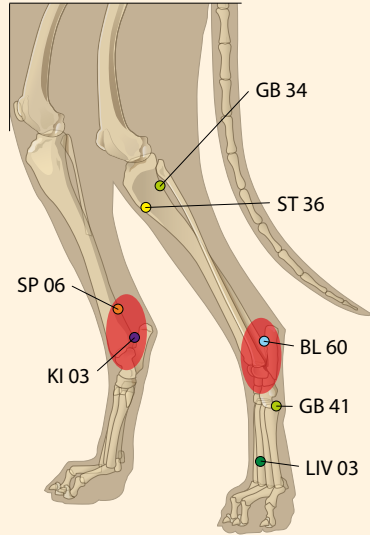


KI 03

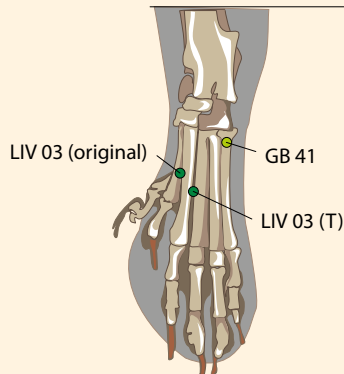
Laser puncture KI 03, rear left leg, medial



Laser puncture BL 60, rear left leg, lateral



Rear left paw, dorsal



Respiratory tract

Acute disorders

The ability of the body to counteract external and internal pathogenic factors depends on the condition of the immune system (☞ also Treatment plan *Immune system*).

A weakened respiratory tract defence system cannot respond adequately to attacks of cold, heat, humidity, dryness and other environmental factors or attacks by bacteria and viruses. Subsequent illnesses are often characterized by coughing, lack of energy, poor condition, increased respiratory rate and shortness of breath. Hypothermia or fever are common.

Depending on the course of the illness and its cause, TCM differentiates between various sets of symptoms and reacts with different treatment strategies. The following treatment plan therefore represents a type of cookbook recipe, but one which is successful, or at least helps towards recovery in most cases.

Caution: The thoracic area must not be irradiated in the case of febrile infections.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>☞ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	LU 07, SP 06, BL 13, BL 23, GV 14, LI 11
Puppy	acute	6	100	1:00	2:00	

Supertherapy with frequencies (fm)

Single frequencies: 1,152 Hz (PROSTAGLANDIN E1), ANTI-INFLAMMATION acc. to Rife (728 Hz, Streptokokken 880 Hz, 787 Hz), 741 Hz (SOL 7)

FI-Bands: FI-Band INFECTION, FI-Band REGENERATION

Treatments: Acute pain: daily

Treatments total: Individual, depending on healing progress



Diagnosis

BL 13 Shu point of the *Lung*, BL 14 Shu point of the *Pericardium*.
BL 23 Shu point of the *Kidney* (an attack on the *Lung* weakens the *Kidney*).



Area therapy

Laser the entire thoracic area – the front, the sides as well as the upper back – with the laser shower/laser comb. To complete the treatment, again concentrate especially on the area of BL 13 and BL 14.



Laser puncture

- LU 07 Loosens mucus.
- SP 07 Moves mucus, stimulates the immune system.
- BL 13 Shu point of the *Lung*, regulates the *Defense Qi*.
- BL 23 Shu point of the *Kidney*, tonifies the *Kidney Yang* and *Qi*.
- GV 14 With attacks of *Cold*: drives out *Wind*, regulates the *Defense Qi*.
- LI 11 With attacks of *Heat*: purges *Heat* and cools the *Blood*.



Point location

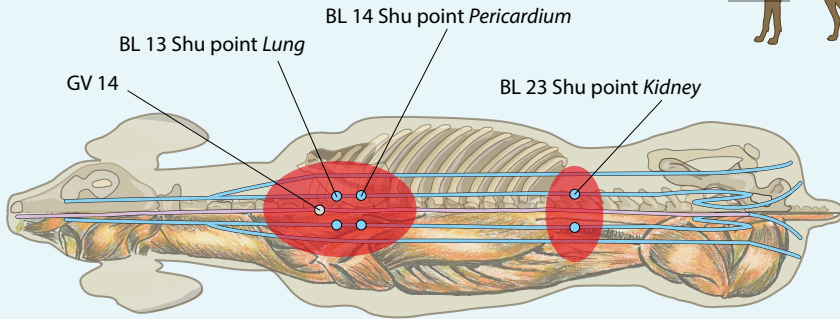
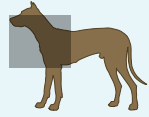
- LU 07 At the craniomedial edge of the radius, directly proximal to the medial styloid process.
- SP 07 On the medial side of the lower leg at the boundary to the distal quarter; at the medial tibia edge at the boundary to the tendon of the gastrocnemius muscle.
- BL 13 Lateral to the caudal boundary of the spinous process of L3.
- BL 13 Lateral to the caudal boundary of L4.
- BL 23 Lateral to the caudal boundary of the spinous process of L2.
- GV 14 Cranial to the spinous process of L1.
- LI 11 On the outgoing elbow crease, before the lateral epicondyle.

Additional measures

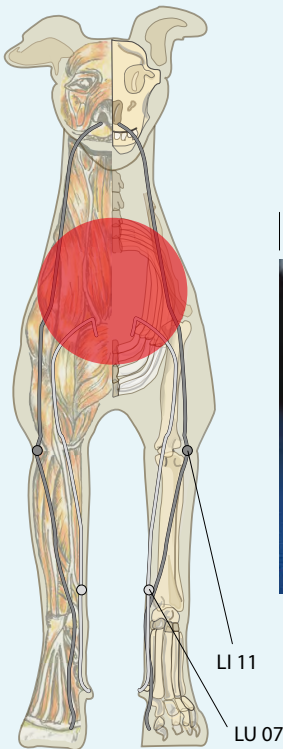


Cough tea; add mullien, garlic and red clover to the food twice daily for 10 days.

Treatment plan – Acute respiratory tract disorders

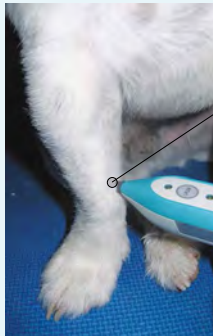


Area therapy over the Shu points of the Lung, Pericardium and Kidney

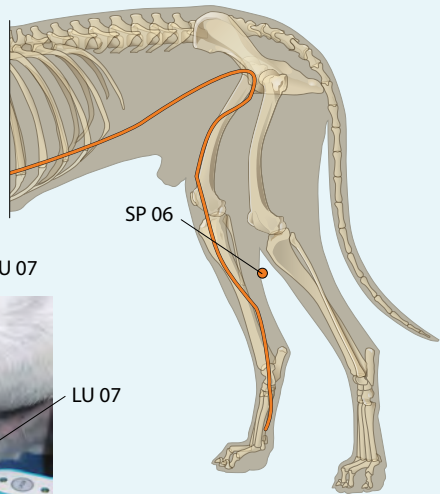


Area therapy of the thorax

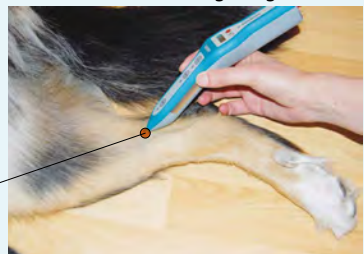
Laser puncture LU 07



LU 07



Laser puncture SP 06
rear right leg, medial



SP 06

Respiratory tract

Chronic illnesses/COPD

A cough in dogs and/or cats can become chronic if it does not clear up after the acute phase (e. g. COPD = Chronic Obstructive Pulmonary Disease or feline/canine asthma). Its distribution is often underestimated, particularly in the case of cats (especially outdoor cats). There are two forms of progression:

1. *Chronic progression* (with or without symptoms): slow or rapid deterioration in spite of various treatment attempts.
2. *Chronically recurring progression*: individual treatments work to varying degrees but only bring temporary relief from symptoms. The influence of the following factors leads to a new flare-up of the condition:
 - Exposure to bacteria, viruses and fungi.
 - Climatic factors (macroclimate – weather; microclimate – kennel/environment).
 - Allergenic factors (☞ also the indication *Immune disorders*).
 - Individual factors (fitness, stress, strain, disturbance fields, e. g. scars).
 - Food factors (unbalanced diet).
 - Chemical and physical factors (medication, geopathy, electromog).

The strain on the immune system can no longer be withstood, the movement of fluids is restricted and mucus build-up can no longer be loosened. The result is massive immigration of “inflammatory cells” into the respiratory organs without adequate removal of cells/cell residues, leading to chronic inflammatory swelling with constriction of the respiratory tract (obstruction) and thickening of mucous secretions.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture ☞ Treatment basics – point therapy
				cw	fm	
Dog	chronic	4	100	0:40	1:20	LU 07, SP 06, BL 13, BL 23, GV 14, LI 11
Puppy	chronic	3	100	0:30	1:00	+ BL 18, LIV 03, KI 01, KI 03

Supertherapy with frequencies (fm)

Single frequencies: 699 Hz (INTERFERON), 1,152 Hz (PROSTAGLANDIN E1), Anti-infection acc. to Rife (728 Hz, streptococcus 880 Hz, 787 Hz), 741 Hz (SOL 7)

FI-Bands: FI-Band INFECTION, FI-Band REGENERATION

Sweeps: ALPHA-Sweep, PURR-Sweep

Treatments: 1-2 x/week • **Treatments total:** Individual, up to 12 treatments



Area therapy ☞ Acute respiratory tract disorders and also:



Laser puncture ☞ Treatment plan – Respiratory tract disorders – Acute and also:

BL 18 Shu point of the *Liver*, regulates the liver function.

LIV 03 Tonifies the *Liver Qi*.

KI 01 Strengthens the *Kidney Qi*.

KI 03 *Kidney* function disorders, tonifies the *Kidneys*.



Point location

BL 18 Lateral to the caudal boundary of the spinous process of T10.

LIV 03 (T) Between metatarsal bones 2 and 3 at the distal end of the second third.

KI 01 Centrally between the foot pads of the rear legs.

KI 03 Medial, midway between the ankle hock and the inner ankle bone.

Effect

Laser therapy is very effective in most cases, especially when it is combined with phytotherapy (e. g. herbal tea/cough tea, also TCM recipes). The recommended treatments for acute and chronic cough in dogs and cats stimulate the immune system, increase the depth of breathing and respiratory rate, stimulate fluid flow and mucus production. However, if the organ is already irreversibly damaged, no currently conceivable therapy will be able to heal it any more. The best that can be hoped for is that the remaining residual functions can be stimulated and freedom from symptoms achieved.

Additional measures

🌿 Cough tea; phytotherapy: mullein, garlic and red clover (add to the food twice daily for a period of 10 days).

Treatment plan – COPD

Area therapy and point therapy | of the Shu points

BL 13 Shu point Lung
BL 20 Shu point Spleen
BL 23 Shu point Kidney

LI 11
LU 07
SP 06
KI 03
KI 01
ST 36

Rear paw, plantar
KI 01

Area therapy of the chest

Laser puncture LI 11
left elbow, lateral

Laser puncture KI 01
rear paw, plantar

Gastrointestinal tract

Acute disorders

Most gastrointestinal disorders are painful. There are only a few acute gastrointestinal disorders, such a mild diarrhea caused by an unbalanced diet, stress (e. g. transport stress) or poor quality or tainted food, that are hardly or only slightly painful.

Depending on their symptoms, painful gastrointestinal disorders are initially classified under the generic term “colic”. A vet should always be consulted and any special instructions carefully followed. This book recommends only general supportive measures and a treatment plan, which are helpful to the vet, without wishing to call into question any individual tried and tested colic management. Patients who may require an operation should not undergo any type of complementary therapy. In probably the most common type of colic that does not require surgery, namely cramp or spastic colic, laser therapy carried out by an experienced therapist is just as successful as the administration of tried and tested drugs (e. g. N-butyl-scopolamine and/or metamizol). The following acupuncture plan is recommended for the less experienced therapist.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	Colic: ST 01, ST 45, BL 21,
Puppy	acute	6	100	1:00	2:00	Constipation: BL 25, ST 36, LI 11, SP 06

Supertherapy with frequencies (fm)

Single frequencies: 553 Hz (LARGE INTESTINE), 7,695 Hz (QI-MOVEMENT) • FI-Bands: FI-Band PAIN • Sweeps: ALPHA-Sweep

Treatments: 1-2 x/week until recovery • **Treatments total:** 5 and more



Diagnosis

Shu point of the *Stomach*: BL 21, Shu point of the *Large intestine*: BL 25 (Shu point diagnosis is very reliable in previously untreated animals)



Laser puncture

Colic

BL 21 Point of 1st choice in spastic colics (point laser for 2 – 5 minutes).

ST 01 Removes excess from the *Stomach* meridian.

ST 45 Removes excess from the *Stomach* meridian.

Constipation *Note: Treat each point for at least 2 minutes.*

BL 25 Constipation, diarrhea (also colics)

ST 36 Strengthens the transport function of the *Stomach*

LI 11 Regulates the *Large intestine* and the *Nutritional Qi*, clears *Heat*.

ST 06 Constipation, disorders of the gastrointestinal tract.



Point location

ST 01 On the lower eyelid under the middle of the pupil.

ST 45 On the outer claw fold of the 3rd toe.

BL 21 Lateral to the caudal boundary of the spinous process of T13.

BL 25 Lateral to the caudal boundary of the spinous process of L5.

ST 36 On the outer side of the tibia, lateral to the distal tibial tuberosity (before the tibial cranial muscle).

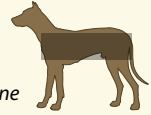
LI 11 On the outgoing bending crease of the elbow, before the lateral epicondyle.

SP 06 On the inside of the lower leg at the boundary to the lower quarter; at the medial tibia edge at the boundary to the gastrocnemius muscle.

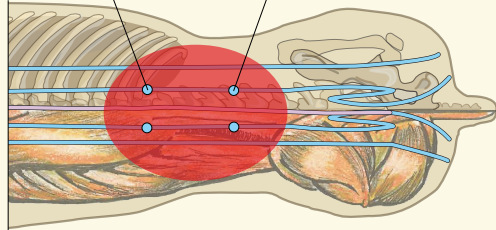
Additional measures

🌐 Homoeopathy (Colocynthis C30, Aconitum C30, Magnesium phos. C30); microbiological therapy.

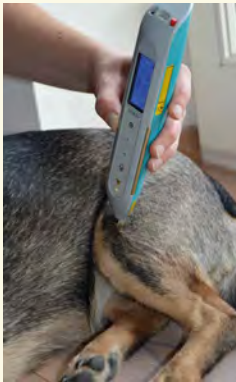
Therapy plan – Acute gastrointestinal disorders



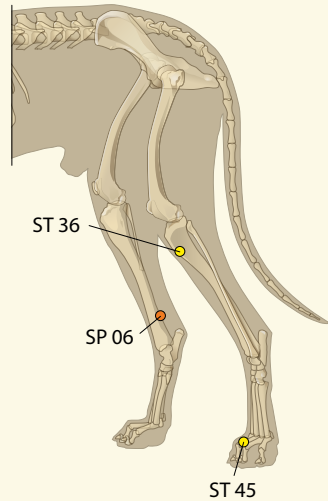
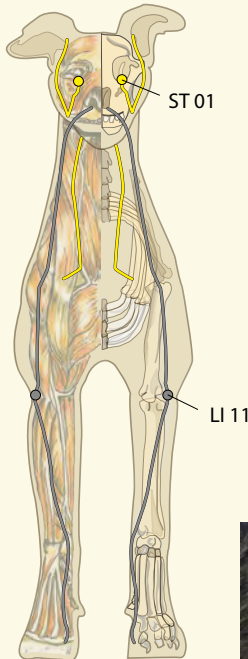
BL21 Shu point *Stomach* BL 25 Shu point *Large intestine*



Area therapy over the Shu points of the *Stomach* and *Large intestine*

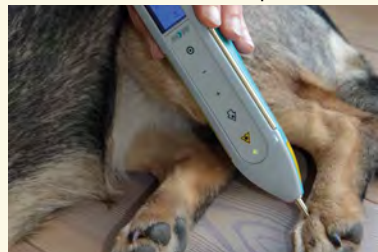
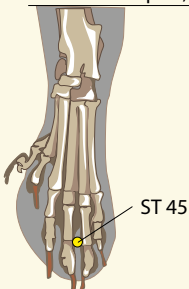


Point therapy ST 36
rear right leg, lateral



Point therapy ST 45
rear left paw, dorsal

Point therapy ST 45
rear left paw, dorsal



Gastrointestinal tract

Chronic disorders

Signs of a chronic gastrointestinal disorder are constant or regular diarrhea and permanent or recurrent susceptibility to colic of all kinds. In human medicine these symptoms are known as “irritable bowel syndrome” or “Crohn’s disease”. Western scientific explanation models cannot fully explain the causes and therefore limit themselves to a general description of a disorder of the large intestine that leads to diarrhea.

The following treatment plan sets out effective treatments for the most common symptoms of a chronic gastrointestinal disorder.

Causes ascribed to keeping conditions and food play an important role, particularly in chronic gastrointestinal conditions. Any treatment is doomed to failure if the feeding and/or exercise regime is not satisfactory.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	chronic	4	100	0:40	1:20	BL 21, ST 45, BL 27, SP 06, LIV 13, BL 18,
Puppy	chronic	3	100	0:30	1:00	LI 11, BL 25, ST 36, KI 01, LIV 03 (T), LI 04

Supertherapy with frequencies (fm)

Single frequencies: SOL 1 (174 Hz), SOL 7 (741 Hz), STOMACH (471 Hz), LARGE INTESTINE (553 Hz), LIVER (442 Hz), SPLEEN (702 Hz)

FI-Bands: FI-Band INNER CENTER

Sweeps: ALPHA-Sweep

Treatments: 2-3 x/week

Treatments total: 1-8

▲ Diagnosis

Above all the Shu points of the *Stomach* (BL 21) and the *Large intestine* (BL 25) are checked and, in addition, the corresponding alarm points. Testing the Shu points of the *Liver* and *Spleen* may also uncover any involvement of these organs.

(Shu point diagnosis is reliable in previously untreated animals).

Organ	Shu point	Alarm Mu point
Stomach	BL 21	CV 12
Large intestine	BL 25	ST 25
Liver	BL 18	LIV 14
Spleen	BL 20	LIV 13



Area therapy

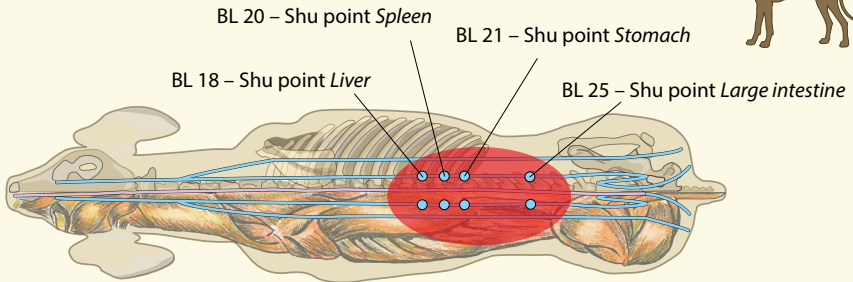
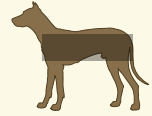
Area therapy is carried out over the active/painful Shu points.



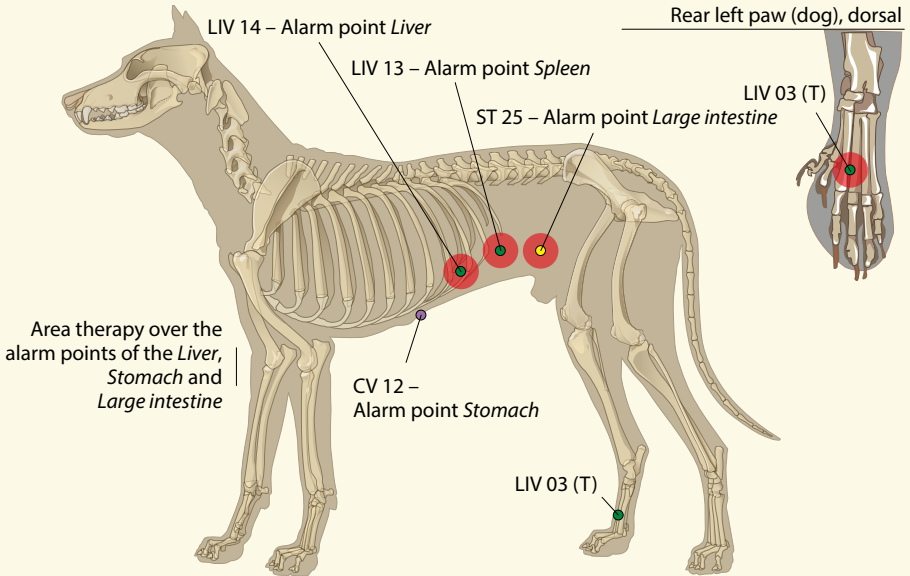
Laser puncture

↳ following pages

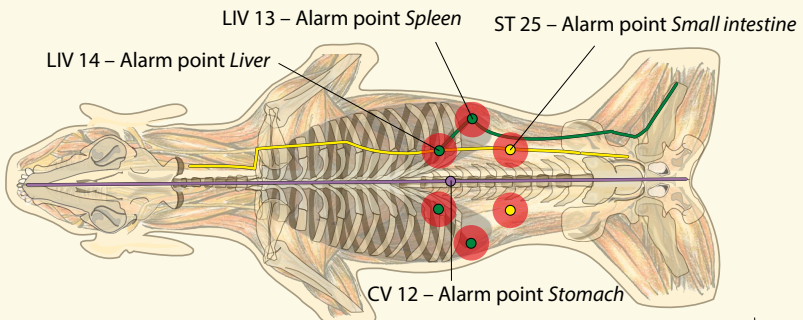
Treatment plan – Chronic gastrointestinal disorders 1



Area therapy over the Shu points of the *Liver, Spleen, Stomach and Large intestine*



Area therapy over the alarm points of the *Liver, Stomach and Large intestine*



Area therapy over the alarm points of the *Liver, Stomach, Spleen and Large intestine*

Gastrointestinal tract

Chronic disorders



Laser puncture

Spastic colics

- BL 21 Point of first choice in spastic colics (point laser for 2 – 5 minutes).
- ST 45 Removes excess from the *Stomach* meridian.
- BL 27 Shu point of the *Small intestine*, tonifies the *Small intestine*.

Chronic diarrhea

- SP 06 Constipation, disorders of the gastrointestinal tract.
- LIV 03 (T) Opens the passage between the front and hind halves of the body, tonifies the *Liver Qi*.
- BL 18 Shu point of the *Liver*, tonifies the *Liver*.
- LI 11 Regulates the *Large intestine* and the *Nutritional Qi*, clears *Heat*.

Constipation (Note: treatment time at least 2 minutes per point!)

- BL 25 Shu point of the *Large intestine*; colics, constipation, diarrhea.
- ST 36 Strengthens the transport function of the *Stomach*; regulates the intestines and movement of the bowels.
- KI 01 Strengthens the *Kidney Qi*.

Irritable bowel

- SP 06 Constipation, disorders of the gastrointestinal tract.
- ST 36 Regulates the intestines and movement of the bowels.
- LIV 03 Tonifies of the *Liver Qi*.
- BL 18 Promotes liver function.
- BL 25 Shu point of the *Large intestine*; tonifies the *Large intestine*.
- LI 04 Blockage point.



Point location

- BL 21 Lateral to the caudal boundary of the spinous process of T13.
- ST 45 On the outer claw fold of the 3rd toe.
- BL 27 Lateral to the caudal boundary of the spinous process of L7.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; on the medial tibia edge at the boundary to the gastrocnemius muscle.
- LIV 03 (T) Between metatarsal bones 2 and 3 on the distal end of the second third.
- BL 18 Lateral to the caudal boundary of the spinous process of T10.
- LI 11 On the out-going bending crease of the elbow, before the lateral epicondyle.
- BL 25 Lateral to the caudal boundary of the spinous process of L5.
- ST 36 On the outer tibia side, lateral to the distal tibial tuberosity (before the tibial cranial muscle)
- KI 01 Centrally under the foot pads of the hind quarters.
- LI 04 On the medial edge of the 2nd metacarpal bone, in the middle of the fold formed after spreading the thumb away from the 2nd toe.

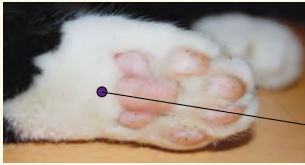
Additional measures



Homoeopathy:

- In diarrhea: Ferrum phosphoricum C30 (once daily).
- In chronic diarrhea: Natrium choratum C30, Chelidonium C30 (once daily, administered alternately)
- In both cases: microbiological therapy

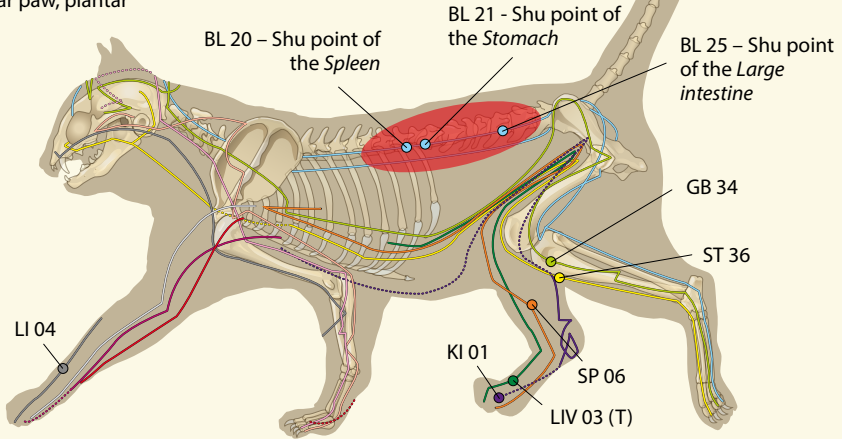
Treatment plan – Chronic gastrointestinal disorders 2



Rear paw, plantar

KI 01

Area therapy of the Shu points



BL 20 – Shu point of the Spleen

BL 21 - Shu point of the Stomach

BL 25 – Shu point of the Large intestine

GB 34

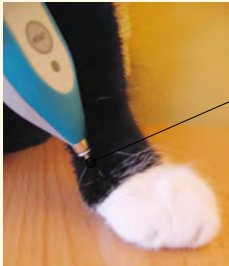
ST 36

LI 04

KI 01

LIV 03 (T)

SP 06



LI 04

Laser puncture LI 04, left front paw, dorsal



Laser puncture LIV 03 (T), rear paw, dorsal



Area therapy of the Shu points



GB 34

Laser puncture GB 34, right rear leg

Bladder and kidneys

Disorders of the urinary organs can be subtle in nature and may only become apparent due to pain in the renal area, for example. But they can also be acutely painful, in the form of “renal colic” for instance. Kidney and/or bladder problems frequently occur together with diseases or disorders of the sexual organs. This can be explained in part by the course of the development of the urinary organs in the embryo. According to the 5 element rule of TCM, the affected organs, kidneys, bladder and sexual organs are assigned to the element water. Their condition generally deteriorates in wet weather, and so renal colic occurs more often after heavy downpours than after other external influences. Less severe disorders of the urinary organs respond well to laser therapy and laser puncture. On the other hand larger kidney stones or gallstones cannot be treated in this way. In this case making changes to the food constitutes the main approach, and if this is not successful, surgery may be necessary.

Urine retention is not necessarily linked to a urinary organ problem. It often occurs in connection with spastic colic and can then be traced back to the spastic-painful abdominal condition of the animal.

In many cases incontinence can be very successfully treated. However, it should be noted that if there are scars present, such as scars caused by a colic operation, neutralization may be necessary. (↔ Treatment plan *Disturbance field and scars*).

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↔ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	6	100	1:00	2:00	Depending on the individual indication or symptom
Dog	chronic	4	100	0:40	1:20	
Puppy	acute	4	100	0:40	1:20	
Puppy	chronic	3	100	0:30	1:00	

Supertherapy with frequencies (fm)

Single frequencies: KIDNEY (611 Hz), NOGIER B (584 Hz), SOL 2 (285 Hz), SOL 1 (174 Hz)

FI-Bands: FI-Band INFECTION (especially with bacterial infection), FI-Band PAIN, FI-Band INNER CENTER

Treatments: Acute: daily, Chronic: 2-3 x/week

Treatments total: 1-10



Diagnosis

The Shu points of the *Bladder* and *Kidney* are painful.



Area therapy

The areas above the Shu points of the *Kidney* (BL 23), the *Large intestine* (BL 25) and the *Bladder* (BL 28) are area lasered.

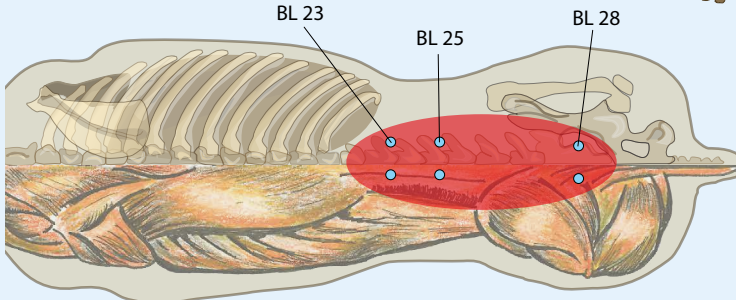
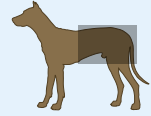
Area therapy above the alarm point of the *Bladder* (CV 03) is extremely effective, but the area is usually too sensitive so that the animal will often not allow treatment at this point.



Laser puncture

↔ following pages

Treatment plan – Bladder and kidneys (1)



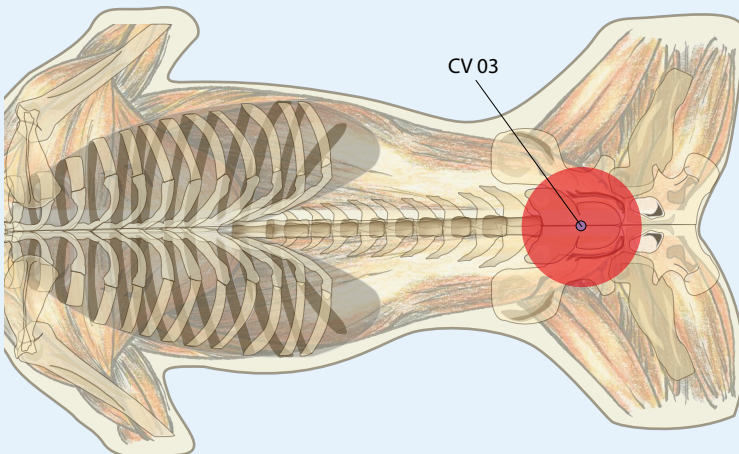
Area or point therapy of the Shu points of the *Kidney, Large intestine and Bladder* (BL 23, BL 25 and BL 28), dog, dorsal view



Laser puncture BL 23, Shu point *Kidney*



Area therapy over CV 03, alarm point *Bladder*



Area therapy over CV 03, the alarm point of the *Bladder*, dog, ventral view

Bladder and kidneys



Laser puncture

Acute nephritis

- BL 23 Tonifies *Kidney Yang* and *Qi* (Shu points of the *Kidney*).
- KI 03 Tonifies the *Kidneys* and strengthens the *Essence*.

Chronic nephritis

- BL 23 Shu point of the *Kidney*, tonifies *Kidney Yang* and *Qi*.
- KI 01 Strengthens the *Kidney Qi*.
- BL 25 Shu point of the *Large intestine*, tonifies the *Large intestine*, colics.

Acute cystitis

- BL 28 Shu point of the *Bladder*.
- BL 65 Removes *Excess* from the *Bladder meridian*.

Chronic cystitis

- BL 28 Shu point of the *Bladder*.
- BL 01 Deficit point of the *Bladder meridian*.

Incontinence

- CV 01 Clears *Damp Heat* (particularly from the urogenital area).
- KI 01 Strengthens the *Kidney Qi*.
- KI 03 Tonifies the *Kidneys* and strengthens the *Essence*.
- SP 06 Regulates the sphincters.
- CV 03 Disorders of the urinary tract.



Point location

- BL 23 Lateral to the caudal boundary of the spinous process of L2.
- KI 03 Midway between the medial ankle hock and inner ankle bone.
- KI 01 Centrally under the foot pads of the rear legs.
- BL 25 Lateral to the caudal boundary of the spinous process of L5.
- BL 28 Lateral to the second sacral dorsal foramen in a depression between the sacrum and the medial boundary of the dorsal iliac spine.
- BL 65 Lateral to the head of the 5th metatarsal bone, proximal to 5th metatarsal-phalangeal joint.
- BL 01 In a depression on the inner corner of the eye, in a notch dorsal to the base of the nictitating membrane.
- CV 01 Between the anus and the vulva in female animals and between the anus and root of the penis in male animals.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; at the medial tibia edge at the boundary to the gastrocnemius muscle.
- CV 03 On the ventral midline, 1 Cun cranial to the pectineal line of pubis.

Additional measures



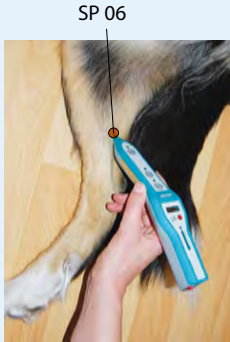
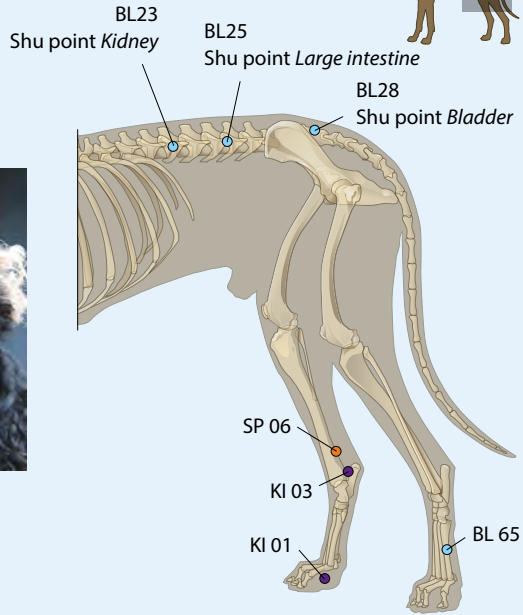
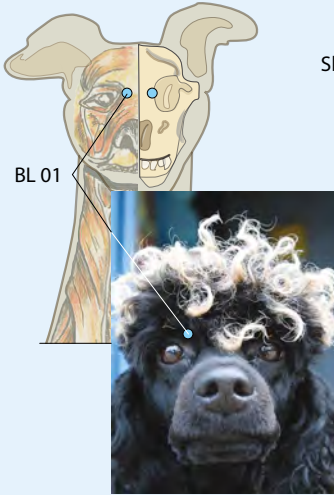
Kidney stones: Change of diet and food supplementation (e. g. Renodoron)

Nephritis: Homoeopathic with *Berberis vulgaris*

Cystitis: Homoeopathic with *Cantharis*

Last: Nettle, peppermint, chamomile teas.

Treatment plan – Bladder and kidneys (2)



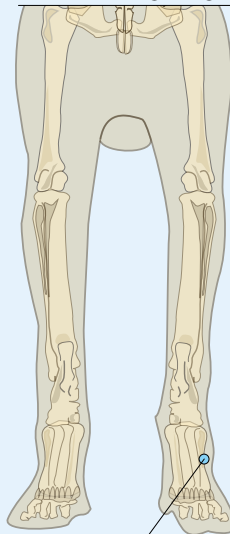
Laser puncture SP 06
rear right leg, medial



Laser puncture KI 03
rear left leg medial

KI 03

Rear legs (dog), caudal view



BL 65



Laser puncture KI 01 (dog)
rear paw, plantar

Liver

Toxic effects are the most common causes of liver disorders. They include:

- Environmental effects in food and water
- Effects of pharmaceutical products
- Metabolic disorders and/or infectious diseases
- Incorrect feeding

Liver disorders are rarely associated with pain and are therefore often not noticed. Symptoms which could indicate a liver disorder are lack of energy, deterioration in condition, and, not infrequently, susceptibility to diarrhea without painful colic. A marked unwillingness to move may also be noticeable. According to TCM the muscles are not being continuously supplied with Qi by the liver.

If an infection is suspected, in addition to eliminating the toxic effect factors, investigation of leptospirosis is necessary and tumors of the liver must also be ruled out. The treatment strengthens the liver function and also stimulates as well as supports detoxification (see also

☞ Treatment plan *Metabolism/ detoxification*)

Important note: Previously treated patients with increased "liver values" are often presented. However, most of these cases do not involve a liver disorder, but rather a reaction, for example to the administration of analgesics, which recedes again by itself if the liver is healthy.

Treatment plan

Age	Wound Depth	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture ☞ Treatment basics – point therapy
				cw	fm	
Dog	acute	6	100	1:00	2:00	BL 18, LIV 03, BL 23
Dog	chronic	4	100	0:40	1:20	
Puppy	acute	4	100	0:40	1:20	
Puppy	chronic	3	100	0:30	1:00	

Supertherapy with frequencies (fm)

Single frequencies: LIVER (442 Hz), NOGIER B (584 Hz), SOL 2 (285 Hz), SOL 7 (741 Hz)

FI-Bands: FI-Band DETOX, FI-Band REGENERATION

Treatments: daily until improvement • Treatments total: 1-5



Diagnosis

The Shu points of the *Liver* and *Gallbladder* react painfully.



Area therapy

The area above the Shu points of the *Liver* (BL 18) and the *Gallbladder* (BL 19) are area lasered.



Laser puncture

BL 18 Shu point of the *Liver*, tonifies the *Liver*.

LIV 03 Tonifies the *Liver Qi*.

BL 23 Shu point of the *Kidney*, tonifies the *Kidney Qi*.

GV 03 (Baihui) Central trigger point for the rear half of the body.



Point location


BL 18 Lateral to the caudal boundary of the spinous process of T10.

BL 23 Lateral to the caudal boundary of the spinous process of L2.

GV 03 "Bahui" – between L7 and sacrum on the medians.

LIV 03 (T) In dogs in which the 1st toe (phalange no.1) is bony LE 03 is between metatarsal bones 1 and 2, otherwise between metatarsal bones 2 and 3.

Additional measures

 Dandelion (*Taraxacum*) homeopathically or as a herb/tea. Mistletoe tea is also recommended. Foods that are high in carbohydrates should be avoided!

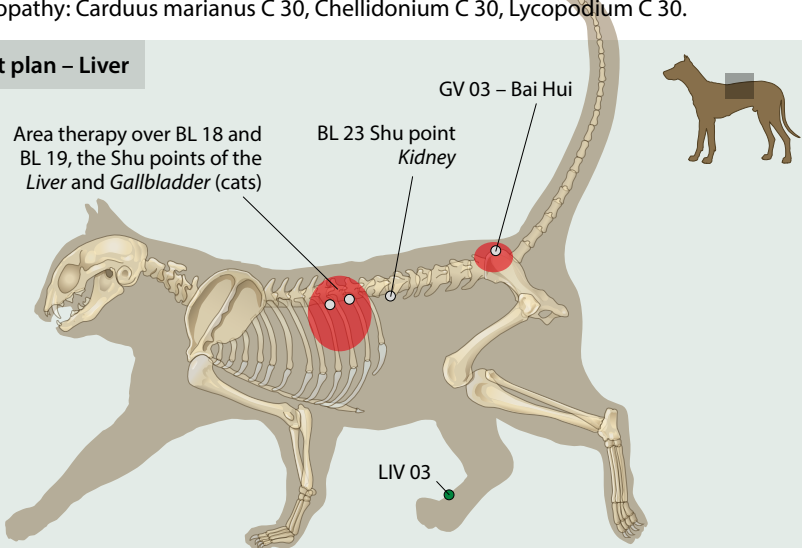
Homoeopathy: *Carduus marianus* C 30, *Chellidonium* C 30, *Lycopodium* C 30.

Treatment plan – Liver

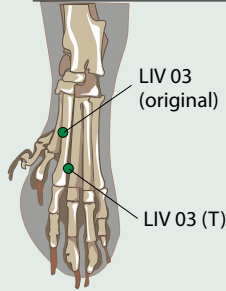
Area therapy over BL 18 and BL 19, the Shu points of the *Liver* and *Gallbladder* (cats)

BL 23 Shu point
Kidney

GV 03 – Bai Hui



Laser puncture LIV 03
rear left paw, dorsal



LIV 03

Laser puncture LIV 03
rear left paw, dorsal

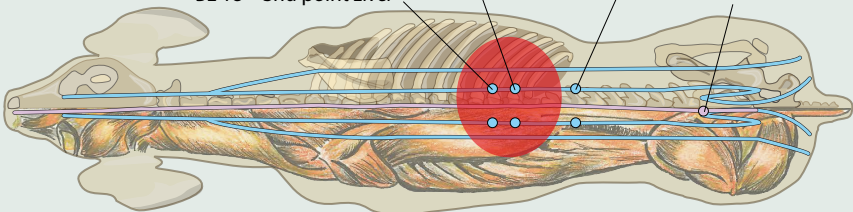
Area therapy over the Shu points
BL 18, BL 19, BL 21 (cats)

BL 19 – Shu point *Gallbladder*

BL 23 – Shu point *Kidney*

BL 18 – Shu point *Liver*

GV 03 – Bai Hui



Area therapy over BL 18 and BL 19, the Shu points of the *Liver* and *Gallbladder* (dogs)

Spleen and pancreas

In Western conventional medicine the spleen and pancreas rarely tend to be at the focus of diagnostic measures. In contrast, TCM ascribes them an important role as the possible cause of a wide variety of disorders.

According to TCM the principal functions of the Spleen and Pancreas are “transport and transformation” wherein their main property is “to guarantee cyclical processes” and “keeping things in place”. As vague as this may sound, a TCM diagnostician examines the Spleen in the event, for example, of a) diarrhea or constipation (disturbed “transformation” of the stomach contents, b) endogenous deficiency (inadequate “transportation” of nutrients to the required location), c) vertebral disc disorders, general functional disorders or also edemas (lack of ability to “keep things in place”, d) disorders of the hormonal or day/night rhythm (“disturbed cyclical processes”) and also frequently e) immune disorders etc. In the presence of these main symptoms, the unpractised user can, even without detailed TCM diagnosis, conclude that the Spleen is involved if the treatment plan he/she has chosen on the basis of the symptoms does not help. The associate/Shu points and alarm/Mu points of the Spleen should then be examined and, if necessary, included in the treatment plan with the additional points set out below.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>☞ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	6	100	1:00	2:00	LIV 03 (T), SP 06, BL 20, ST 36, GB 34, BL 21, GB 30
Dog	chronic	4	100	0:40	1:20	
Puppy	acute	4	100	0:40	1:20	
Puppy	chronic	3	100	0:30	1:00	

Supertherapy with frequencies (fm)

Single frequencies: SPLEEN/PANCREAS (702 Hz), NOGIER B (584 Hz), SOL 2 (285 Hz), SOL 7 (741 Hz)

FI-Bands: FI-Band INNER CENTER, FI-Band LYMPHE

Treatments: 1-2 x/week • **Treatments total:** 1-10



Area therapy

Laser the area above the Shu points of the *Stomach* and *Spleen* (BL 20 and BL 21) and the left flank area extensively with the area shower.



Laser puncture

- LIV 03 (T) Controls the energy and function of the *Spleen* and *Stomach*.
- SP 06 Eliminates disorders of the *Spleen* functions “transformation” (= conversion and utilization of the stomach contents for the body) and “transport”.
- BL 20 Shu point of the *Spleen*, stimulates the activity of the *Spleen* and *Pancreas*.
- ST 36 Moves *Blood*.
- GB 34 Moves *Qi*.
- BL 21 Shu point of the *Stomach*, stimulates stomach activity.
- GB 30 Cools the *Blood* (tonifies *Qi* and *Blood* and dissolves *Damp Heat*).



Point location

- LIV 03 (T) Between metatarsal bones 2 and 3 (LIV 03 T) at the distal end of the lower third.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; at the medial tibia edge on the boundary to the gastrocnemius muscle.
- BL 20 Lateral to the caudal boundary of the spinous process of T12.

- ST 36 On the outside of the tibia, lateral to the distal tibial tuberosity (before the tibial cranial muscle).
- GB 34 Midway between ST 36 and the head of the femur (behind the tibial cranial muscle).
- BL 21 Lateral to the caudal boundary of the spinal process of T3.
- GB 30 Caudal to the trochanter major in a furrow behind the hip joint /on the pubic axis behind the acetabulum (= illustration Treatment plan – Hip).

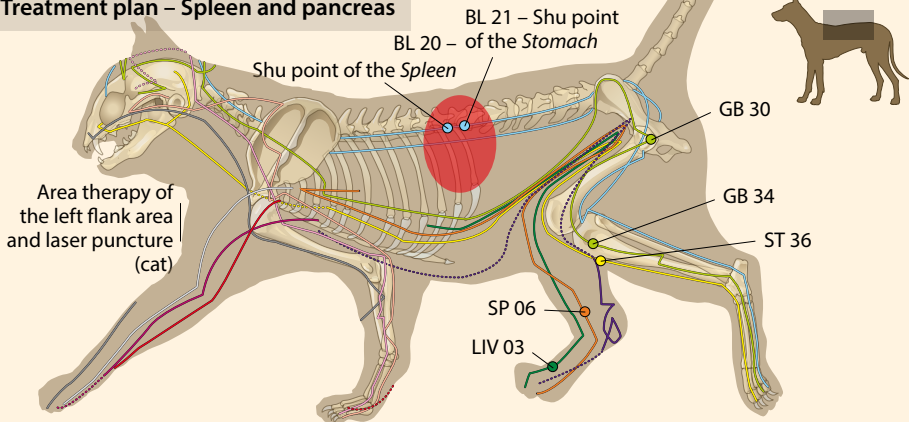
Effect

The treatment is nearly always very successful, particularly in combination with stimulation of the immune system with microbiological therapy.

Additional measures

- 🍽️ Change of food (bland diet), TCM herbs (*Spleen teas*), stimulation of the immune system with microbiological therapy.

Treatment plan – Spleen and pancreas



Area therapy over BL 20 and BL 21



Laser puncture GB 34
rear right leg, lateral

Laser puncture GB 30



Laser puncture LIV 03 (T)

Vessels

Foreword

Vessels such as arteries, veins and lymphatic vessels transport blood and lymph with the aid of their pulsating qualities and blood pressure. They help to regulate the fluid balance in tissue, act as thermoregulatory mechanisms and pathways for the flow of energy (*Qi* flow).

At the junction of the vessels vortices are created which lead to the production of levitative energy, which is responsible for the continuous transportation of blood cells etc., even against the force of gravity.

Disruption to the flow of blood and lymph leads to changes in vortex formation and consequently to a reduction in the flow rate. This results in transport deficits through cluster formation ("clumping of the material being transported"). The best example of this is varicose veins in humans.

Flow disruptions can have many causes, including:

- Vascular disorders
- Vascular injuries (e. g. through the effects of external force, injections or chemically due to drugs)
- Heart diseases
- Medicinal products or poisons
- Constant poor exercise or lack of movement
- Disorders of the mechanisms controlling the fluid balance
- Nutritional disorders

If blood and lymph cannot flow freely the fluid balance can no longer be adequately regulated and the tissue is poorly nourished. This can lead to the formation of edema and temporary or permanent damage to tissue and vessels, even tissue death.

If the fluids pass unhindered through damaged vessel walls into the surrounding tissue, serum accumulations (seromas) or hematomas can develop, and effusions can occur irrespective of the vascular structures. Inflammations caused by bacteria for example, can liquefy and lead to the formation of a purulent, cavity-like effusion (abscess).

According to TCM transport and transformation are governed by the *Spleen/pancreas* organ system and the fluid balance is controlled by the *Kidneys*. The regulation of these functions is therefore predominantly influenced by these two organ systems.

Area therapy with laser is extremely suitable for the local treatment of effusions. The "maturing" of abscesses is also supported.

The only exceptions for area therapy are inflammatory edemas (contraindication!) as laser therapy promotes blood supply, whereas these areas really need to be kept cool.

Hematoma and seroma

Blood effusions (hematomas) or effusions of blood serum (seromas) generally occur because of vascular defects, for example following impact injuries, injections or operations. Fresh effusions in particular should not be punctured and drained as the effusion cavity can quickly fill up with a new effusion.

Supportive ointments (e. g. containing heparin) only have a limited effect on large effusions. Promoting the circulation by means of laser therapy is one of the key factors in the success of

Hematoma/fistula/seroma/abscess

treatment. Smaller effusions and effusions following injections can be completely eliminated within a total irradiation time of 20 – 60 minutes per treatment. The maximum dose of 4 J per unit of area and application is then exceeded, but this does not lead to any adverse effects in this case. Depending on the size of the effusion the treatment period with daily treatment may be a few weeks.

Note: In the case of postoperative effusions the surgeon must always be consulted and any surgical option should also be discussed.

Abscesses/fistulas

Purulent cavities (abscesses) or purulent channels form during the course of bacterial infections associated with the liquefaction of tissue. At these encapsulated inflammation sites a power struggle between the body and bacteria takes place. The symptoms are the five classic signs of inflammation: pain, swelling, warming, reddening (in the case of unpigmented skin) and functional limitation.

Abscesses

Abscesses must “mature”. Good treatment supports the maturing and healing process and thereby the body’s efforts to kill the bacteria and stop their proliferation.

Laser therapy improves vascular supply, thereby improving the local metabolism, which in turn also strongly promotes the healing of an abscess after opening and flushing.

Fistulas

Fistulas form when an abscess or an inflamed wound cannot heal completely because of a chronic wound healing disturbance. A fistula often has to be tackled surgically.

Laser therapy should be used to promote wound healing if the wound is too large or there are tissue structures on its surface, and the wound cannot be satisfactorily surgically treated (☞ Treatment plan *Wounds*).

Vessels

Hematoma/fistula/seroma/abscess

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>☞ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	BL 20, BL 23
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: SPLEEN (702 Hz), QI-movement (7,695 Hz), SELF HEAL (4,625 Hz)

FI-Bands: FI-Band LYMPH, FI-Band REGENERATION

Treatments: daily

Treatments total: 1-20



Area therapy

Laser the affected region. Use an area laser for large hematomas and abscesses and a point laser in the case of smaller areas (e. g.: perianal fistula). Daily treatment is important, in severe cases over a period of several weeks.



Laser puncture

The influence points of the *Spleen* and *Kidney* are suitable for strengthening the transport of fluid and the fluid balance in general.

BL 20 Shu point of the *Spleen*; governs transformation and transport.

BL 23 Shu point of the *Kidney*; governs the fluid balance.



Point location

BL 20 Lateral to the caudal boundary of the spinous process of T12.

BL 23 Lateral to the caudal boundary of the spinous process of L2.

Laser therapy promotes the microcirculation and, through the improved lymph drainage, a more rapid reduction in swelling. It stimulates the recanalization of the vessels in destroyed tissue structures and reduces the release of vasoactive amines so that vascular sealing begins more quickly. It supports phagocytosis activity thus accelerating resorption of the hematoma or seroma. The likelihood of an effusion becoming inflamed is sharply reduced. Laser therapy also stimulates the pain-alleviating mechanisms and supports all cell metabolism processes so that the tissue can heal more quickly and with less risk of complications.

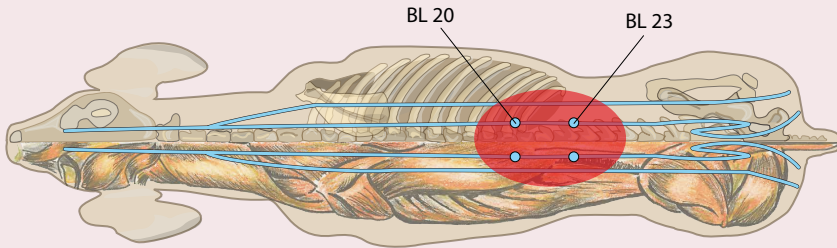
Additional measures



Traumeel or Kytta ointment, restitution fluid.

Homoepathy: Arnica C30 (once daily), Calendula C30 (once daily)

Treatment plan – Hematoma/fistula



Area therapy of the Shu points of the *Spleen* and *Kidney*



Treatment of a perianal fistula
(point laser with 2 cm autoclavable light guide)



Thread fistula on the stifle

Vessels

Vascular inflammations

The most common vascular inflammations in dogs and cats are venous wall inflammations (thrombophlebitis) due to chemical irritation through injected preparations. Inflammations of the area surrounding the vessels (periphlebitis) as a result of incorrectly administered injections occur quite frequently.

In most cases the saphenous vein and antebrachial cerebral vein are affected. The symptoms are the 5 classic guideline criteria of pain, swelling, warming, reddening and functional limitation. This can lead to disrupted venous drainage on the affected limb.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	BL 23, BL 20, SP 04, SP 06, GB 30, LI 11
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: SPLEEN (702 Hz), QI-MOVEMENT (7,695 Hz), SELF HEAL (4,625 Hz)

FI-Bands: FI-Band LYMPH, FI-Band INFECTION, FI-Band REGENERATION

Treatments: daily • Treatments total: Individual with recovery



Area therapy

Laser the affected area on outer and inner front leg and/or outer and inner rear leg with the laser shower and also the corresponding lymphatic channels.



Laser puncture

- BL 23 Shu point of the *Kidney*, tonifies the *Kidney Qi*.
- BL 20 Shu point of the *Spleen*, tonifies the *Spleen*.
- SP 02 Supports the *Spleen* (transport and transformation function).
- SP 06 Constipation, disorders of the gastrointestinal tract.
- GB 30 Tonifies *Qi* and *Blood*, dissolves *Damp Heat*.
- LI 11 Regulates the *Large intestine* and the *Nutrition Qi*, clears *Heat*.



Point location

- BL 23 Lateral to the caudal boundary of the spinous process of L2.
- BL 20 Lateral to the caudal boundary of the spinous process of T12.
- SP 02 Proximal to the first, medial metatarsal bone.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter: on the medial tibia edge at the boundary to the gastrocnemius muscle.
- GB 30 On the pubic axis behind the acetabulum (⇔ *Illustration Treatment plan – Hip*).
- LI 11 On the outgoing bending fold of the elbow, before the lateral epicondyle.

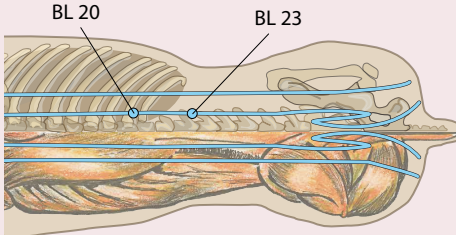
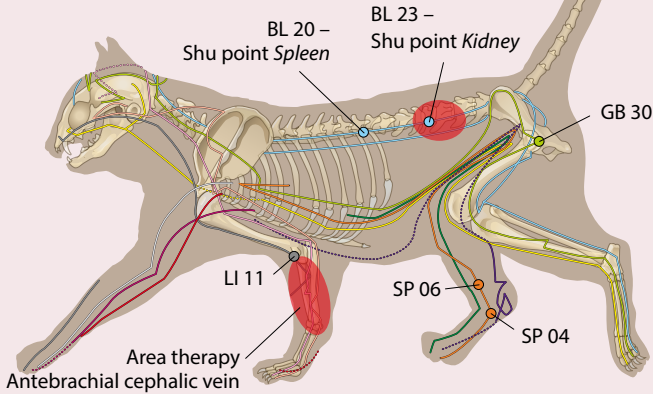
Effect

Laser therapy is particularly successful in the early stages of inflammation. The longer the disorder persists, the less successful the treatment is. Laser therapy promotes the reduction of effusions/inflammations through stimulating the circulation. If the consequences of the inflammation are already evident in the form of blood clots (thrombi) and scarring, the treatment is more protracted and the prognosis is less favorable.

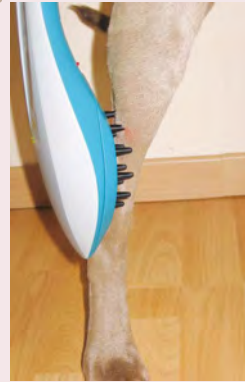
Additional measures

- Traumeel or Kytta ointment, heparin DMSO ointments, restitution fluid
- Homoeopathy: Arnica C30 (once daily).

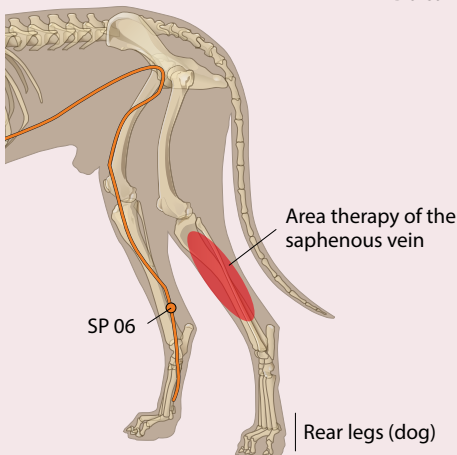
Treatment plan – Vascular inflammation



Dorsal view (dog)



Area therapy of the saphenous vein, rear right leg (dog)



Laser puncture GB 30 (cat)

Metabolism/Detoxification

There cannot of course be just one precisely defined treatment plan that is suitable for the great variety of metabolic disorders that can occur. Metabolic disorders may be due to many causes, be of varying intensity and develop in different ways. A “cookbook recipe” cannot do justice to this multiplicity. Diagnosis of the underlying cause is always essential.

The proposed treatment plan should therefore be thought of as a suitable additional therapy that is useful in every case. Its aim is detoxification through stimulation of the metabolizing and draining organ systems. The metabolism is relieved by detoxification and can regenerate itself more rapidly. A sensible diet, which serves the same purpose, should also support detoxification.

Treatment plan

Age	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
			cw	fm	
Dog	4	100	0:40	1:20	BL 18, BL 19, BL 20, BL 23, BL 25, BL 27,
Puppy	3	100	0:30	1:00	LIV 03, LI 11, ST 36, GB 34, KI 01, SP 06

Supertherapy with frequencies (fm)

Single frequencies: LIVER (442 Hz), SOL 7 (741 Hz), QI-MOVEMENT (7,695 Hz)

FI-Bands: FI-Band DETOX, FI-Band INNER CENTER, FI-Band REGENERATION, FI-Band LYMPH

Treatments: 1-2 x/week

Treatments total: 6-8



Area therapy

The areas over the Shu points BL 18, BL 19, BL 20, BL 23, BL 25 und BL 27 are area lasered.



Laser puncture

- LIV 03 Tonifies the *Liver Qi*.
- LI 11 Regulates the large intestine and *Nutrition Qi*, clears *Heat*.
- ST 36 Strengthens the transport function of the *Stomach*.
- GB 34 Supports the flow of *Qi*.
- KI 01 Strengthens the *Kidney Qi*.
- SP 06 Constipation, disorders of the gastrointestinal tract.



Point location

- LIV 03 (T) In dogs in which the 1st toe (phalange no. 1) is bony LIV 03 is between metatarsal bones 1 and 2, otherwise between metatarsal bones 2 and 3.
- LI 11 On the outgoing bending crease of the elbow, before the lateral epicondyle.
- ST 36 On the lateral tibia side, lateral to the distal tibial tuberosity (before the tibial cranial muscle).
- GB 34 Midway between ST 36 and the head of the fibula behind the tibial cranial muscle.
- KI 01 Centrally on the foot pads of the rear legs.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; on the medial tibia edge at the boundary to the gastrocnemius muscle.
- BL 18 Lateral to the caudal boundary of the spinous process of T10.
- BL 19 Lateral to the caudal boundary of the spinous process of T11.
- BL 23 Lateral to the caudal boundary of the spinous process of L2.
- BL 27 Lateral to the caudal boundary of the spinous process of L7.

Additional measures



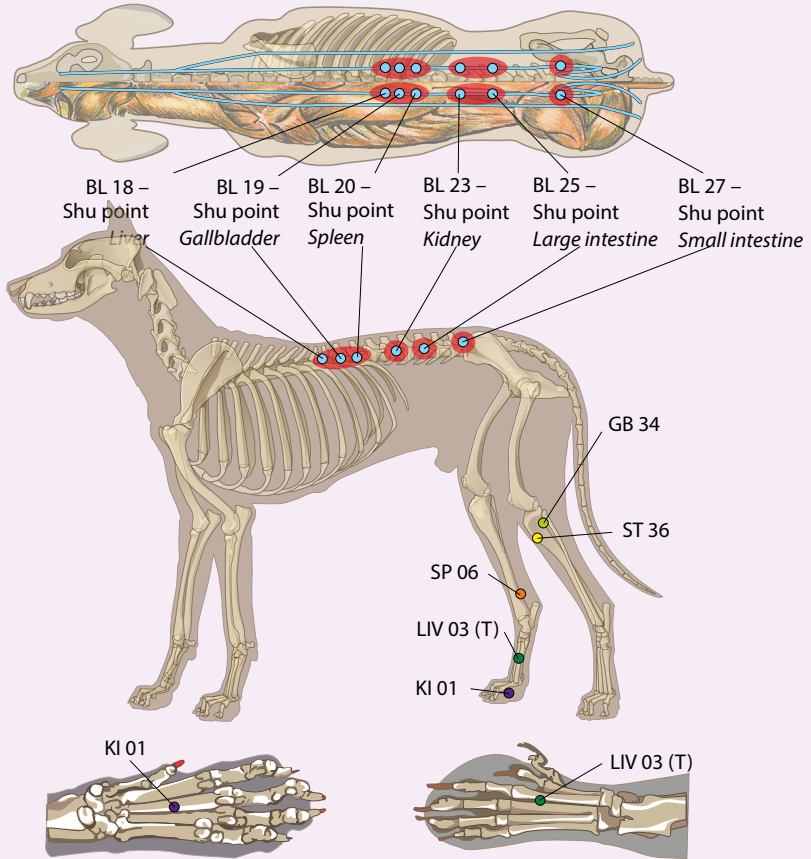
Dietary supplements with nettle tea and nettle juice, ginger.

Homoeopathy: Nux vomica C30 (once daily for one week), then 1 day break, then Thuja C30 (once daily for one week).

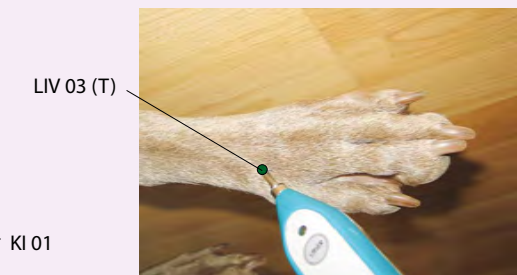
Treatment plan – Metabolism



Area or point therapy of the Shu points



Rear paw, planar



Rear left paw, dorsal

Skin

Laser therapy is a very effective sole treatment for milder skin irritations. In the case of more severe problems it is an excellent supportive measure for rapid regeneration of the diseased skin.

“Hot spots” and lick eczemas

“Hot spots” are bacterial inflammations of the skin and subcutaneous tissue, which occur especially in areas that are intensely licked, but also on the head and cheeks, and above all during the warmer times of the year. According to TCM pathology, lick eczemas are the result of *Damp Heat*. They are extremely inflammatory, weeping, are strongly susceptible to infection and thrive under a thick coat, where as a result of conglutination strong bacterial colonization occurs. Lick eczemas can spread explosively overnight and are often very painful. Animals often also lick areas where they are experiencing pain. According to the rules of proper wound cleaning, hair and conglutinations must be cleared from the affected area, under sedation if necessary. Antibiotics must be prescribed for severe inflammations, which also means that laser therapy is still contraindicated at this stage, as purulent infection can spread diffusely (phlegmon). Once the inflammation is under control the laser supports the healing of the irritated areas of skin.

Parasitic skin disorders

All parasitic skin disorders (e. g. mange) and fungal infections must initially be treated causally.


Allergic skin reactions

Allergies to, for example, foods, environmental influences, fungi or parasites etc., can dominate skin problems to such an extent that laser therapy is powerless in the long-term. Here too the causes must first be eliminated as far as possible.

Effect

Laser therapy improves the capillary blood supply and stimulates the metabolism, controls pain and inflammation and prevents secondary infections. Caution is urged with phlegmonous processes, where laser therapy should only be used during the healing stage for the purpose of tissue regeneration. In general though it cannot replace causal treatment in the case of severe skin disorders.

Additional measures

 Propolis products (external), homoeopathy: Silicea, Phyrogenium



Diagnosis The causes must first be clarified.



Area therapy Irradiate the affected area of skin with the laser shower.



Laser puncture

- KI 03 In moist, warm processes.
- SP 04 For irritated, reddened skin.
- SP 06 Immune-stimulating, supports the cell metabolism
- SP 10 For severe itching.
- LI 11 Removes *Damp Heat*.
- TH 10 Removes *Dry Heat*.

Point location

- KI 03 Medial, midway between the ankle hock and inner ankle bone.
- SP 04 Proximal of the first, medial metatarsal bone.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; on the medial tibia edge at the boundary to the gastrocnemius muscle.
- SP 10 2 Cun over the medial patella edge, on the venter of the femoral quadriceps muscle.
- LI 11 On the out-going bending crease of the elbow, before the lateral epicondyle.
- TH 10 Exactly on the elbow hock.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>ES[®] Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	KI 03, SP 04, SP 06, SP 10, LI 11, TH 10
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

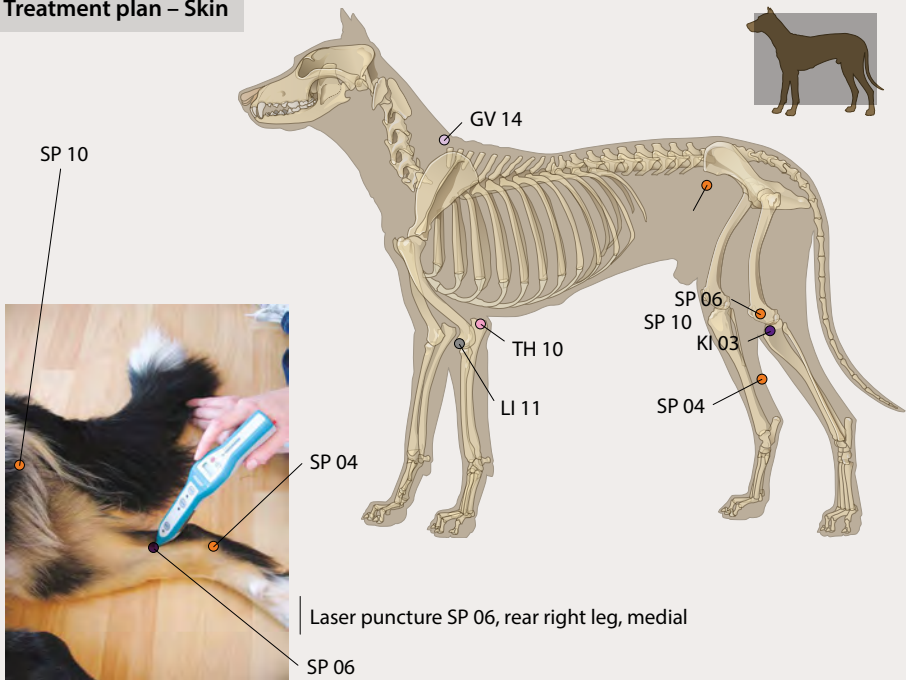
Single frequencies: LUNG (824 Hz), SOL 7 (741 Hz), QI-MOVEMENT (7,695 Hz), CORTISON (5,743 Hz), ALLERGY (1,927 Hz)

FI-Bands: FI-Band INFECTION, FI-Band REGENERATION, FI-Band LYMPH

Sweeps: ALPHA-Sweep

Treatments: 3-7 x/week • Treatments total: 6-10

Treatment plan – Skin



Immune System

If the immune system is compromised it deprives the body of the energy it needs to maintain its defense capacity. The patient becomes tired, depressed and weak. The weakest links in the defense chain are the mucous membranes and the systems associated with them, especially the respiratory system and gastrointestinal system. This is why most of the defense mechanisms are positioned on the mucous membrane barriers. As a rule, in the event of acute stress conditions it is here that disorders occur first, such as coughs or diarrhea. If the stresses continue these symptoms can become chronic and lead to chronic obstructive bronchitis (COB) or permanent diarrhea for example. Furthermore, chronic stress can also result in affliction of other organs such as the skin (eczema) or the vascular system (edema, e. g. swollen legs without evident cause).

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	acute	8	100	1:20	2:40	GV 03, GV 04, ST 36, LI 11, KI 03, SP 06, BL 20, BL 23
Dog	chronic	6	100	1:00	2:00	
Puppy	acute	6	100	1:00	2:00	
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: LUNG (824 Hz), SOL 7 (741 Hz), SOL 5 (528 Hz)

FI-Bands: FI-Band INNER CENTER, FI-Band DETOX

Sweeps: ALPHA-Sweep

Treatments: 2-3 x/week • **Treatments total:** 2-10



Area therapy

The affected organs/their reference zones (Shu points, Head zones) are area lasered.



Laser puncture for stimulation of the immune system

- GV 03 Opens the passage between the front and rear half of the body.
- GV 04 Tonifies the *Kidney Yang*, stimulates *Essence*.
- BL 20 Shu point of the *Spleen-pancreas*, nourishes the *Blood*.
- BL 23 Shu point of the *Kidney*, tonifies *Kidney Yang* and *Qi*.
- ST 36 Moves *Blood*, supports the transport and transformation function of the metabolism.
- LI 11 Immune stimulation, drives out *Heat*.
- KI 03 Tonifies the *Kidneys* and strengthens the *Essence*.
- SP 06 Moves mucus and stimulates the immune system.



Point location

- BL 23 Lateral to the caudal boundary of the spinous process of L2.
- BL 20 Lateral to the caudal boundary of the spinous process of T12.
- GV 03 "Baihui" between L7 and the sacrum on the medians.
- GV 04 Between the spinous process of L2 and L3 on the dorsal midline.
- ST 36 On the outside of the tibia, lateral to the distal tibial tuberosity (before the tibial cranial muscle)
- KI 03 Medial, midway between the ankle hock and the inner ankle bone.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; on the caudal tibia edge at the boundary to the gastrocnemius muscle.
- LI 11 On the out-going bending crease of the elbow, before the lateral epicondyle.

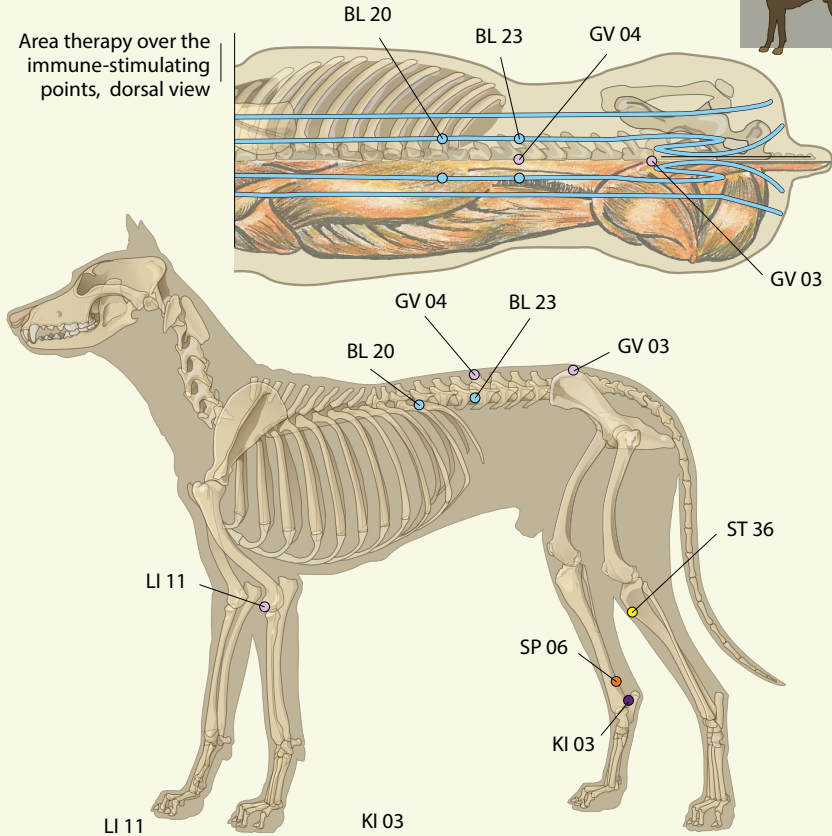
Additional measures

🌐 Schüssler salts: Calcium phosphoricum, Ferrum phosphoricum, Kalium sulfuricum, Magnesium phosphoricum, Sodium phosphoricum in the drinking water.

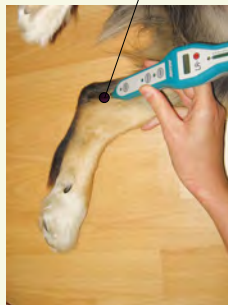
Treatment plant for strengthening the immune system



Area therapy over the immune-stimulating points, dorsal view



Point stimulation LI 11
left elbow, lateral



Point stimulation KI 03
left lower leg



Area therapy over the immune-stimulating points (BL 20 and BL 23) in cats

Psyche

Just as in humans, the body, spirit and soul form an entity in animals too. A dog that is in pain will not be in a good mood, and a dog unable to escape distressing surroundings is a potential pain patient. In brief: physical symptoms have a negative effect on the psyche and vice versa. This is reflected in the definition of pain both in human and veterinary medicine.

Definition of pain

1. In human medicine
An unpleasant sensory or emotional experience associated with actual or potential tissue damage or described in terms of such damage.
2. In veterinary medicine
An aversive sensory experience caused by actual or potential injuries, which triggers protective motor or vegetative reactions and leads to avoidance of such stimulations and thereby modifies the behavior (3).

Elimination of harmful factors

For lasting treatment success the “unpleasant sensory or emotional experiences” to which an animal reacts with pain symptoms and/or abnormal behavior must be eliminated. Such “unpleasant sensory or emotional experiences” may be physical symptoms, stresses in the local/social environment, food that is not appropriate for the species of animal or extreme emotional stresses:

Physical symptoms

Pain and discomfort depress the psyche. Laser therapy is also an extremely successful treatment for pain. It is usually more effective than conventional and also homoeopathic pain killers and this book documents its use for the most important indications in cats and dogs.

Environmental factors (“macroclimate”)

Stress through noise, electrosmog, odors, hazardous substances etc. consciously or unconsciously lead to discomfort.

Social environment (“microclimate”)

The microclimate covers everything in the immediate vicinity that influences the animal. Psychological disorders in cats and dogs are strongly associated with the body-soul balance of the owner. Cats, which are usually attributed with greater external and internal independence, are in fact even more reliant on harmonious, constant surroundings than dogs. Any change in daily interaction (being left alone, going on vacation, moving house, transport etc.) can trigger stress.

Particular emotional stresses

Dogs, such as guide dogs, which carry out one task for their entire life without a physical and emotional counterbalance often develop psychosomatic disorders. They often appear introverted and addicted to their task, which has become the sole aspect of their life. This deviation from the behavior of members of their own species is often mistakenly understood as “good training” or “faithful unto death”. Only when the animal becomes physically ill do the owners maybe realize that they also have to attend to the physical and emotional

equilibrium of their animal and ensure that stress and adrenalin are reduced through greater social contact involving play and romping around.



Strong emotional stress can also arise through an imposed partner (one or more animals living in close proximity). In extreme cases the conflict between animal and animal is only recognized when the dominant animal dies or is given away, and the dominated animal finally has the chance to find a new lease of life. On the other hand, the death of a “partner animal” – not infrequently in the case of house cats which have no other social contact – can lead to great sorrow and even illness. Laser therapy can be very helpful in overcoming sorrow. In the case of emotional stress, e. g. through dominance behavior, laser therapy can at best achieve a defusing of the situation but no lasting success until the circumstances are definitively sorted out (separation, or if necessary, mediation with the aid of a specialist in animal behavior).

Expression of pain (abnormal behavior)

As in humans, animals deal with emotional or physical pain in very different ways. Depending on its temperament, conditioning and also on organ weakness, the animal may in some cases react with withdrawal, sorrow or concern and in others with aggression or anger. Dobermanns, for example, tend to handle physical or emotional stress with withdrawal, while Rottweilers can quickly become aggressive. Castrated animals, whose castration scar causes disturbances are often anxious. Under severe stress withdrawal and anxiety reactions can suddenly change to aggression (“anxiety biters”).

As part of good therapy it is important to diagnostically clarify whether a Yin or Yang disorder is involved, i. e. whether the animal is reacting with aggression/anger or with introversion, passivity or sorrow.

Laser acupuncture Treatment basics – point therapy

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)	
				 cw	 fm
Dog	acute	6	200	0:30	1:00
Dog	chronic	4	200	0:20	0:40
Puppy	acute	4	200	0:20	0:40
Puppy	chronic	3	200	0:20	0:40

Standard therapy

Start the treatment with the following standard therapy, which has a positive influence on all forms of emotional imbalances.

1. "Baihui" (GV 20)

Laser the Baihui point for approx. 1 minute. The former fontanelle point (a point which "closes" very late) has very powerful access to the central nervous system and has a relaxing and balancing effect.

2. "Yin-Yang balance"

Laser the points GV 26 and CV 24 alternately for 30 seconds or 1 minute depending on your laser device (25 mW or 50 mW) for a total of 2 or 4 minutes respectively. In anxious, uptight patients the treatment has a strong calming effect and is therefore generally excellently suited as preliminary treatment for examinations as well as all type of therapy.

Point location

GV 20	"Baihui"/dorsomedian in the area of the fontanelle gap.
GV 26	In the philtrum, at the crossing point of the connection line of the ventral nostril boundaries.
CV 24	In the middle of the indentation between the chin and lower lip.

Supertherapy with frequencies (fm)

Single frequencies: ALPHA (10 Hz), SEROTONIN (9,613 Hz), SOL 1 (174 Hz)

FI-Bands: FI-Band PSYCHE • Sweeps: ALPHA-Sweep

Anxiety

In TCM anxiety is associated with the functional circuit of the *Kidney*. This is often damaged in castrated animals ("attack on the *Kidney*"), which therefore tend to anxiety reactions. Anxiety can suddenly change to aggression ("anxiety biters"), so that in the case of anxious patients and "anxiety biters" it is a good idea to examine the scars and, if necessary, include them in the treatment ⇔ Treatment plan *Disturbance fields and scars*).

Laser puncture

BL 23	Shu point of the <i>Kidney</i>
KI 01	Strengthens the <i>Kidney Qi</i>

Point location

BL 23	Lateral to the caudal boundary of the spinous process of L2.
KI 01	Centrally under the food pads of the rear legs.

Supertherapy with frequencies (fm)

Single frequencies: ALPHA (10 Hz), SEROTONIN (9,613 Hz), SOL 1 (174 Hz), KIDNEY (611 Hz)

FI-Bands: FI-Band PSYCHE • Sweeps: ALPHA-Sweep

Concern

In TCM concern is associated with the functional circuit of the *Spleen/pancreas*.

Laser puncture

BL 20	Shu point of the <i>Spleen</i> ; in the case of <i>Spleen Qi</i> disorder
SP 06	Tonification point: in the case of tiredness and weakness

Point location

- BL 20 Lateral to the caudal boundary of the spinous process of T12.
- SP 06 Medial on the lower leg at the boundary to the caudal quarter; on the medial tibia edge at the boundary to the gastrocnemius muscle.

Supertherapy with frequencies (fm)

Single frequencies: ALPHA (10 Hz), SEROTONIN (9,613 Hz), SOL 1 (174 Hz), LIVER (442 Hz)

FI-Bands: FI-Band PSYCHE • Sweeps: ALPHA-Sweep

Anger and aggression

In TCM anger and aggression are associated with the functional circuit of the *Liver*.

Laser puncture

- BL 18 Shu point of the *Liver*.
- LIV 03 (T) Tonifies the *Liver Qi*.

Point location

- BL 18 Lateral to the caudal boundary of the spinous process of T10.
- LIV 03 (T) In dogs in which the 1st toe (phalange no. 1) is bony LIV 03 is between metatarsal bones 1 and 2 (although without function, very much energy bound up here), otherwise between metatarsal bones 2 and 3.

Supertherapy with frequencies (fm)

Single frequencies: ALPHA (10 Hz), SEROTONIN (9,613 Hz), SOL 1 (174 Hz), GALLBLADDER (583 Hz), LIVER (442 Hz)

FI-Bands: FI-Band PSYCHE • Sweeps: ALPHA-Sweep

Distress and sorrow

According to TCM distress and sorrow are associated with the functional circuit of the *Heart*. Above all, treating HT 09 helps enormously in overcoming sorrow and can also reverse withdrawal in apathetic patients. A one-off treatment is usually sufficient, but if necessary another treatment can be carried out. Owners often notice the initial changes around 3-7 days after the treatment.

Laser puncture

- BL 15 Shu point of the *Heart*.
- HT 09 Changes mood in *Shen* disorders.

Point location

- BL 15 Lateral to the caudal boundary of the spinous process of T5.
- HT 09 On the lateral claw fold of the 5th front toe.

Supertherapy with frequencies (fm)

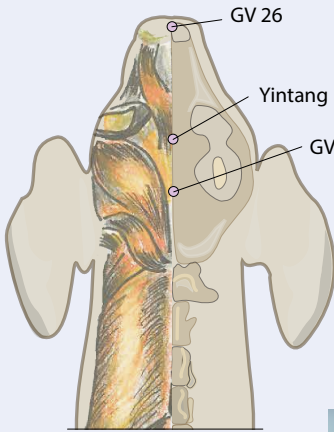
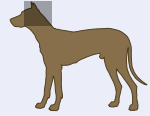
Single frequencies: ALPHA (10 Hz), SEROTONIN (9,613 Hz), SOL 1 (174 Hz), LIVER (442 Hz)

FI-Bands: FI-Band PSYCHE • Sweeps: ALPHA-Sweep

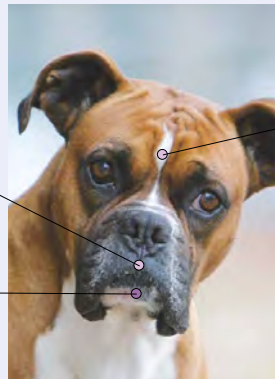
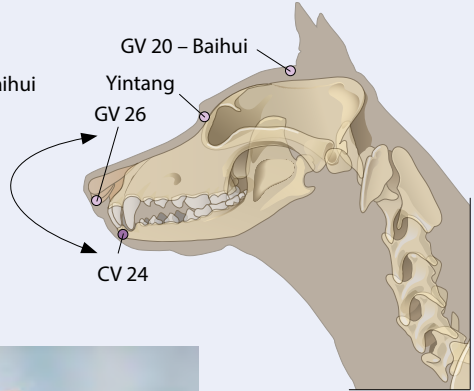
Emotions and the corresponding elements and organ pairs

Expression	Wood	Fire	Earth	Metal	Water	
Organ pair	Yin	Liver	Heart	Spleen/pancreas	Lung	Kidney
	Yang	Gallbladder	Small intestine	Stomach	Large intestine	Bladder
Emotion	Anger	Joy	Concern	Sorrow	Fear	
Expression (human)	Rage	Laugh	Sing	Cry	Sigh	

Treatment plan – Psyche – Standard therapy



Head (dog) dorsal



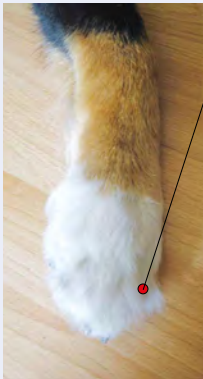
Yintang

GV 26

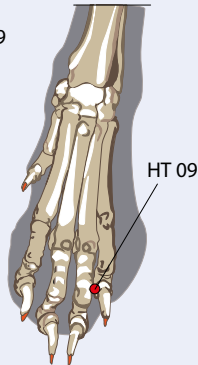
CV 24

Yin/Yang balancing and calming point Yintang

Left front paw dorsal



HT 09



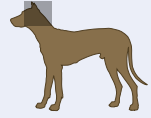
HT 09

Laser puncture KI 01
right rear paw plantar

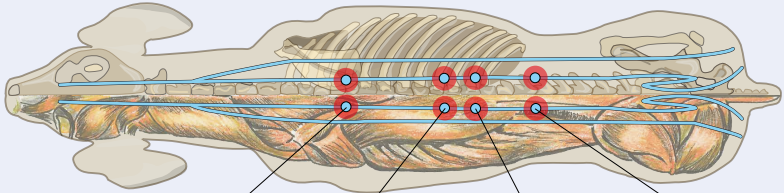


KI 01

Treatment plan – Psyche



Area or point therapy of the Shu points



GV 20 – Baihui

BL 15 –
Shu point
Heart

BL 18 –
Shu point
Liver

BL 20 –
Shu point
Spleen

BL 23 –
Shu point
Kidney

GV 26

CV 24

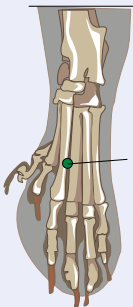
SP 06

LIV 03 (T)

KI 01

HT 09

Left rear paw dorsal



LIV 03 (T)



Other disorders

Seizure disorders in dogs

Seizures form part of epileptic syndrome and occur predominantly in dogs.

1) Epilepsy

Epilepsy patients have to be treated regularly and as required. As required means, for example, preferably a week before the next crisis in the case of patients known to experience regular seizures (e. g. before a full moon).

2) Migraine accompagnée

Seizure patients frequently do not respond, or if so, only inadequately, to traditional treatment with anti-epileptic drugs. In these cases Chinese pulse diagnosis very often finds a clinical picture which in human medicine tends to be ascribed to migraine. This leads to the presumption that many seizure disorders in dogs are in fact a canine form of so-called migraine accompagnée, especially as the treatment plan for migraine leads to very good results in such cases. For this reason in patients where epilepsy treatment has not proved to be very successful it is worth including the additional migraine points in the treatment plan. In the overwhelming majority of cases the migraine is associated with a scar disorder, with the navel being affected in approx. 50% of the patients. Migraine therapy therefore also includes navel neutralization.

Treatment plan

Age	Condition	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>↳ Treatment basics – point therapy</small>
				cw	fm	
Dog	chronic	6	100	1:00	2:00	Yintang, GV 20, GB 20, GV 14, ST 36, GB 34, TH 05, Additional points for migraine headaches: LIV 03, SP 06, CV 08
Puppy	chronic	4	100	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: ALPHA (10 Hz), SOL 1 (174 Hz), BAHR 5/ ALIGNMENT (9,592 Hz)

FI-Bands: FI-Band INTERFERENCE

Sweeps: ALPHA-Sweep

Treatments: 3-7 x/week • **Treatments total:** 6-10



Area therapy Laser the scar/navel if necessary.

Laser puncture

1. Epilepsy

GV 20 The "Baihui" point harmonizes the nervous system.

GB 20 Removes *Wind* ("Wind condition" triggers seizures).

GV 14 Removes *Wind* ("Gate of the Wind").

Yintang Sedation point.

ST 36 Harmonizes the transport of *Blood*.

GB 34 Harmonizes the transport of *Qi*.

TH 05 Strengthens the *Defense Qi* and protects against the attack of external stimuli.

2. Migraine

Use the points as in 1) Epilepsy and add the following:

LIV 03 Tonifies the *Liver Qi* and harmonizes the distribution of *Qi*; essential migraine point.

SP 03 Harmonizes vessel tonus.

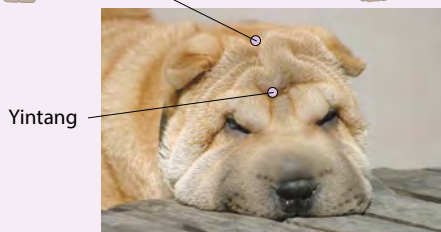
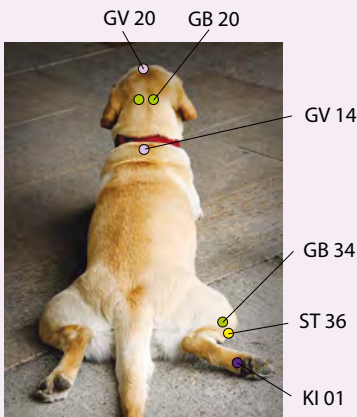
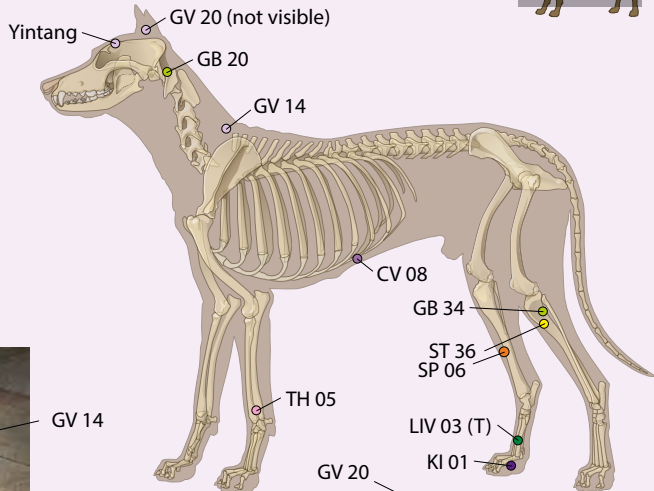
CV 08 Neutralizes the navel region.

In anxious (mainly small) dogs supplement the treatment plan with KI 01 in both cases.

Point location

- GV 20 "Baihui" / At the intersection of the line running perpendicularly from the rear base of the ear and the midline of the head.
- GB 20 On the lower edge of the occipital bone, in an indentation between the sternocleidomastoid muscle and the trapezius muscle.
- GV 14 Cranial to the process of the 1st thoracic vertebra.
- Yintang On the facial midline in an indentation between the medial corners of the eye on the transition between the nasal bone and frontal bone.
- ST 36 On the outside of the tibia, lateral to the distal tibial tuberosity (before the tibial cranial muscle)
- GB 34 Midway between ST 36 and the head of the fibula (behind the tibial cranial muscle).
- TH 05 (R) In the lower quarter of the dorsal lower arm between the radius and ulna.
- LIV 03 (T) In dogs in which the 1st toe (phalange no. 1) is bony LIV 03 is between metatarsal bones 1 and 2, otherwise between metatarsal bones 2 and 3.
- SP 06 On the medial side of the lower leg at the boundary to the distal quarter; on the medial tibia edge at the boundary to the gastrocnemius muscle.
- CV 08 On the ventral body midline, precisely at the navel.

Treatment plan – Seizure disorders



Other disorders

Stomatitis in cats

Stomatitis is a disorder of the mucuous membranes which occurs in dogs, and especially frequently in cats. There are many causes but they are always associated with immunodeficiency and in most cases with alimentary factors. Cats in particular, do not get on well with industrially produced food, which often contains sugar or caramel and other artificial additives. Dry food too is chemically altered through thermal pressing and is usually mixed with preservatives. For this reason house cats are noticeably frequently affected, while cats with a health lifestyle are considerably less so.

Treatment of stomatitis should always be accompanied with a change in diet (food without artificial additives) and microbiological therapy.

Stomatitis occurring as part of conditions associated with immunodeficiency, such as FIV infections, is often difficult to treat.

Note: The treatment plan can be used in general for all form of mucous membrane problems in dogs and cats (e. g. inflammations of the vaginal mucous membrane in bitches or foreskin catarrh in male dogs).

Treatment plan

Age	Dose (J/cm ²)	Power (mW)	Time (min:sec)		Laser puncture <small>ES Treatment basics – point therapy</small>
			cw	fm	
Cat	3	50	1:00	2:00	KI 03, BL 60, ST 45, ST 21, LI 11, LI 04
Kitty	2	50	0:40	1:20	

Supertherapy with frequencies (fm)

Single frequencies: BAHR 7 (299,75 Hz), NOGIER F (73 Hz), SOL 7 (741 Hz), ENTZÜNDUNG nach RIFE (787 Hz, 880 Hz, 728 Hz)

FI-Bands: FI-Band INFECTION, FI-Band INTERFERENCE, FI-Band PAIN

Treatments: 2-3 x/week • Treatments total: 2-15



Local therapy

Laser the oral mucous membrane directly, preferably using dental applicators. If the inflammatory pressure is not too great, local treatment is often tolerated. During and after treatment with anti-inflammatory drugs, local therapy can also be carried out in parallel or afterwards.



Laser puncture

- KI 03 Fire point on the *Kidney* meridian; inhibits inflammation ("cools all fiery states").
- BL 60 Aspirin point, inflammation inhibition.
- ST 45 Removes *Excess* from the *Stomach* meridian.
- BL 21 Shu point of the *Stomach*.
- LI 11 Removes *Heat*.
- LI 04 Regulates the *Digestion Qi*.



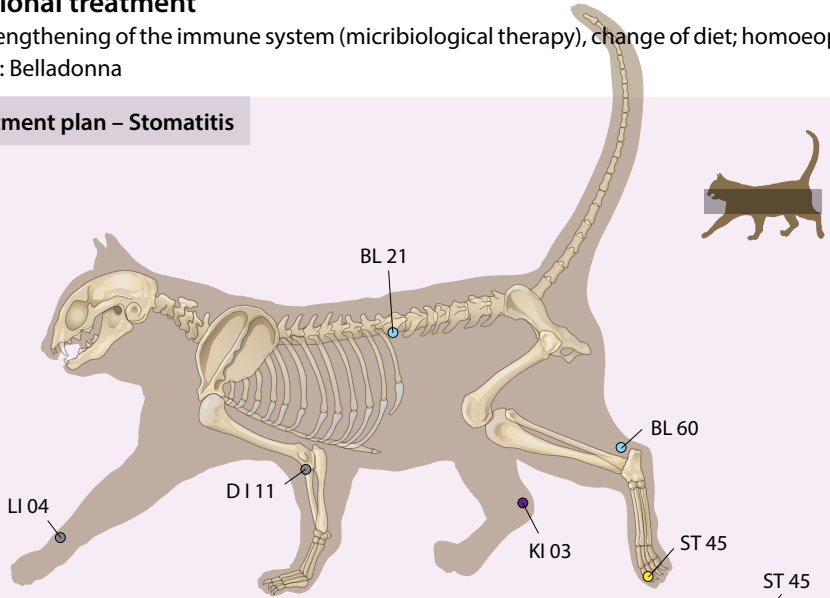
Point location

- KI 03 Medial, midway between the ankle hock and the inner anklebone.
- BL 60 Midway between the ankle hock and the outer anklebone.
- ST 45 On the outer claw fold of the 3rd toe.
- ST 21 In the middle of the 11th ICS at the mammary line.
- LI 11 On the out-going bending crease of the elbow, before the lateral epicondyle.
- LI 04 On the distal edge of the 2nd metacarpal bone, in the center of the fold formed by spreading the thumb from the 2nd toe.

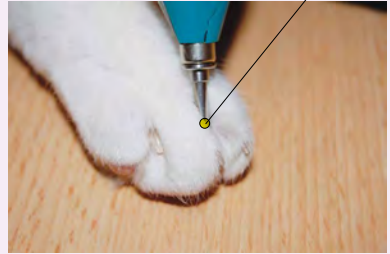
Additional treatment

🌐 Strengthening of the immune system (microbiological therapy), change of diet; homoeopathy: Belladonna

Treatment plan – Stomatitis



Treatment of the oral mucous membrane using dental applicators



Laser puncture ST 45 | left rear paw, dorsal



Laser puncture LI 11 | rear right paw, lateral



Laser puncture LI 04 | rear left paw, medial

Other disorders

Conjunctivitis

Inflammation of the conjunctiva of the eyes occurs relatively often, usually in conjunction with climatic stress factors and/or anatomical anomalies. In winter these include cold, humidity or dryness (heated living conditions) and wind, and in summer mainly mechanical irritants (dust and injuries through plant parts while rummaging in dust or grassy areas), as well as intensive UV radiation (mountains). In these cases laser puncture usually alleviates irritations and inflammations in the eye very quickly.

The treatment is rather more protracted in the following cases:

1) Obstruction of the nasolacrimal canal

If the tear duct becomes blocked or swollen due to inflammation (eye examination with a fluorescein sample and/or attempt at flushing the nasolacrimal canal), treatment is carried out after rinsing with ointments and drops. In milder cases the patient and owner can be spared this procedure, and laser therapy suffices. In more severe cases, e. g. in the event of a high germ content, antibiotic treatment is necessary, with laser therapy being used as an indispensable supportive measure.

2) Puppies

Puppies, in particular, often suffer from conjunctivitis. This is partly because their mucous membrane-associated defense mechanism is not yet fully developed, and partly because with their still short noses the nasolacrimal ducts are usually not yet fully open and therefore not able to function properly. With puppies it is not desirable to use eye preparations containing antibiotics and corticoids on a permanent basis, so that here laser puncture is the most effective alternative – until the eyes are immunologically and functionally fully developed.

If conjunctivitis is due to permanent, usually breeding-related, mechanical causes, other methods (surgery if necessary) should be employed, with laser therapy being carried out continuously until then:

1) Deformity of the lid edges

Outward turning eyelid margins (ectropion) are typical of, for example, Bernese Mountain Dogs and also St. Bernhards, while inward turning eyelids (entropion) are found in breeds with many skin folds (e. g. in the Shar-Pei).

2) Short nose

In short-nosed breeds (brachicephalics, e. g. Pug, Shi-Tzu, Persian cats) the nasolacrimal canal is often not, or if so, only poorly laid out and therefore not fully functional.

3) Distichiasis

Here the eyelashes on the inner eyelid margin grow towards the cornea and lead to permanent irritation of the eye.

Note: The utmost caution is required when treating the eye (see Principles – Contraindications and precautionary measures). Use a suitable covering to protect the eyes.



Laser puncture

Local points ST 01, ST 02, BL 01, GB 01

Distal points

- BL 19 Shu point of the *Gallbladder*.
- BL 21 Shu point of the *Stomach*.
- BL 67 Ting point to remove *Excess* from the eye.
- ST 45 Ting point to remove *Excess* from the eye.
- GB 44 Ting point to remove *Excess* from the eye.



Point location

- ST 01 On the lower eyelid under the center of the pupil.
- ST 02 In the center of the 11th ICS at the mammary line.
- BL 01 In an indentation at the inner corner of the eye, in a notch dorsal of the base of the nictitating membrane.
- GB 01 Lateral to outer corner of the eye and the osseous eye socket.
- BL 19 Lateral to the caudal boundary of the spinous process of T11.
- BL 21 Lateral to the caudal boundary of the spinous process of T13.
- BL 67 On the lateral claw fold of the 5th toe.
- ST 45 On the lateral claw fold of the 3rd toe.
- GB 44 On the lateral claw fold of the 4th toe.

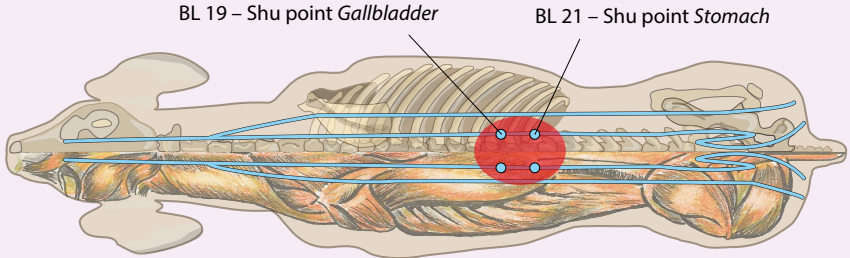
Effect

Treatment of the local points alone usually brings rapid success, but in most cases the inflammation flares up again after a few days. By including the distal points, especially BL 19, the treatment outcome is lasting and effective. For sporadic conjunctivitis in a normal eye 1–2 treatments are sufficient. In the case of chronic forms a treatment interval of 3 days should be observed.

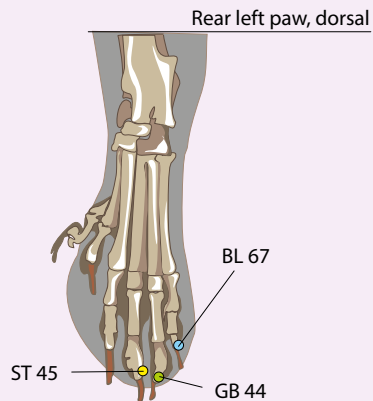
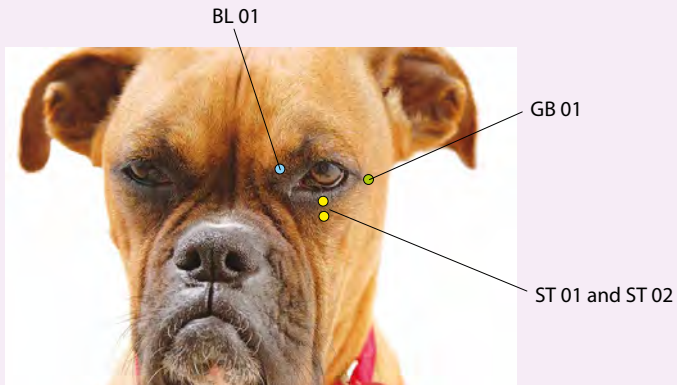
Additional measures

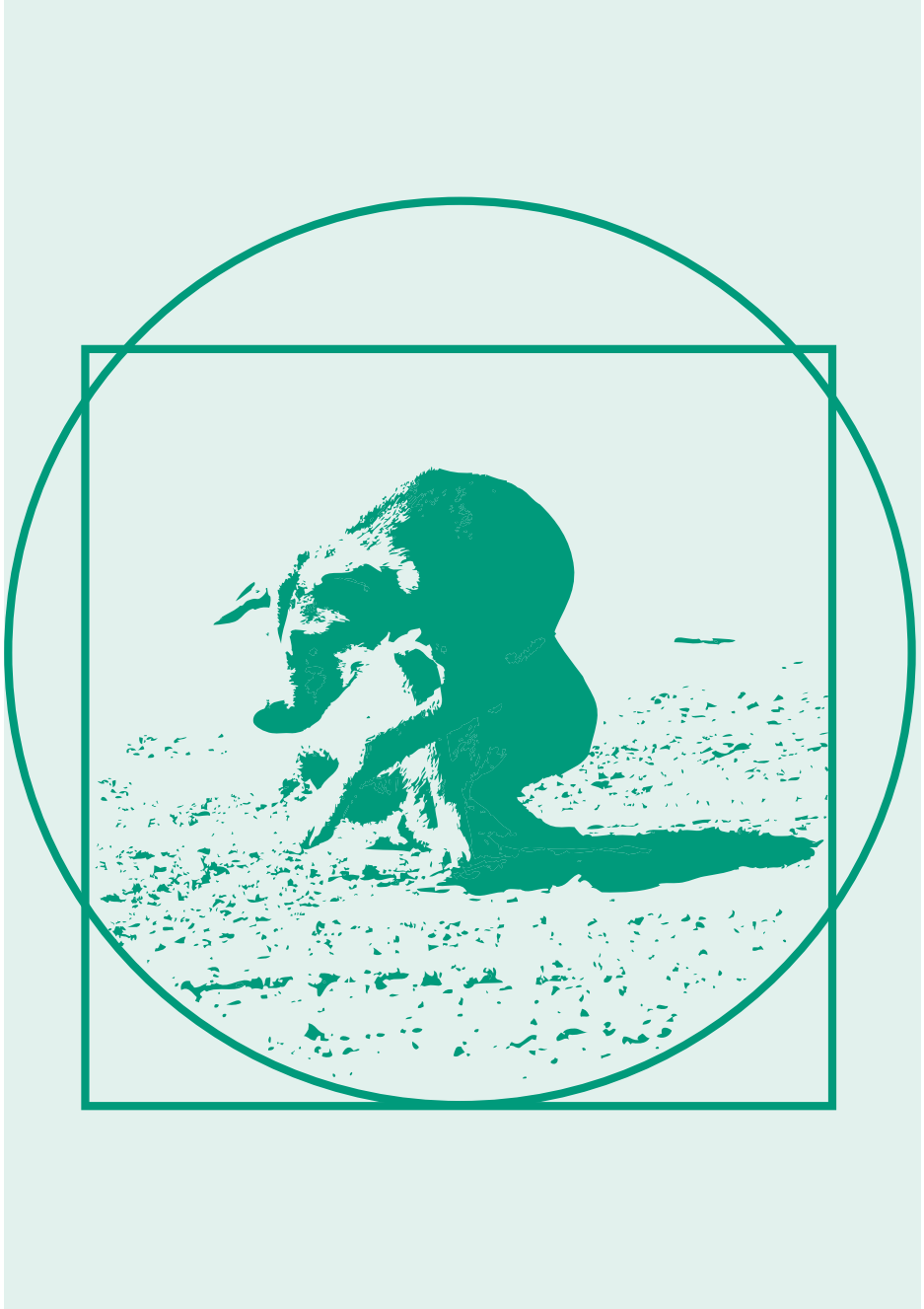
 Phytotherapy: Euphrasia (Eyebright, also homoeopathically).

Treatment plan – Conjunctivitis



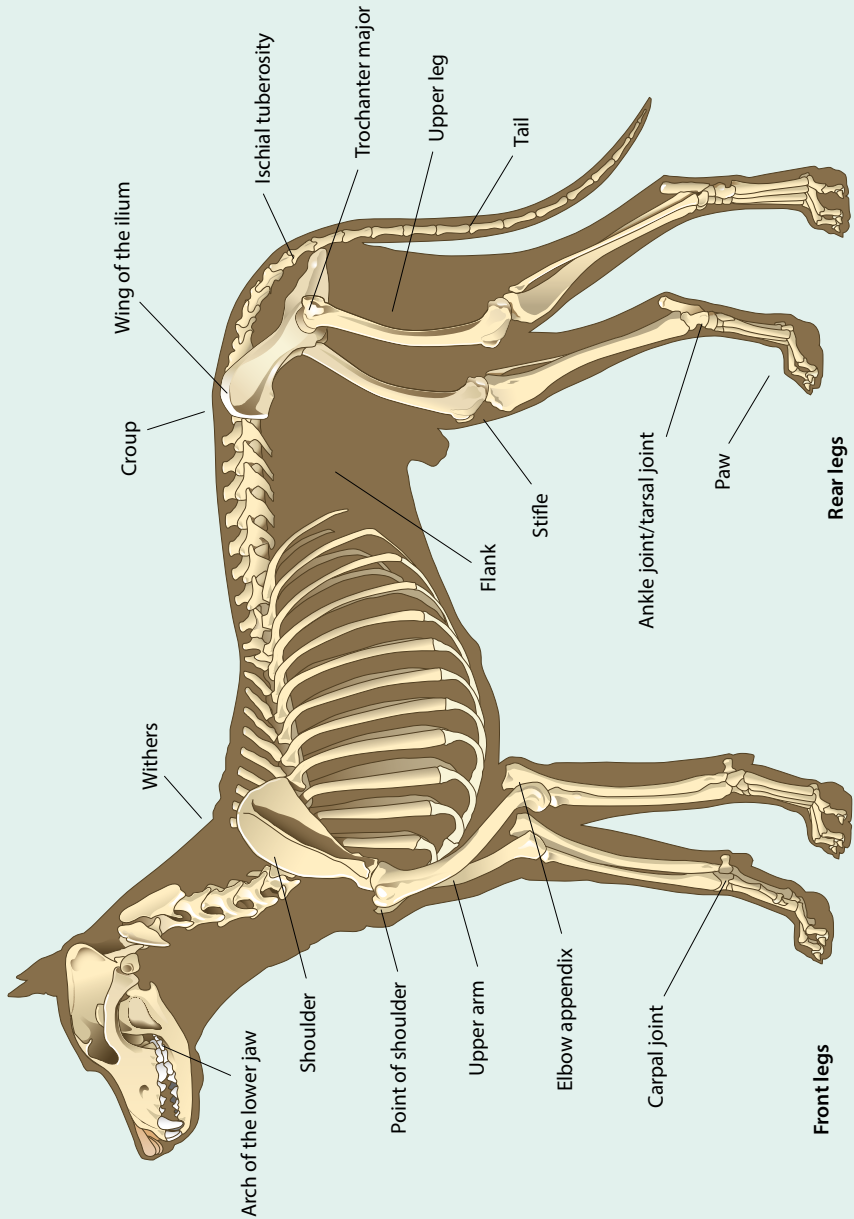
Area therapy over the Shu points of the Gallbladder and Stomach



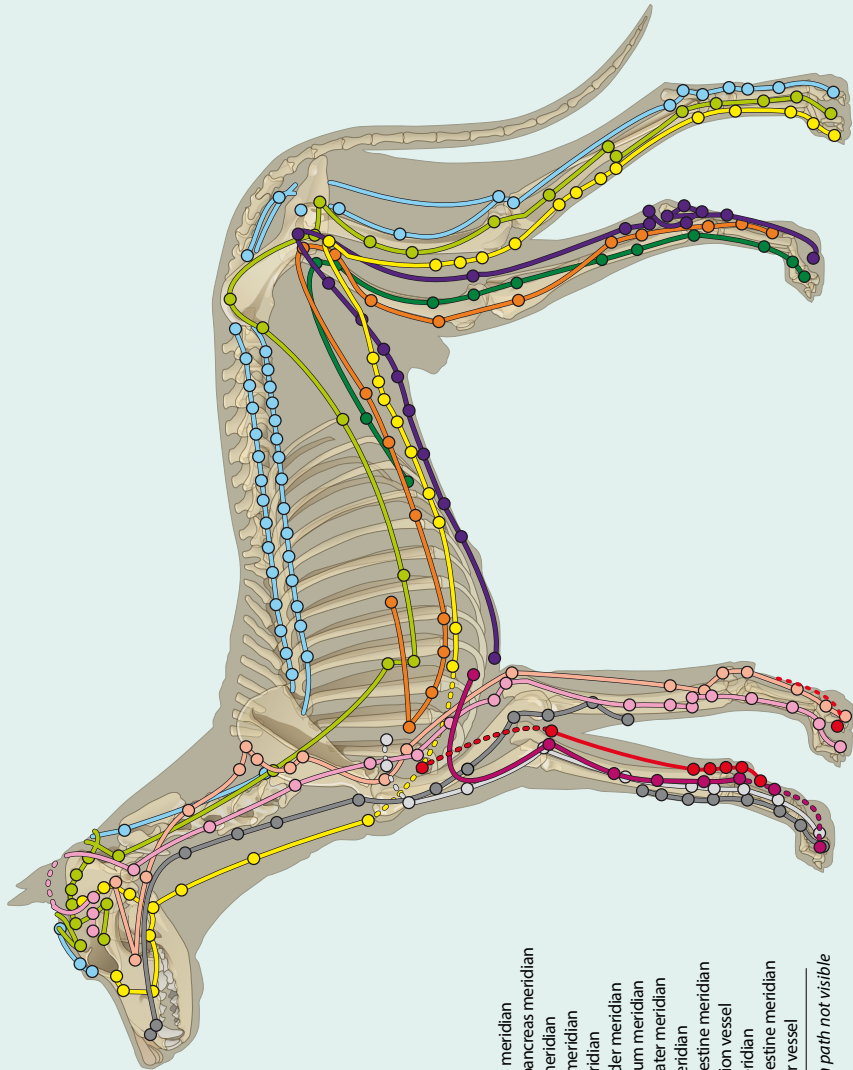


Addendum

Reference chart – Dog



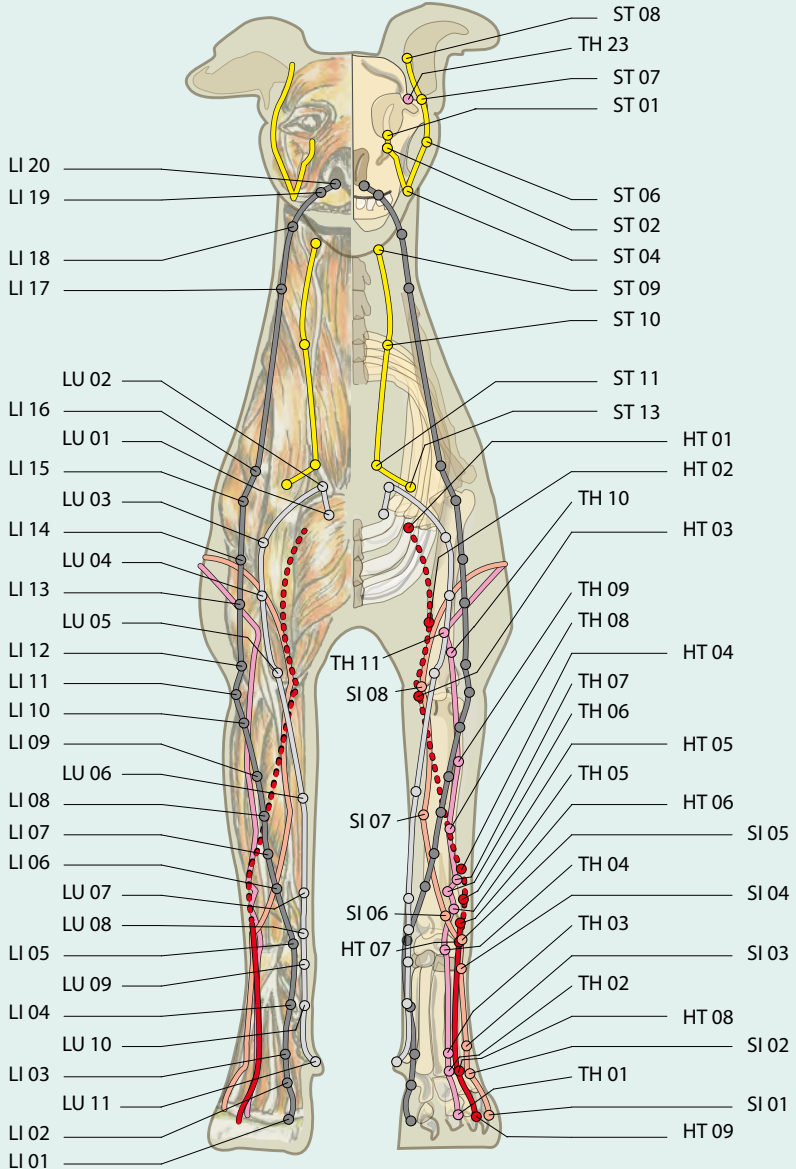
Meridian chart dog – View from the side



- Stomach meridian
- Spleen-pancreas meridian
- Kidney meridian
- Bladder meridian
- Liver meridian
- Gallbladder meridian
- Pericardium meridian
- Triple heater meridian
- Heart meridian
- Small intestine meridian
- Conception vessel
- Lung meridian
- Large intestine meridian
- Governor vessel
- Meridian path not visible

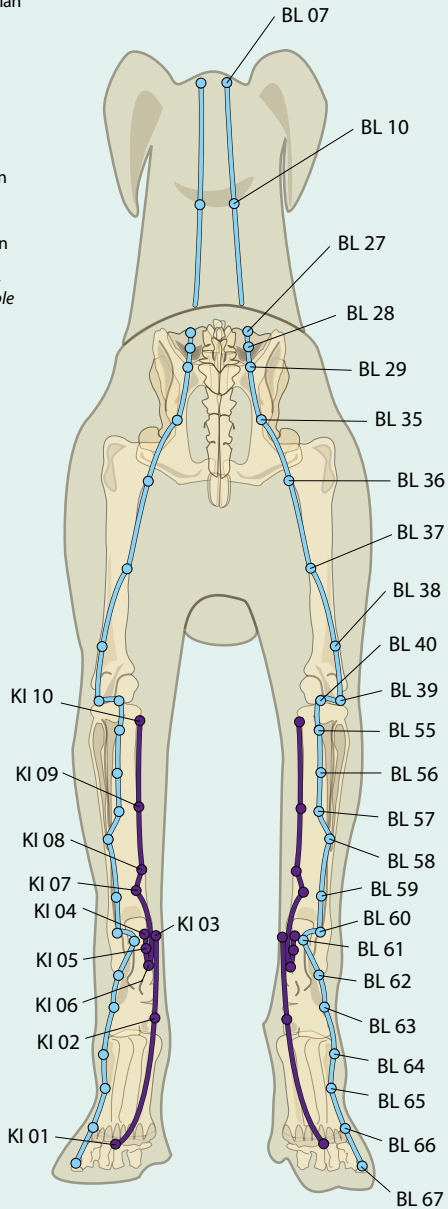
Addendum

Meridian chart dog – front view



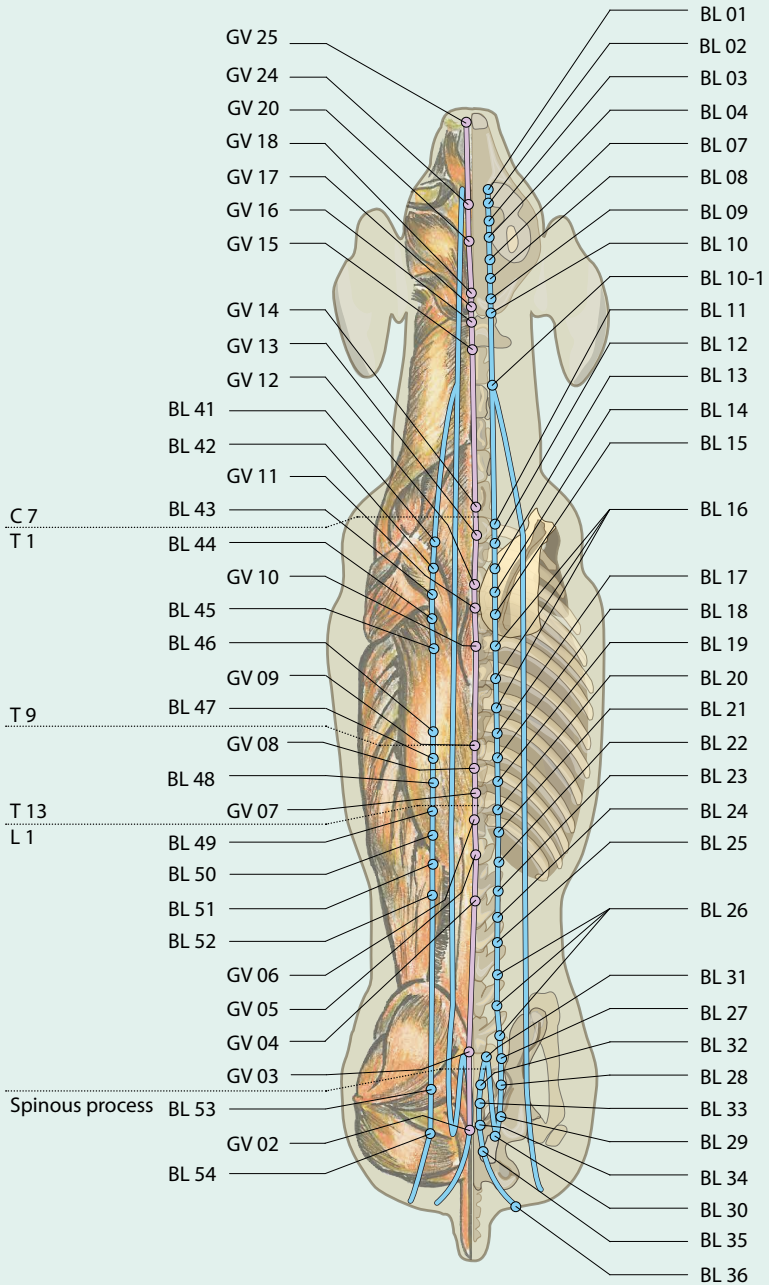
Meridian chart dog – rear view

- Stomach meridian
 - Spleen-pancreas meridian
 - Kidney meridian
 - Bladder meridian
 - Liver meridian
 - Gallbladder meridian
 - Pericardium meridian
 - Triple heater meridian
 - Heart meridian
 - Small intestine meridian
 - Conception vessel
 - Lung meridian
 - Large intestine meridian
 - Governor vessel
- ● ● ● Meridian path not visible



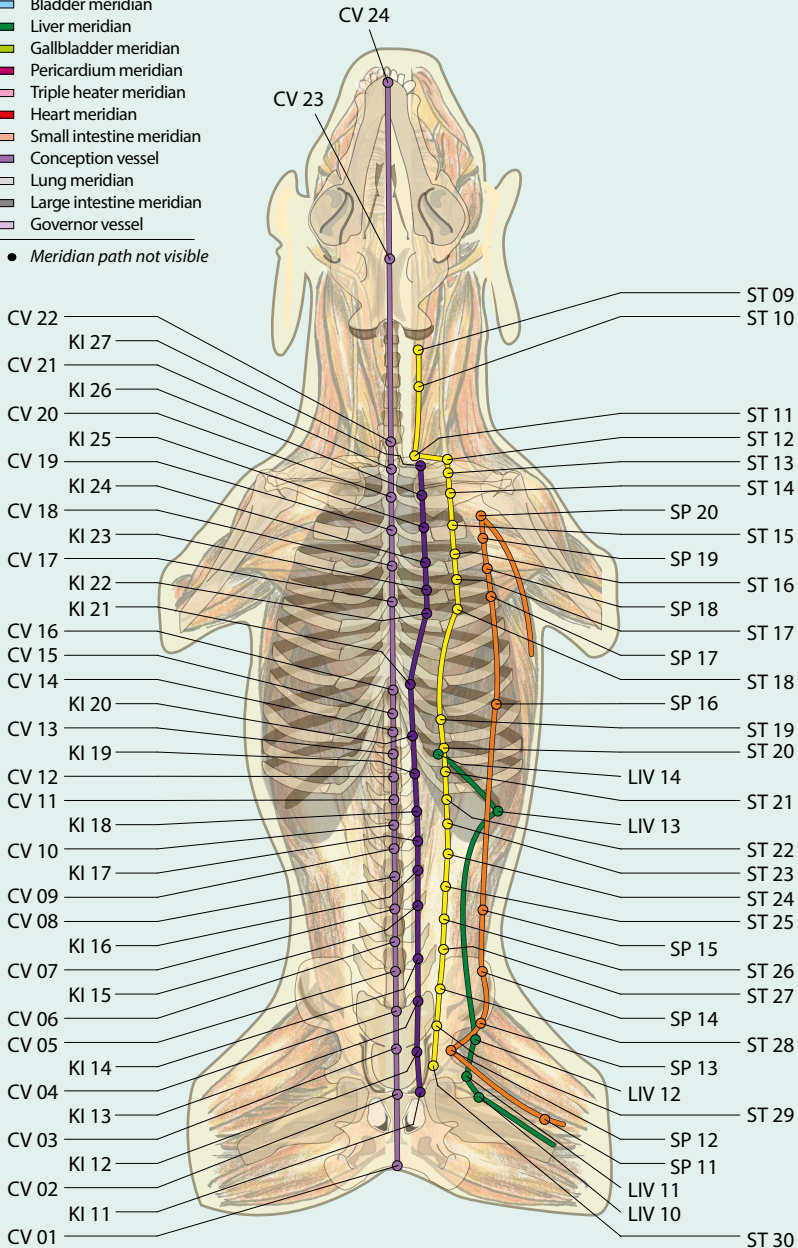
Addendum

Meridian chart dog – dorsal view



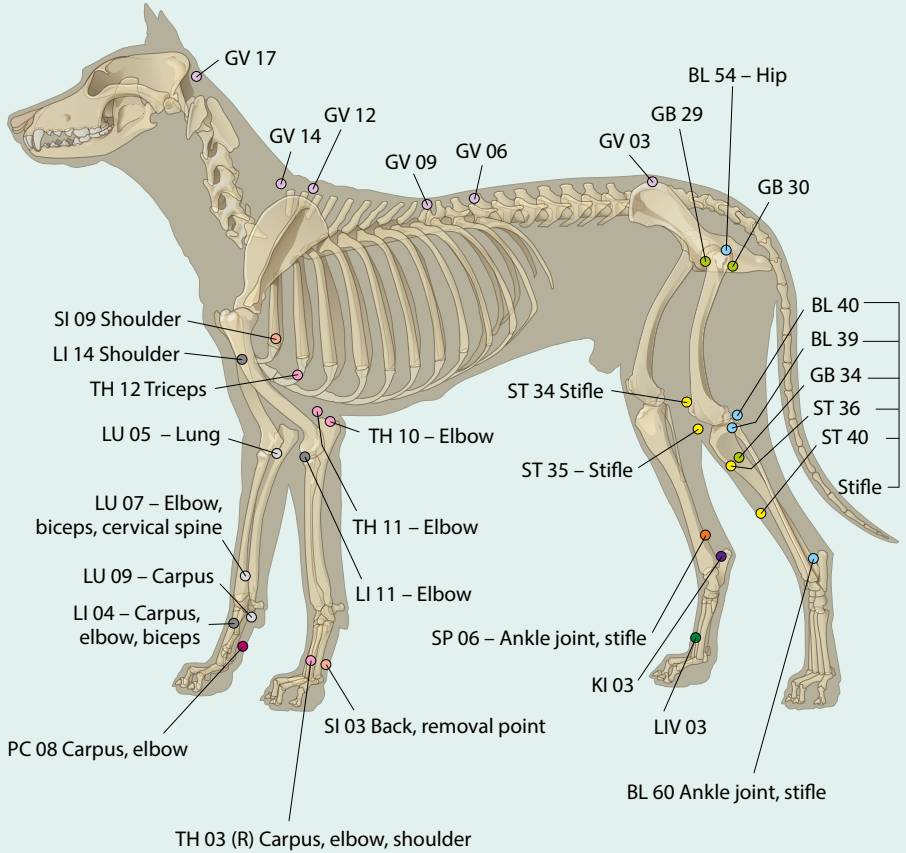
Meridian chart dog – ventral view

- Stomach meridian
 - Spleen-pancreas meridian
 - Kidney meridian
 - Bladder meridian
 - Liver meridian
 - Gallbladder meridian
 - Pericardium meridian
 - Triple heater meridian
 - Heart meridian
 - Small intestine meridian
 - Conception vessel
 - Lung meridian
 - Large intestine meridian
 - Governor vessel
- ● ● ● Meridian path not visible



Addendum

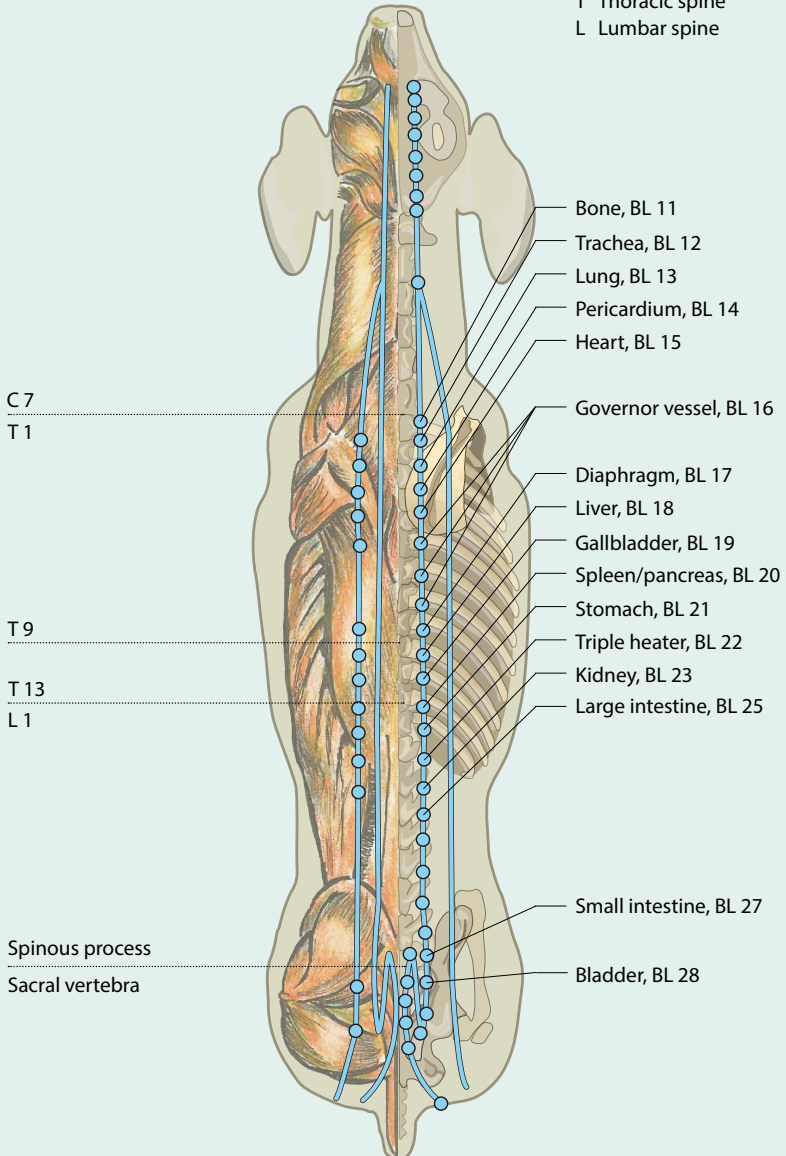
Pain-relevant points and trigger points – dog



View from the side |

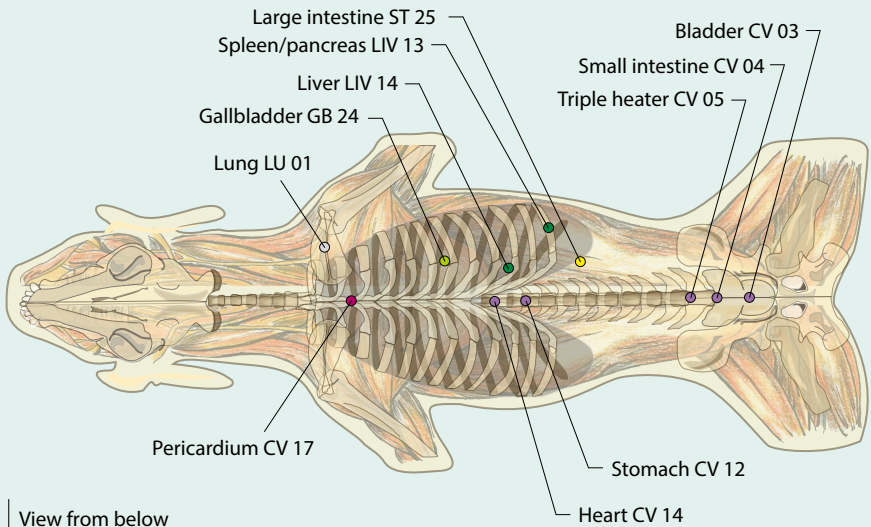
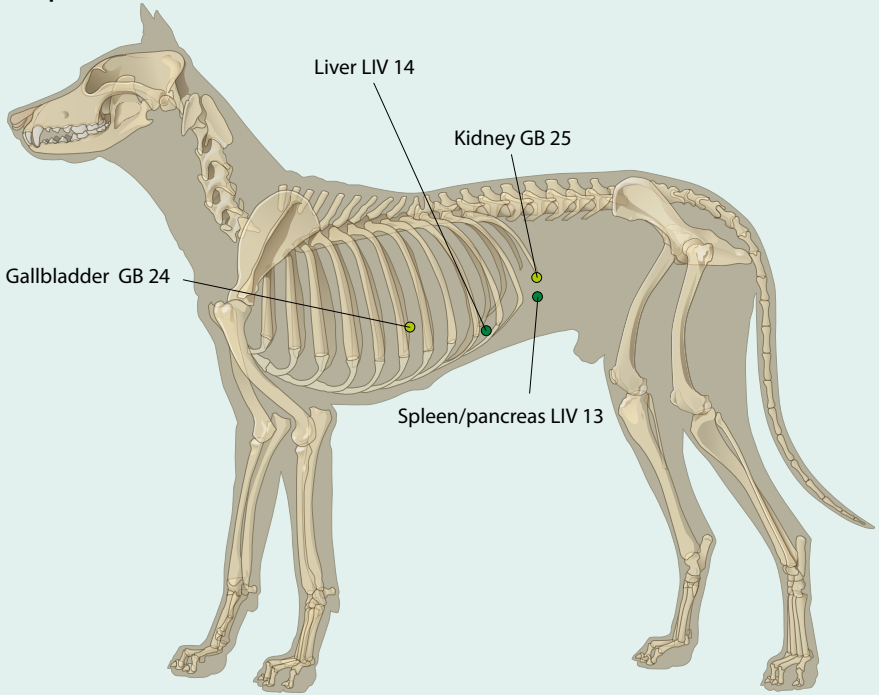
Diagnosis points – dog Shu points

C Cervical spine
T Thoracic spine
L Lumbar spine



Addendum

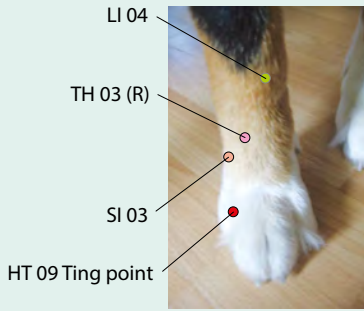
Diagnosis points – dog Alarm points



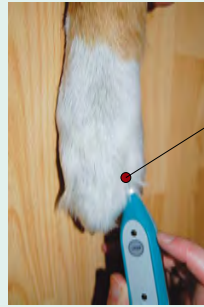
View from below

Diagnosis points – dog Ting points

Front legs

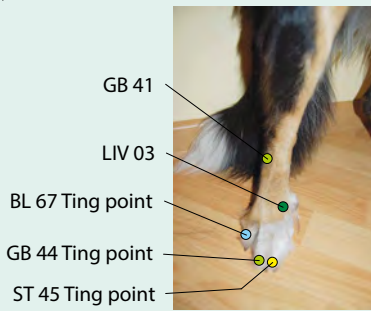


Front right paw, dorsal

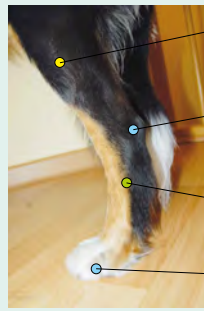


Laser puncture HT 09
front left paw, dorsal

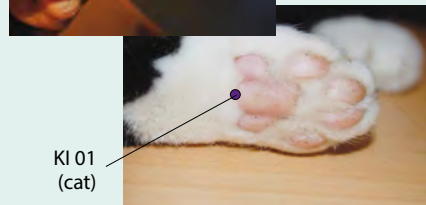
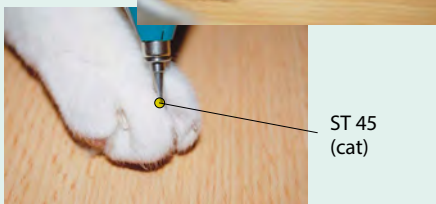
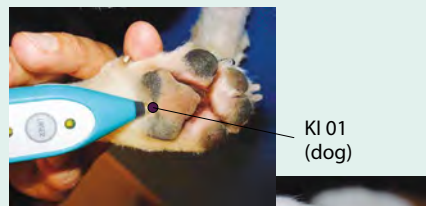
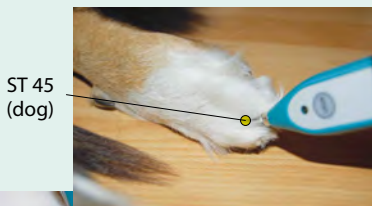
Rear legs



Rear right paw, dorsal



Rear left paw, lateral

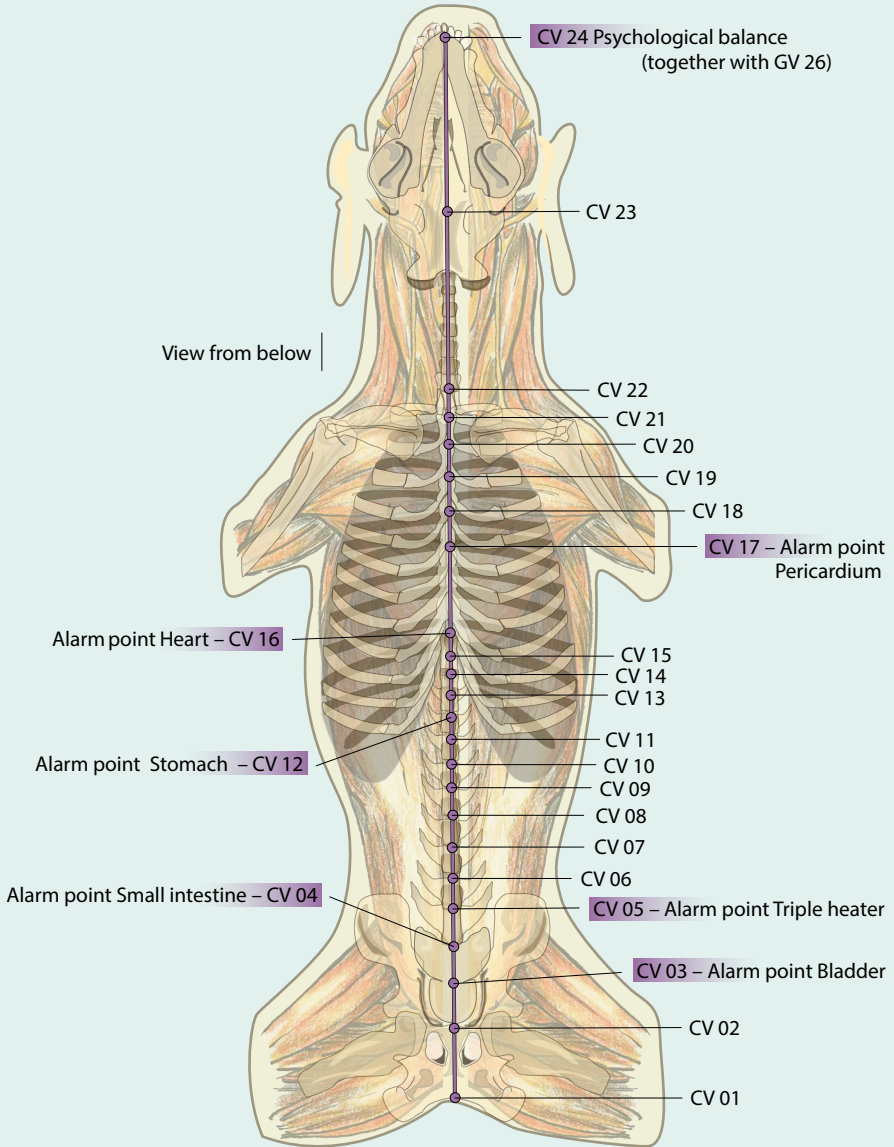


Laser puncture Ting point ST 45

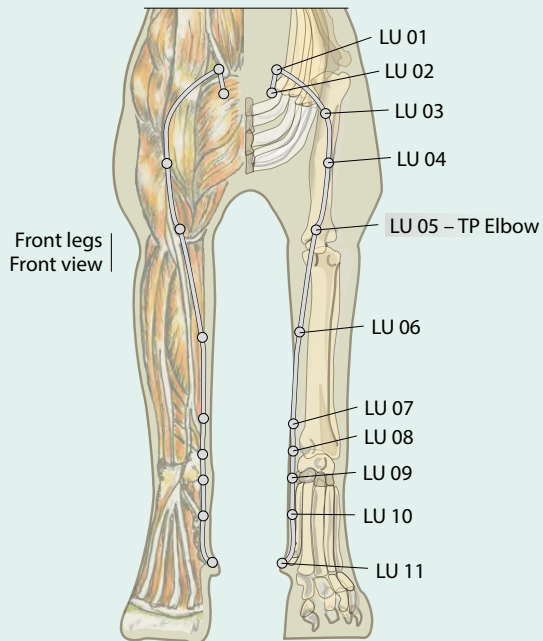
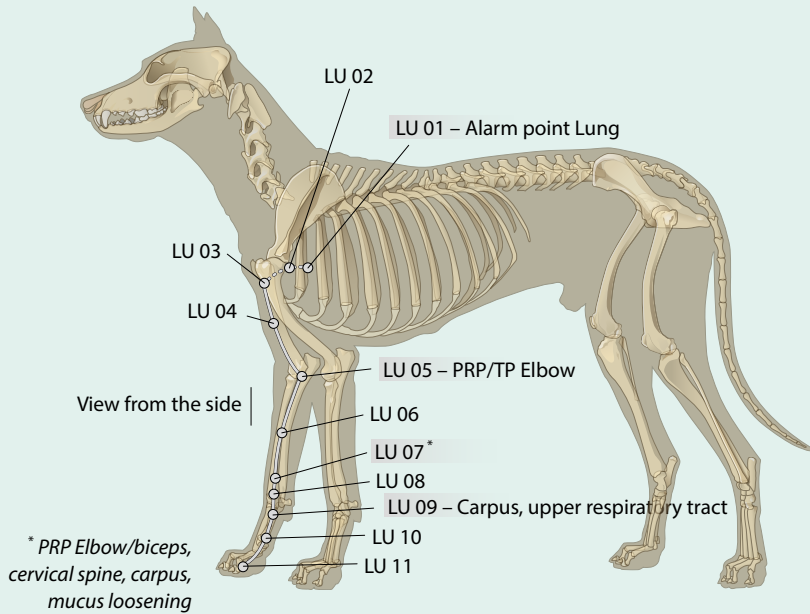
Laser puncture Ting point KI 01

Addendum

Diagnosis and treatment-relevant points Conception vessel (dog)

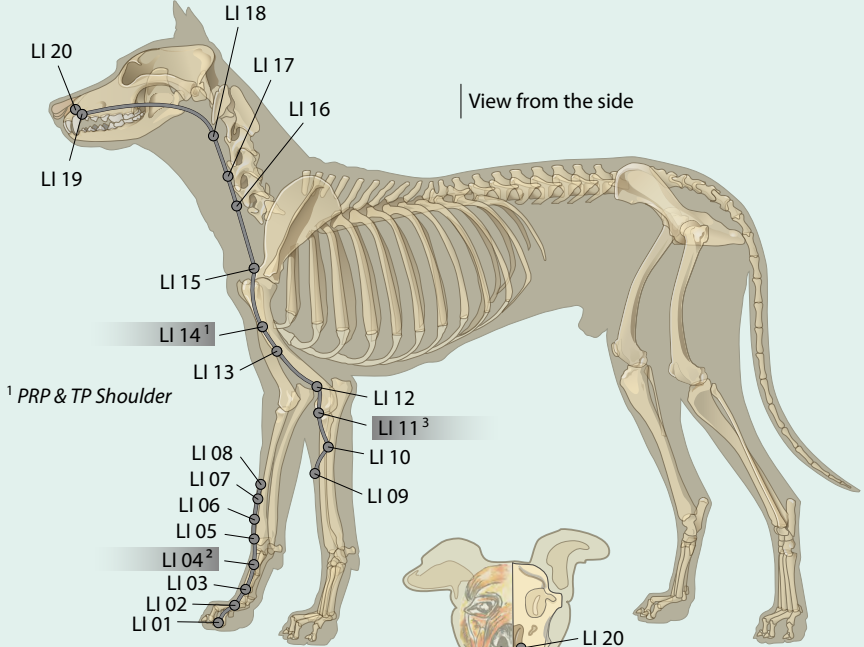


Diagnosis and treatment-relevant points Lung meridian (dog)



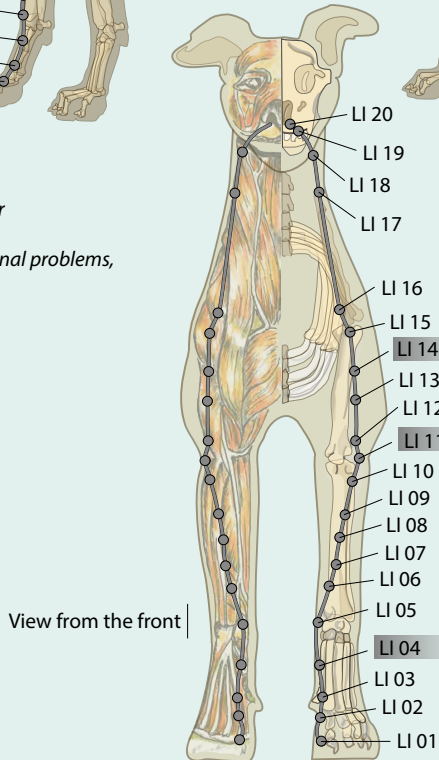
Addendum

Diagnosis and treatment-relevant points Large intestine meridian (dog)

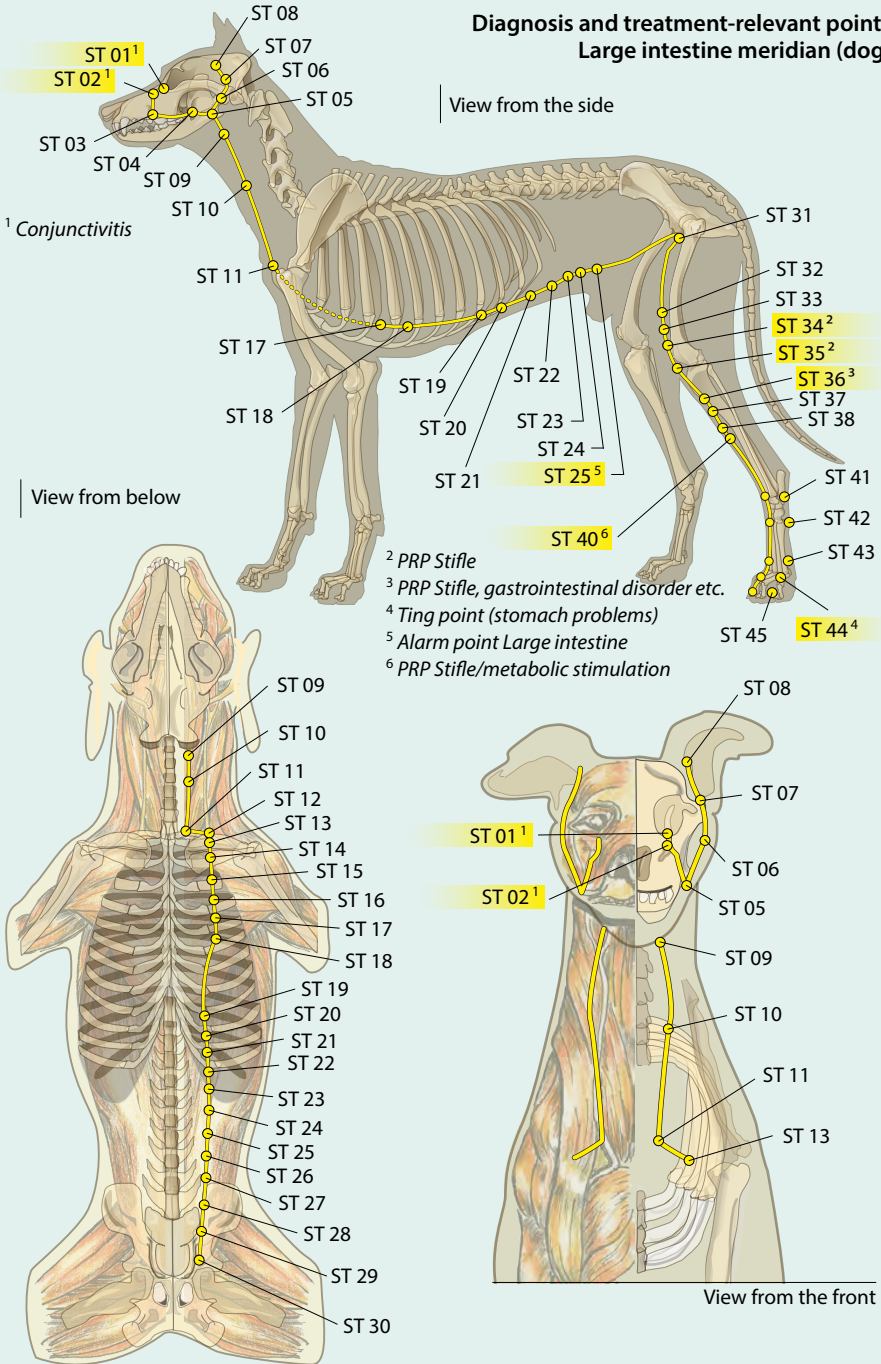


² PRP Carpus, biceps
gastrointestinal disorder

³ PRP Elbow, gastrointestinal problems,
skin disorders

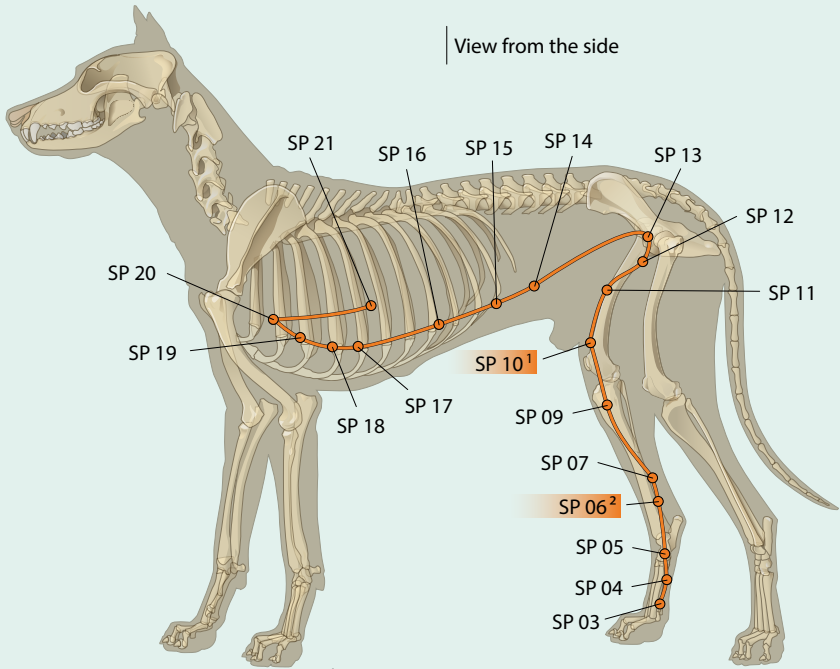


Diagnosis and treatment-relevant points Large intestine meridian (dog)



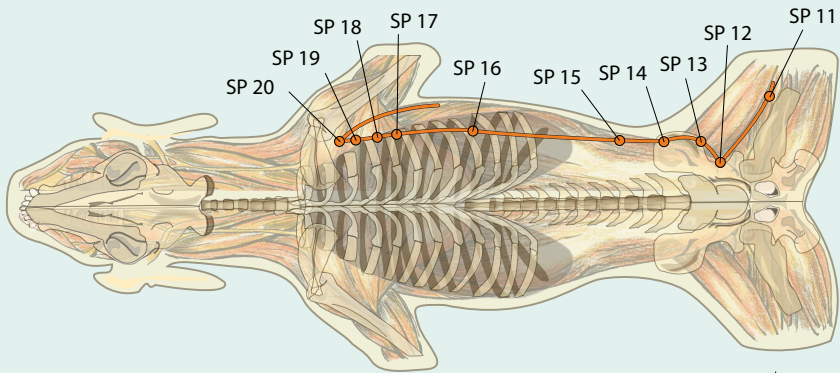
Addendum

Diagnosis and treatment-relevant points Spleen-pancreas meridian (dog)



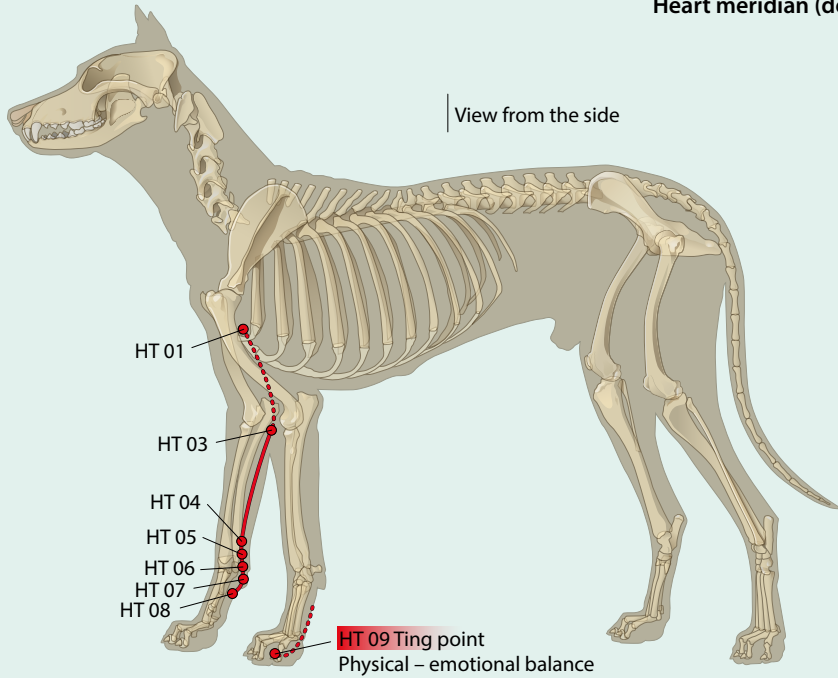
¹ Skin diseases/itching

² PRP Ankle joint and stifle, circulation, immune stimulation
intervertebral disk disorders, diarrhea, incontinence

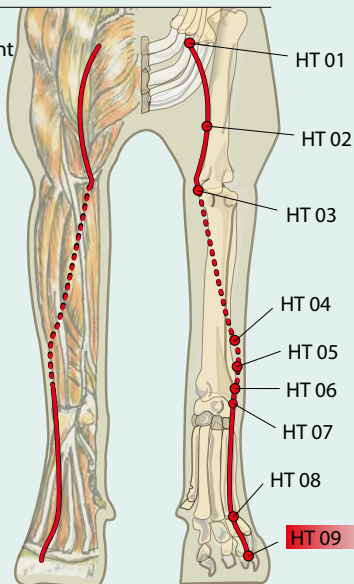


View from below

Diagnosis and treatment-relevant points Heart meridian (dog)

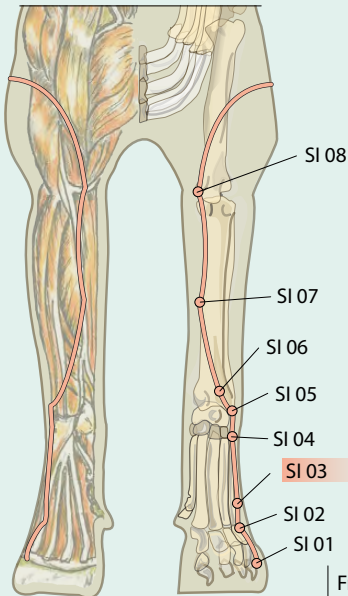
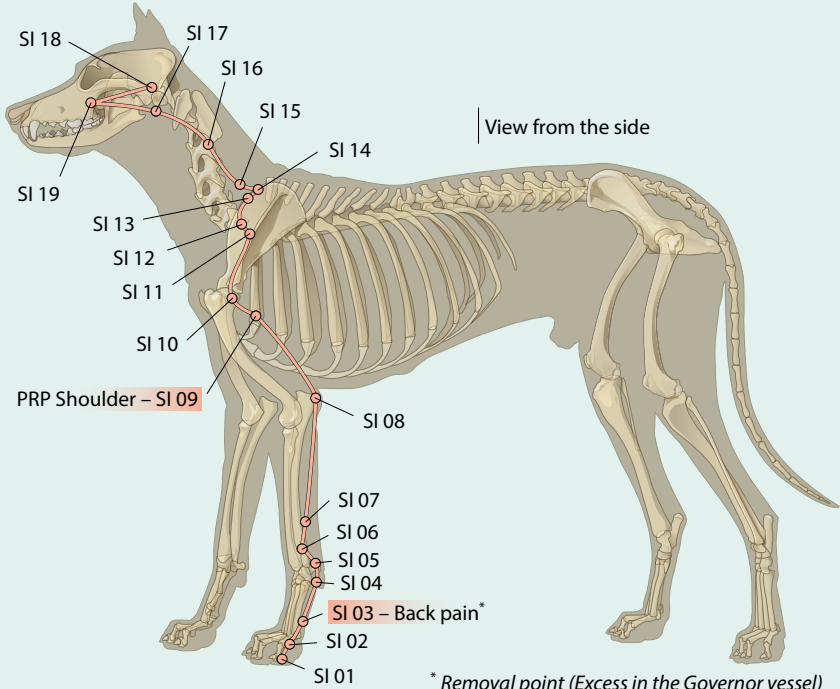


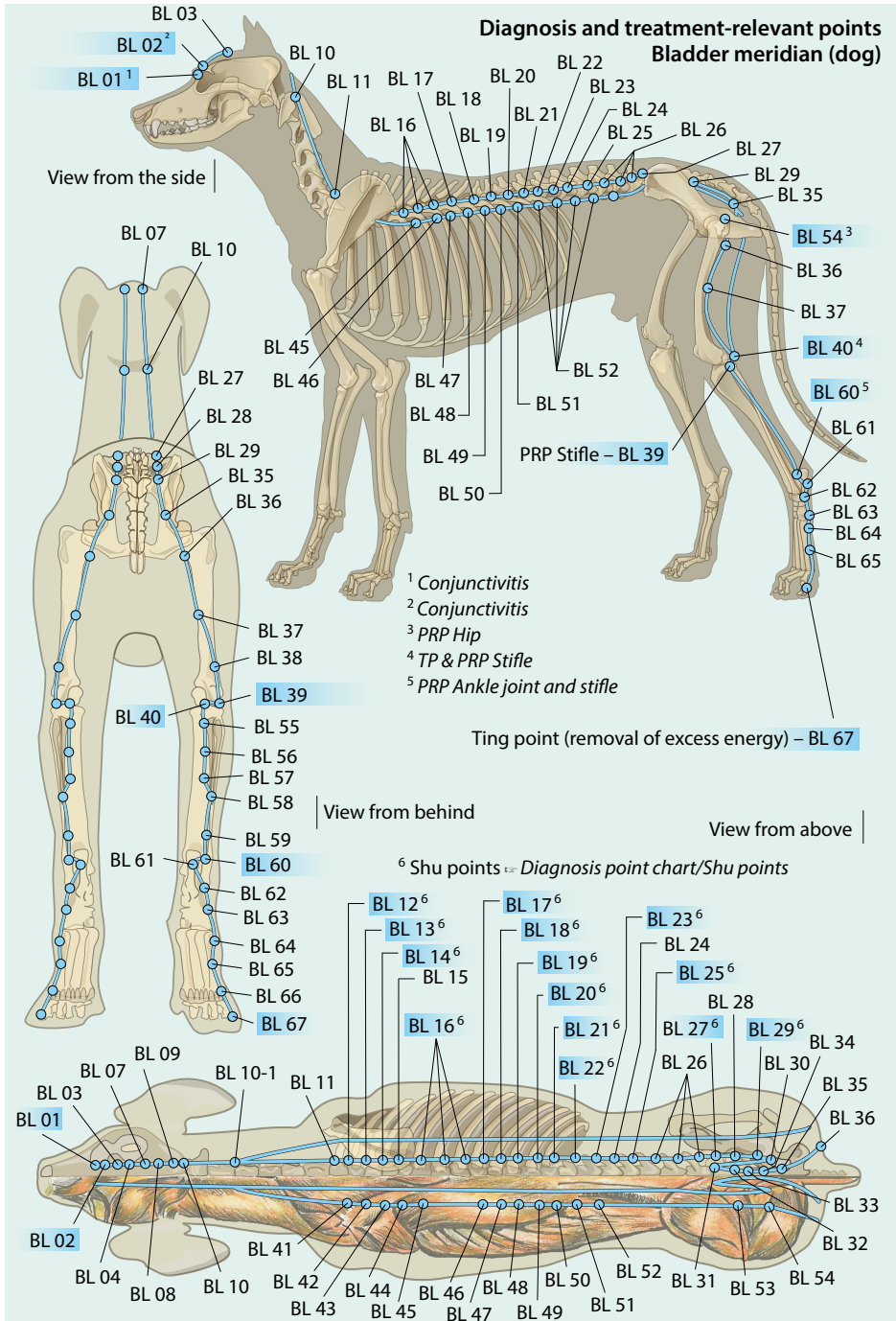
Front legs
View from the front



Addendum

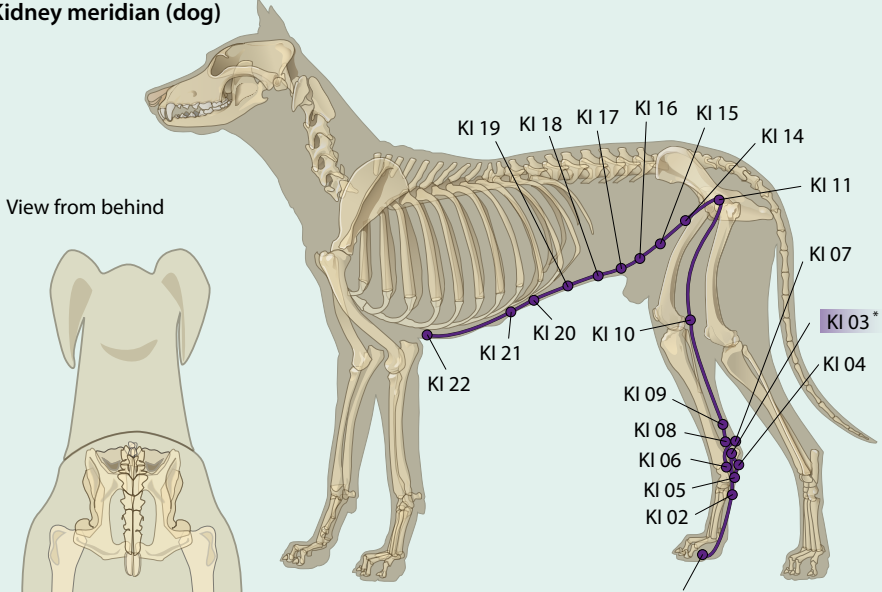
Diagnosis and treatment-relevant points Small intestine meridian (dog)





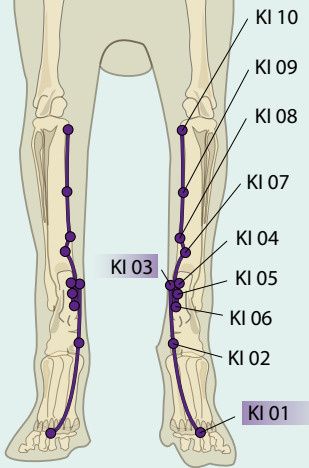
Addendum

Diagnosis and treatment-relevant points Kidney meridian (dog)

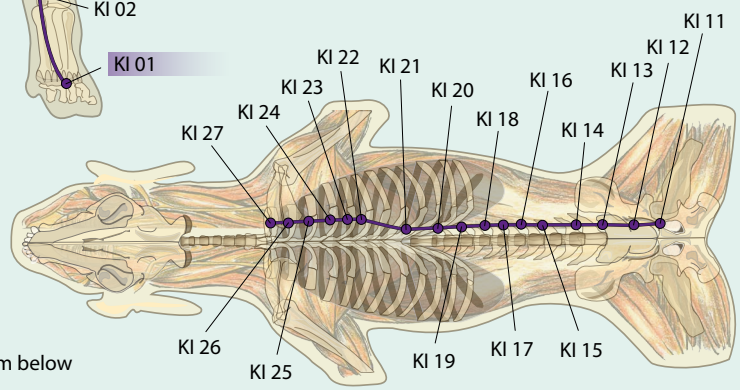


Ting point/Qi build-up – KI 01

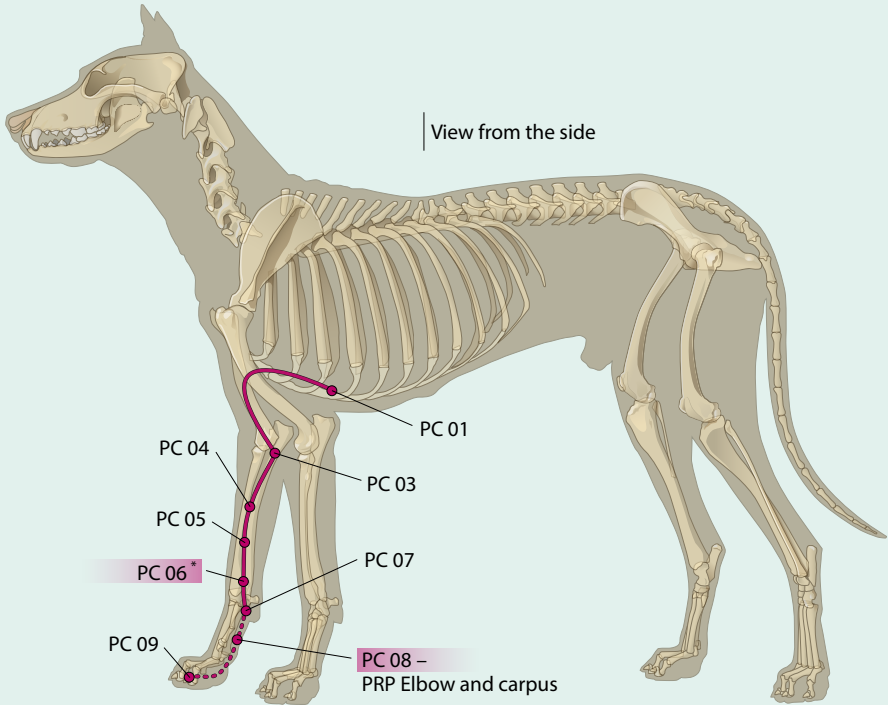
* PRP Ankle joint, stifle



View from below



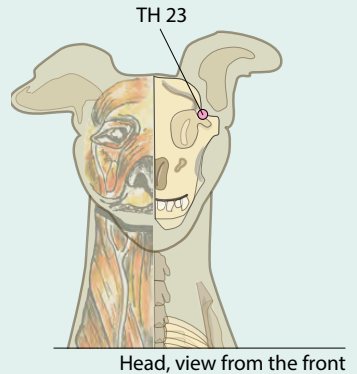
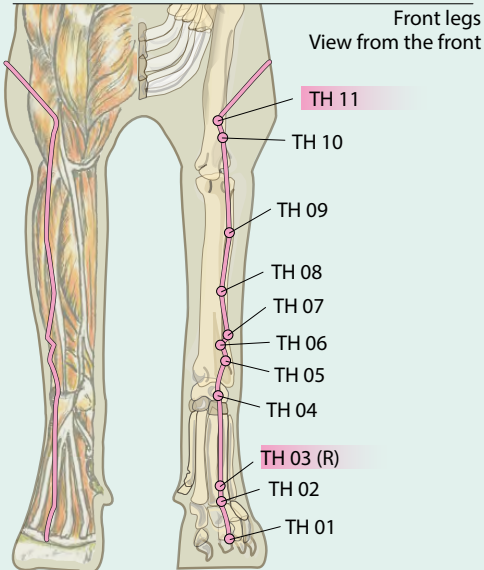
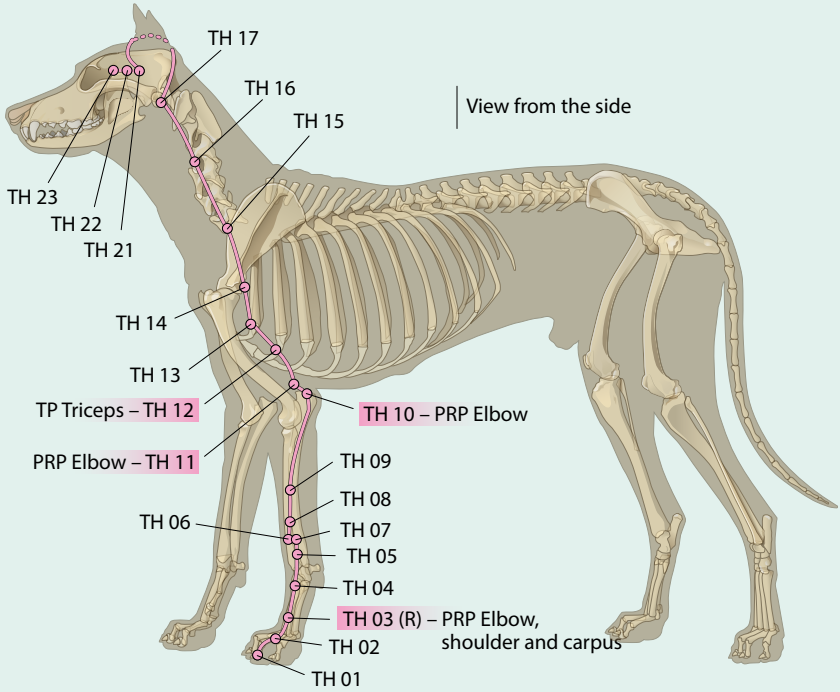
Diagnosis and treatment-relevant points Pericardium meridian (dog)



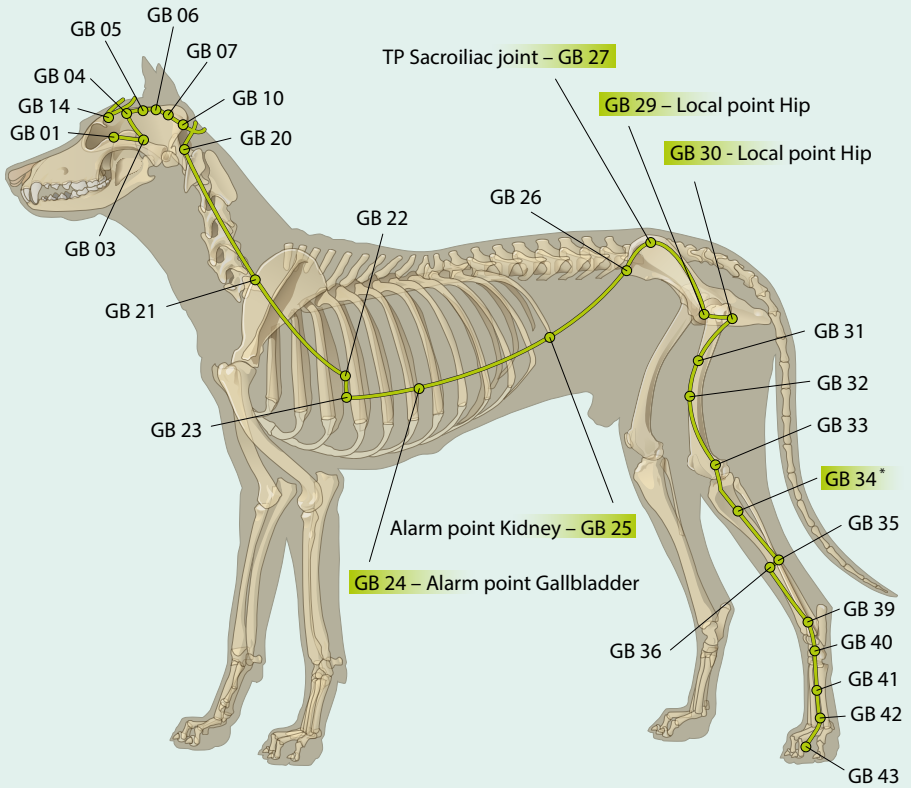
* Disorders of the thorax and cardiovascular disorders, nausea, vomitin

Addendum

Diagnosis and treatment-relevant points Triple heater meridian (dog)



Diagnosis and treatment-relevant points Gallbladder meridian (dog)

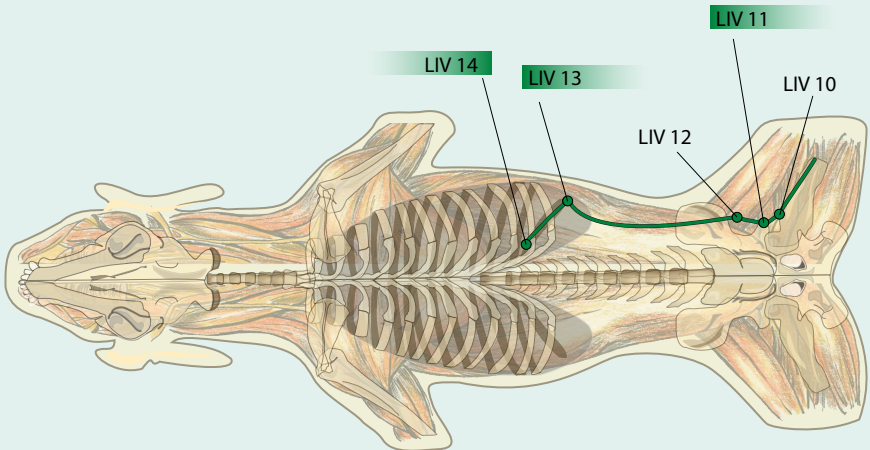
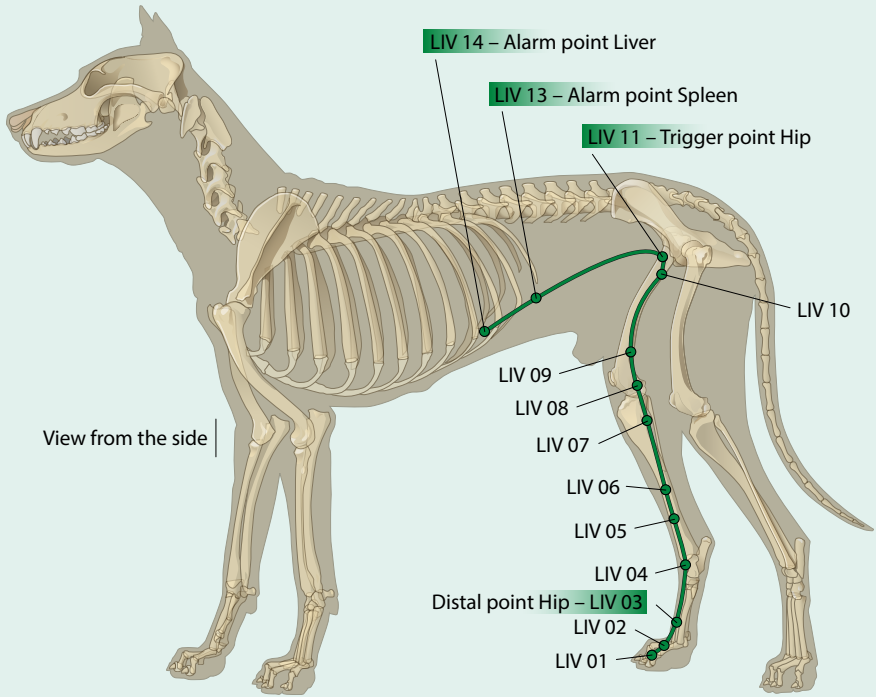


View from the side |

* PRP Stifle

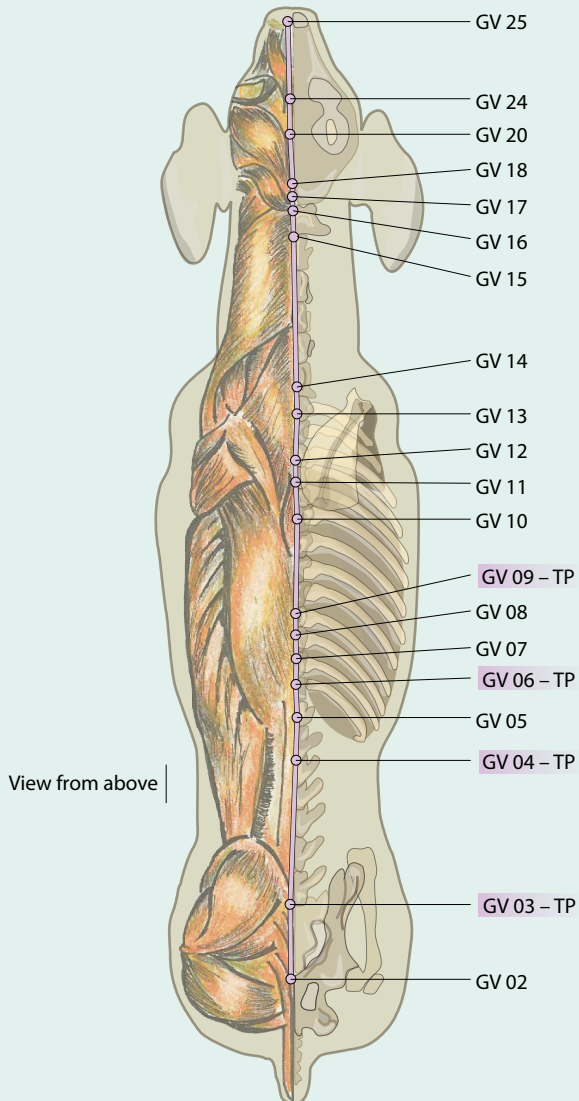
Addendum

Diagnosis and treatment-relevant points Liver meridian (dog)



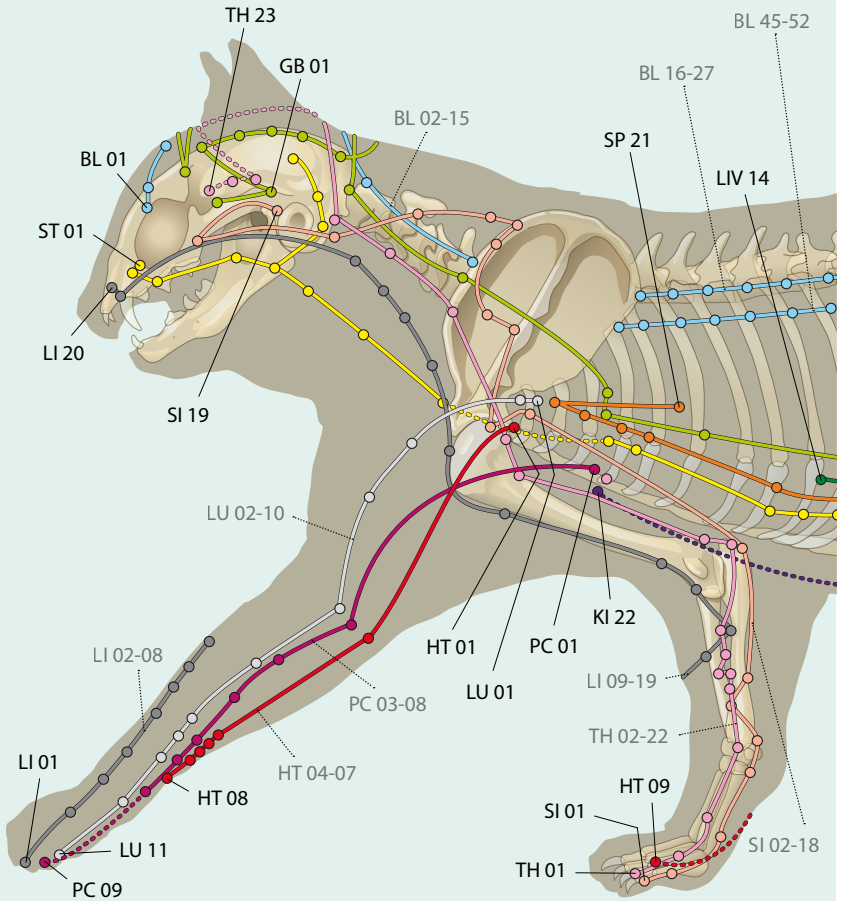
View from below |

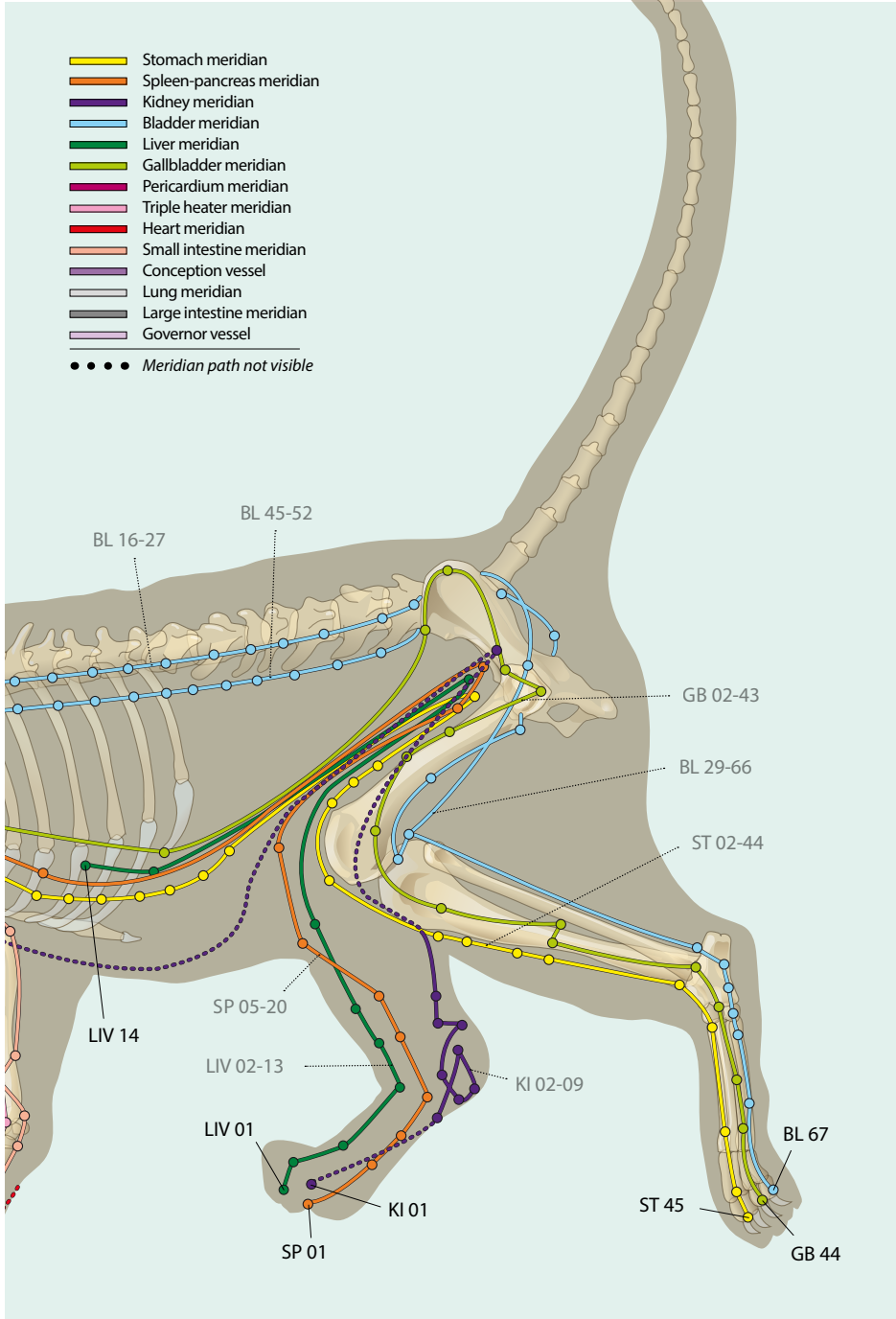
Diagnosis and treatment-relevant points Governor vessel (dog)



Addendum

Meridian chart (cat)





Addendum

Diagnosis points – Point location

TRIGGER POINTS

Part of the body/ symptom	Point	Location
Internal organs	Shu points	See <i>Shu points</i>
Spinal column	GV 03	"Baihui"/between L7 and sacrum on the medians
	GV 04	Between the spinous process of L2 and L2 on the dorsal midline
	GV 06	Median behind the spinous process of T12 on the dorsal midline
	GV 09	Median behind the spinous process of T7 on the dorsal midline
Neck	BL 10	Between the spinous processes of the C1 and C2 on the lateral side of the trapezius muscle cranial of the wing of the atlas
	LIV 11	At the origin of the rectus femoris muscle
Hip	GB 27	Before the upper spinous process of the iliac crest
Sacroiliac joint	LI 14	At the tip of the deltoid muscle, where the shoulder section of the muscle inserts
Shoulder	TH 12	In the centre on the dorsal edge of the lateral muscle head of the triceps (midway between the long head and the lateral head)
Triceps	LU 05	In the centre of the crook of the elbow, on the inner edge of the brachioradial muscle
Elbow	BL40	In the centre of the stifle joint fold between the muscles
Stifle		

ALARM POINTS

Alarm point/organ	Location
CV 03 Bladder	On the ventral midline, 1 Cun cranial to the pectineal line of the pubis
CV 04 Small intestine	On the ventral midline, 2 Cun cranial to the pectineal line of the pubis
CV 05 Triple heater	On the ventral midline, 2 Cun caudal to the navel
CV 12 Stomach	Midway between the navel and xiphoid, on the ventral midline
CV 14 Heart	Directly behind the xiphoid process
CV 17 Pericardium	On the ventral midline at the level of the rear edge of the elbow
ST 25 Large intestine	2 Cun lateral to the navel
GB 24 Gallbladder	In the 7th ICS at the transition of the rib to the rib cartilage
GB 25 Kidney	On the rear edge of the last (13th) rib in the corner between lumbar vertebra and costal arch.
LIV 13 Spleen	On the flank, at the lower edge of the penultimate rib, at the transition of the rib to rib cartilage
LIV 14 Liver	Between the 10th and 11th ICS, at the level of the elbow
LU 01 Lung	In the first ICS, behind the connection between the sternum and rib cartilage

SHU POINTS

Shu point/organ	Location
BL 11 Bone	Lateral to the caudal boundary of the spinous process of T1
BL 12 Trachea	Lateral to the caudal boundary of the spinous process of T2
BL 13 Lung	Lateral to the caudal boundary of the spinous process of T3
BL 14 Pericardium	Lateral to the caudal boundary of the spinous process of T4
BL 15 Heart	Lateral to the caudal boundary of the spinous process of T5
BL 16 Governor vessel	Lateral to the caudal boundary of the spinous process of T7
BL 17 Diaphragm	Lateral to the caudal boundary of the spinous process of T9
BL 18 Liver	Lateral to the caudal boundary of the spinous process of T10
BL 19 Gallbladder	Lateral to the caudal boundary of the spinous process of T11
BL 20 Spleen/pancreas	Lateral to the caudal boundary of the spinous process of T12
BL 21 Stomach	Lateral to the caudal boundary of the spinous process of T13
BL 22 Triple heater	Lateral to the caudal boundary of the spinous process of L1
BL 23 Kidney	Lateral to the caudal boundary of the spinous process of L2
BL 25 Large intestine	Lateral to the caudal boundary of the spinous process of L5
BL 27 Small intestine	Lateral to the caudal boundary of the spinous process of L5
BL 28 Bladder	Lateral to the second sacrodorsal foramen, in an indentation between the sacrum and the medial boundary of the dorsal iliac spine

Acupuncture, tonification and sedation points used

LARGE INTESTINE

LI 11	Tonification point
LI 02 & LI 03	Sedation point
LI 02	On the medial edge of metacarpophalangeal joint II, at the base of the 2nd phalange
LI 03	On the medial edge of metacarpophalangeal joint II, at the head of the 2nd metacarpal bone
LI 04	On the medial edge of the 2nd metacarpal bone, in the middle of the fold formed by spreading the thumb away from the 2nd toe
LI 11	At the outgoing bending crease of the elbow, before the lateral epicondyle
LI 14	On the inner carpus surface, above the tendon of the radial carpal muscle, distal to the medial styloid process

LUNG

LU 09	Tonification point
LU 05	Sedation point
LU 05	In the center of the elbow at the inner edge of the brachioradial muscle
LU 07	On the craniomedial edge of the radius, directly proximal to the medial styloid process
LU 09	On the inner carpus surface, above the tendon of the radial carpal muscle, distal to the medial styloid process

STOMACH

ST 41	Tonification point
ST 45	Sedation point
ST 01	On the lower eyelid below the center of the pupil
ST 21	In the center of the 11th ICS at the mammary line
ST 25	Lateral on the mammary line, at the navel
ST 34	"Upper eye of the stifle"/proximo-lateral to the patella
ST 36	On the outside of the tibia, lateral to the distal tibial tuberosity (before the cranial tibial muscle)
ST 41	In the center of the dorsal ankle joint hock at the tip of the outer anklebone
ST 45	On the outer claw fold of the 3rd toe

SPLEEN-PANCREAS

SP 02	Tonification point
SP 05	Sedation point
SP 02	On the tibial side of the big toe, distal to the metatarsophalangeal joint
SP 04	On the lateral base of the first, medial metatarsal bone
SP 05	In a depression between the anklebone and talus on the inside of the ankle joint
SP 06	On the medial side of the lower leg at the boundary to the distal quarter; at the medial tibia edge at the boundary to the gastrocnemius muscle
SP 10	2 Cun above the patella edge, on the venter of the quadriceps femoris muscle

GALLBLADDER

GB 43	Tonification point
GB 38	Sedation point
GB 20	On the lower edge of the occipital bone in an indentation between the sternocleidomastoid muscle and the trapezius muscle
GB 27	On the upper spinous process of the iliac crest
GB 29	Starting from the trochanter major feel along the axis to the middle of the wing of the ilium as far as the acetabulum, and here, slightly to the left an indentation (GB 19) ⇨ Illustration <i>Treatment plan – Hip</i>
GB 30	On the pubic axis behind the acetabulum (⇨ Illustration <i>Treatment plan – Hip</i>)
GB 34	Midway between ST 36 and the head of the fibula (behind the cranial tibial muscle)

Addendum

Acupuncture, tonification and sedation points used

GB 38	On the anterior edge of the fibula, 1 Cun below the lower third of the lower leg (GB 37)
GB 41	Midway between metatarsal bones 4 and 5, in an indentation distal to the 4th and 5th tarso-metatarsal joint
GB 43	Between the 4th and 5th metatarsophalangeal joint above the fold between the toes

LIVER

LIV 08	Tonification point
LIV 02	Sedation point
LIV 02	On the inside of the 2nd metatarsophalangeal joint
LIV 03 (T)	Between metatarsal bones 2 and 3 at the distal end of the second third
LIV 03 original	In dogs in which the 1st toe (phalange no. 1) is bony LIV 03 is located between metatarsal bones 1 and 2
LIV 08	At the inner end of the stifle joint crease in an indentation
LIV 11	At the origin of the rectus femoris muscle
LIV 13	Under the free end of the 13th rib
LIV 14	In the 10th ICS at the mammary line

SMALL INTESTINE

SI 03	Tonification point
SI 08	Sedation point
SI 03	At the start of the distal third of the 5th metacarpal bone, lateral
SI 08	At the elbow in an indentation between the olecranon and tip of the epicondyle of the humerus
SI 09	In an indentation between the deltoid muscle (scapular section) and the dorsal edge of the lateral head of the brachial triceps muscle

HERZ

HT 09	Tonification point
HT 07	Sedation point
HT 07	On the rear of the lower arm directly proximal to the pisiform bone, between the tendons
HT 09	On the medial claw angle of the 5th front toe

BLADDER

BL 67	Tonification point
BL 65	Sedation point
BL 01	In an indentation at the inner corner of the eye, in a notch dorsal to the base of the nictitating membrane
BL 10	Between the spinous process of T1 and T2 on the lateral side of the trapezius muscle, cranial to the wing of the atlas
BL 11 – BL 28	☞ Shu points
BL 39	Lateral over the head of the fibula in the prolongation axis of the tibia plateau
BL 40	At the center of the stifle joint fold between the muscles in a depression
BL 54	On the femur axis at the roof of the acetabulum (☞ Illustration <i>Treatment plan – Hip</i>)
BL 60	In the center between the ankle joint hock and the outer anklebone
BL 65	Lateral to the head of the 5th metatarsal bone, proximal to the 5th metatarsophalangeal joint
BL 67	On the lateral claw fold of the 5th toe

KIDNEY

KI 07	Tonification point
KI 01 & 02	Sedation point

Acupuncture, tonification and sedation points used

KI 01	Centrally under foot pads of the rear legs
KI 03	Medial, in the center between the ankle joint hock and the inner ankle bone
KI 07	On the anterior edge of the Achilles tendon, 3 Cun above the connection line between the inner anklebone and the Achilles tendon

GOVERNOR VESSEL

GV 03 „Baihui“	“Baihui” Between L7 and the sacrum on the medians
GV 04	Between the spinous process of L2 and L3 on the dorsal midline
GV 06	Behind the spinous process of T12 on the dorsal midline
GV 09	Behind the spinous process of T7 on the dorsal midline
GV 14	Cranial to the spinous process of T1
GV 20	“Baihui”/At the intersection of the line running perpendicularly from the rear base of the ear and the midline of the head
GV 26	Midway between the nostrils in an indentation at the transition to the hirsute skin of the upper lip

CONCEPTION VESSEL

CV 01	Between the anus and vulva in female animals and between the anus and root of the penis in male animals
CV 03	On the midline of the abdomen, 1 Cun cranial to the pectineal line of the pubis
CV 08	On the midline of the body, precisely at the navel
CV 12	On the midline of the body, 4 Cun cranial to the navel
CV 24	Centrally in the indentation between the chin and the lower lip

TRIPLE HEATER

TH 03	Tonification point
TH 10	Sedation point
TH 03 (R)	Between metacarpus 2 and 4 (not, as usually described, between metacarpus 4 and 5!)
TH 05	In the lower quarter of the dorsal lower arm between the radius and the ulna
TH 10	Precisely on the elbow appendix
TH 11 (R)	Precisely midway between the lateral epicondyle of the humerus and the olecranon
TH 12	In the center on the dorsal edge of the lateral muscle head of the triceps muscle (midway between the long head and the lateral head)

PERICARDIUM

PC 09	Tonification point
PC 07	Sedation point
PC 03	In the centre of the bending crease of the elbow joint
PC 06	2 Cun proximal to proximal to the palmar wrist crease between the tendons
PC 07	In the center of the palmar wrist crease between the tendons of the radial carpal flexor muscle and the superficial digital flexor muscle
PC 08	Centrally below the sole bone
PC 09	Between the palmar claw fold and the foot pad of the 3rd toe

ADDITIONAL POINTS

“EYES OF THE STIFLE”	The “eyes of the stifle” are precisely medial and lateral to the tendon insertion point on the edge of the patella between the kneecap and start of the shin bone (“lateral eye of the stifle”: Dubi, “medial eye of the stifle”: Xiyan) / point ST 34 (“upper eye of the stifle” is proximo-lateral to the patella.
Yintang	On the facial midline in an indentation between the medial corners of the eyes at the transition between the nasal bone and the frontal bone

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- (2) Ewald Köppel; Postdoctoral thesis 1991; Enke-Verlag.
- (3) Dr Engelhardt Sann PhD, G. Breves; Psychology of Pets [source in German], 2000, Enke

Literature – Low level laser therapy

Editor: *Anja Füchtenbusch*

Laser acupuncture – a practical handbook

Volkmar Kreisel, Michael Weber

Füchtenbusch 2013

ISBN 978-3-00-037739-6

Jan Tunér, Lars Hode

Laser Therapy – Clinical Practice and Scientific Background

Prima books (☞ webpage)

Jan Tunér, Lars Hode

Laser Therapy in Dentistry and Medicine

Prima books, 1996

ISBN SE91-630-4078-6

Pekka J. Pöntinen

Low Level Laser Therapy as a Medical Treatment Modality

ART URPO LTD 1992

ISBN 951-966-32-0-7

J.A Blahnic, D.W. Rindge

Laser Therapy – A Clinical Manual

Healing Light Seminars INC, Melbourne 2003

ISBN 0-9747572-0-9

Michael R. Hamblin, Ying-Ying Huang

Handbook of Photomedicine

Crc Pr Inc 2013

ISBN 978-1439884690

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Laser therapy and Laser puncture – Treatment tables

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Literature – TCM and acupuncture

Allen M. Schoen

Veterinary Acupuncture: Ancient Art to Modern Medicine

Elsevier Ltd, Oxford; Auflage: 2nd ed. (5. September 2000)

ISBN-13: 978-0323009454

Huisheng Xie, Vanessa Preast, Zhen Zhao

Xie's Veterinary Acupuncture

Blackwell Pub Professional

1st ed. 2007

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Alternative and complementary Veterinary Medicine

Preutz Boktrykkery, Norway 2001

ISBN 82-994172-2-8

Literature – Natural energies

Victor Schauburger

Nature as Teacher

Gateway, 1998

ISBN: 1858600561

Webpages

☞ www.coll.org, college of low level laser therapy

☞ www.prima-books.com, the leading publisher of laser therapy books

☞ The "Low Level Laser Therapy Internet Guide" of "LaserWorld", the Swedish Laser Medical Society at www.laser.nu

Contacts

Workshops and training sessions covering TCM/acupuncture in veterinary medicine are conducted by the following organizations:

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Additional measures

All the biological remedies recommended in this book under "Additional measures" are freely available in pharmacies.



Anja Fuchtenbusch, Specialist for laser photo therapy, graduate biologist, THP, head of COLL (College scientific laser medicine), owner *Fuchtenbusch publishing and education*, instructor for laser therapy, laser acupuncture and laser field therapy.



Peter Rosin, veterinarian specializing in TCM and bioenergetic treatment methods. He studied TCVM in the USA, Norway, Austria, Belgium as well as in China and South Korea. A specialist in LL Laser, he has had his own specialist practice in Berlin since 1993 and teaches laser therapy, laser puncture and TCM for use in veterinary medicine.

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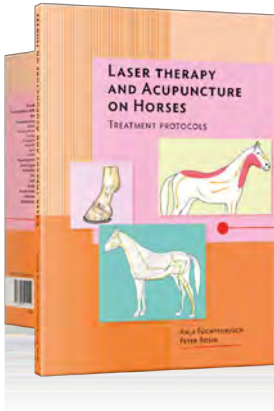
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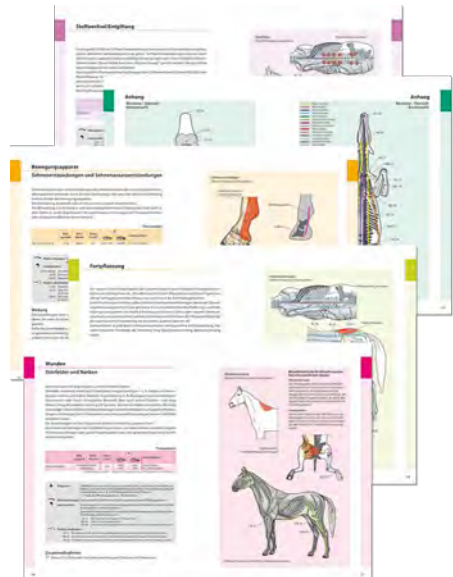
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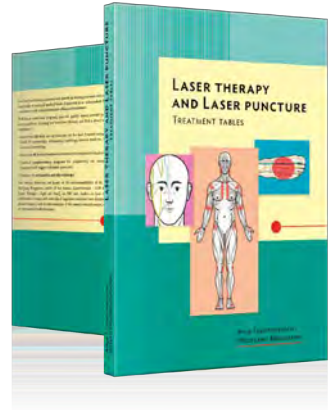
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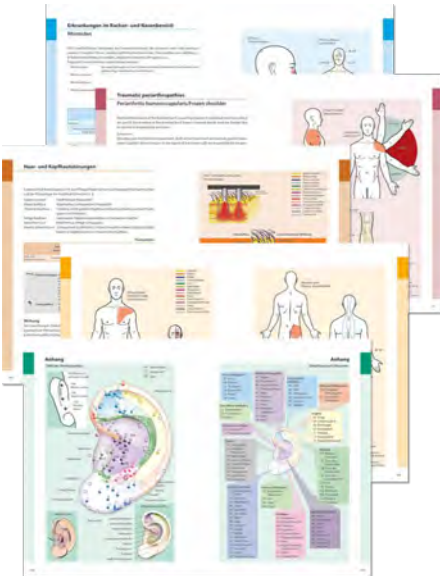
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ISBN 978-3-00-030808-6

