Opinion Lab
Offene innovative Pflege

Non-pharmacological measures for pain reduction

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Version 01

Caritas

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Inhalt

Introduction

Pain management

Effective pain management should always consist of different approaches and include both pharmacological and non-pharmacological therapies which are tailored to the respective nursing home resident's needs. This frequently requires cooperation between different health professions such as general practitioners, physiotherapists, and nursing staff.

Pain assessment and evaluation

Whenever a resident reports or expresses any pain or this is perceived by nursing staff, it is necessary to perform a pain assessment. To select the appropriate assessment tool, the resident's cognitive state must also be taken into consideration.

The use of a pain assessment is not only restricted to the initial assessment of a person's pain but also serves to observe and evaluate their pain status and management measures.

It is recommended that pain assessments should be performed at regular intervals in people with chronic pain.

Adverse effects and/or other anomalies

Medical expertise should be sought if any adverse effects and/or other anomalies or changes in condition occur during or after a pain intervention.

Consulting a physician is absolutely necessary if the following symptoms or anomalies are observed:

- Redness and swelling
- Pain after an accident
- Numbness or signs of paralysis
- Very severe pain
- A limb or joint (e.g., shoulder) can no longer be moved properly
- Perceived instability in a joint / a dislocated joint
- Alteration in the state of health
- Physical discomfort/indisposition

Key information on pain management

What are the regulations regarding pain management measures? Who may perform which measures?

The legal situation may differ between countries with regard to prescribing, initiating and performing pain management interventions. While in Austria, for example, nurses' competencies encompass the independent use of complementary nursing measures and the continued observation and evaluation of a person's health status, this may not be the case in other countries. It is therefore imperative to always be informed about any current regional laws with regard to pain management measures, in particular regarding when a physician has to be consulted and whether/which pain management measures require medical prescription.

What is pain? What is the difference between acute and chronic pain?

Pain is defined as an unpleasant sensory and emotional experience. It may be associated with actual or potential tissue damage. It is important to note that pain is always a personal and individual experience; therefore, every expression of pain is valid and should be taken equally seriously.

Acute pain usually occurs suddenly and has an underlying cause. There are different definitions of how long acute pain may last. If the underlying cause is still present and the process of healing is still ongoing, the respective pain is defined as acute. This process can last from a few minutes to up to 3 or even 6 months.

Chronic pain occurs continually or repeatedly and persists longer than 3 months. Furthermore, chronic pain is subject to multifactorial mechanisms, i.e., it is influenced by biological, psychological and social factors.

What is specific pain and what is non-specific pain?

Specific pain is defined as being caused by a clear identifiable cause, such as an illness. Pain without a recognizable, clear medical cause is known as non-specific pain. Both specific and non-specific pain can be acute or chronic.

Are all kinds of back pain the same?

No! Just as the human back is a complex combination of anatomical structures (e.g., large and small bones, the spinal discs connecting the vertebrae of the spine, the spinal nerves, large and smaller muscles), the types of back pain and their underlying causes may be just as complex and, consequently, often difficult to diagnose. Therefore, in order to determine the right treatment approach, it is necessary to get a precise and clear description: for instance, where the pain is located, whether it is constant or throbbing, sharp or dull, or searing like an electric shock, whether it varies in intensity, or whether it radiates to other areas like the butt, hips or legs, etc.

Why rest/bed rest is not beneficial

Avoiding physical activity may help to provide short-term pain relief, but in the long term it leads to increased pain and, in addition, to pain-related mobility restriction. A lack of physical activity and therefore of muscular stimulation weakens important muscle groups. When under strain, these muscle groups then tend to prematurely respond with pain. As a result, complaints may gradually worsen, leading to functional limitation, inactivity/inertia, and negative moods.

A few exceptional situations, such as acute or traumatic pain, may require short-term rest or bed rest, which is commonly prescribed by a physician and must then be strictly adhered to.

Why „non-recommended measures“ may also be implemented in certain cases

In principle, the healthcare team should primarily offer so-called recommended measures to residents in pain. If a resident, however, requests a non-recommended measure or a measure with unclear evidence, it may still be applied. These are often measures which the residents have always resorted to in the past, and they are convinced of their benefit. With regard to pain management interventions, it is important also take into account and focus on a person’s preferences and needs! However, should any occurring side or adverse effects be observed, it is imperative to strongly advise against the respective pain management measure.

How was the toolkit developed?

All nursing care should be evidence-based. This means that available research findings, the nursing staff's clinical experience and expertise, the residents' needs, and the available resources are all relevant aspects which have a decisive impact on nursing care and its daily practice.

This toolkit is based on currently available research findings. For this purpose, the results of evidence-based websites (e.g., https://medizin- transparent.at) and systematic evidence syntheses were summarized.

Which kind of evidence is the basis for this knowledge/toolkit?

The knowledge which was summarized for this toolkit can be assigned to the following four categories:

- The knowledge was obtained from systematic reviews or derived from evidence-based guidelines.
- The knowledge is based on carefully conducted controlled individual studies of high quality.
- The knowledge is based on uncontrolled or less carefully conducted individual studies.
- The knowledge was derived from expert knowledge or is based on experiences of affected individuals. It has not been corroborated by scientific studies.

It should be pointed out that knowledge derived from systematic reviews or evidence-based guidelines represents the highest level of evidence.

With regard to some measures, it currently remains unclear whether they are effective in relieving pain. This is mostly due to a lack of conclusive studies. Further findings from future studies may change this knowledge gap.

As a general rule: KNOWLEDGE IS ALWAYS CHANGING !

Science is constantly evolving, and further future studies may confirm, challenge or even refute current findings.

Key facts

Effective pain management usually consists of pharmacological and non-pharmacological interventions.

Medical expertise should be sought in case of adverse effects or changes in health status.

Residents‘ wishes/preferences and needs must always be taken into account.

Generally, rest/bed rest is not beneficial and should be used only in exceptional cases as a pain management measure!

Indications and recommended measures

Acute back pain

Elevating extremities (see page 25)

Strengthening exercises (see page 17)

Meditative forms of activity/exercise (tai chi, yoga, Pilates) (see page 17)

Massage (see page 45)

Acute lower back pain

Encouraging movement and physical activity (see page 17)

Acute pain

Progressive muscle relaxation (see page 21)
Autogenic training (see page 21)

Acute shoulder pain

Cold application (see page 36)

Ankle joint fracture

Cold application (see page 36)

Back pain

Encouraging movement and physical activity (see page 17)

Massage (see page 45)

Use of special pillows and mattresses (see page 25)

Cognitive behavioral therapy (see page 34)

Promoting positive thoughts (see page 34)

Baker's cysts

Cold application (see page 36)

Heat application (see page 38)

Carpal tunnel syndrome

Splints (see page 25)

Chronic lower back pain

Encouraging movement and physical activity (see page 17)

Progressive muscle relaxation (see page 21)

Autogenic training (see page 21)

Non-specific back pain

Progressive muscle relaxation (see page 21)

Non-specific chronic lower back pain

Encouraging movement and physical activity (see page 17)

Low-intensity endurance training (see page 17)

Non-specific lower back pain

Self-heating patches (see page 38)

Heat ointment (see page 38)

Massage (see page 45)

Progressive muscle relaxation (see page 21)

Non-specific pain

Encouraging movement and physical activity (see page 17)

Music (see page 48)

Non-specific physical complaints (functional physical complaints)

Progressive muscle relaxation (see page 21)

Autogenic training (see page 21)

Self-hypnosis and fantasy journeys (see page 23)

Distraction (see page 30)

Promoting sleep (see page 31)

Oral mucositis

Gargling with essential oils (see page 50)

Osteoarthritis (especially knee, hip, finger or spinal joint osteoarthritis)

Encouraging movement and physical activity (see page 17)

Low-intensity endurance training (see page 17)

Movement therapy (see page 17)

PAD pain (occlusive peripheral arterial disease)

Walking training (see page 17)

Pain after total knee endoprosthesis (total knee joint replacement)

Cold application (see page 36)

Pain due to chronic disease

Laughter therapy (see page 44)

Pain due to a herniated disc in the lumbar spine

Progressive muscle relaxation (see page 21)

Autogenic training (see page 21)

Indications and measures with unclear evidence

Acute lower back pain

Massage (see page 46)

Acute pain due to chronic diseases

Cold application (see page 37)

Back pain

Cold application (see page 37)

Heat application (see page 40)

Bunion (hallux valgus)

Splints/braces (see page 28)

Shoe inserts (see page 28)

Chronic pelvic pain syndrome

Prostate massage (see page 46)

Chronic prostatitis

Prostate massage (see page 46)

Diseases of the musculoskeletal system

Cold application (see page 37)

Ear pain

Warm ear compress with chamomile extract (see page 43)

Fibromyalgia

Biofeedback (see page 22)

Progressive muscle relaxation (see page 22)

Autogenic training (see page 22)

Mindfulness training (see page 53)

General pain

Curd/cottage cheese wrap (see page 43)

Phlebitis after insertion of an intravenous catheter

Curd/cottage cheese wrap (see page 43)

Rheumatoid joint inflammation (rheumatic arthritis)

Use of special mattresses (see page 28)

Severe pain due to acute sore throat

Cold neck compress (see page 43)

Shoulder pain

Massage (see page 46)

Sore throat

Warm and humid neck compress (see page 43)

Tennis elbow

Splints/bandages (see page 28)

Deep friction massage (see page 46)

Indications and non-recommended measures

Breast cancer

Lymphatic drainage with essential oils (see page 52)

Chronic lower back pain

Matrix therapy (see page 47)

Frozen shoulder

Matrix therapy (see page 47)

Neck pain

Matrix therapy (see page 47)

Upper back pain

Matrix therapy (see page 47)

Empathic attention and communication

Recommended

List of measures

- If a resident expresses/reports pain, make it clear for them that they are being believed and that their symptoms and complaints are being acknowledged.
- Explaining how pain arises
- Reassuring them with regard to the causes of their pain
- Describing the likely development of their pain
- Asking them to observe, measure, and express their pain using a self-assessment scale
- Explaining the necessity of symptomatic pain treatment
- Explaining the reason for the choice/necessity of the respective pain management intervention or analgesic medication
- Explaining how the pain management intervention will be applied / the medication will be administered
- Making sure that the resident has been able to say everything they wanted to
- Offering them a therapeutic partnership

Indications

This measure can be used in combination with any pain management intervention (it increases the effectiveness of other treatment options). It is more effective in acute pain management than in chronic pain management.

Contraindications/adverse effect

These measures have no adverse effects.

Tips and tricks

- The resident should be informed that, as a result of the intervention, their pain will subside within a short time.
- It is helpful to emphasize that the applied pain management intervention has proven to be successful in residents with similar pain or that the respective intervention is very effective in eliminating this kind of pain.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from systematic reviews or evidence-based guidelines.

Physical exercise

Recommended

List of measures – depending on the indication (see Table p.18)

- Low-intensity endurance training (e.g., brisk walking, Nordic/fitness walking, cycling, dancing, gymnastics, swimming)
- Encouraging movement and physical activity (e.g., sitting in a rocking chair, motivating residents to go for a walk)
- Stretching exercises
- Gardening
- Strengthening exercises
- Meditative forms of activity/exercise
- Arranging for physiotherapy
- Special types of physical exercise (e.g., eccentric training, vibration training)

Indications

- Osteoarthritis (degenerative joint disease), notably osteoarthritis of the knee, hip, finger, or spinal joints
- Non-specific chronic lower back pain
- Non-specific lower back pain
- Acute lower back pain
- Chronic lower back pain
- Chronic pain
- Back pain
- Lower back pain
- Fibromyalgia
- Golfer‘s elbow
- Lower back pain due to a herniated disc
- Neuropathic pain
- Pain due to occlusive peripheral artery disease (PAD)
- Rheumatoid joint inflammation (rheumatoid arthritis)
- Non-specific pain
- Shoulder pain
- Frozen shoulder
- Tennis elbow

Type of physical exercise / **Type of pain/diagnosis**	Promotion of physical activity/ movement	Low-intensity endurance training[3]	Strengthening exercises	Stretching exercises	Meditative forms of activity/exercise	Physiotherapy sessions	Special types of physical training
Osteoarthritis (especially knee, hip, finger or spinal joint osteoarthritis)	■	■					Movement therapy
Fibromyalgia	■	■	■	■	■		Vibration training
Golfer‘s elbow			■	■			Eccentric training
Acute lower back pain	■						
Non-specific chronic lower back pain	■	■	■		■		
Lower back pain due to a herniated disc	■					■	
Neuropathic pain						■	Sensorimotor training, balance exercises, coordination exercises
PAD pain							Walking training
Rheumatoid arthritis	■	■	■			■	Functional Training
Non-specific pain	■						
Shoulder pain						■	Shoulder mobilization exercise
Frozen shoulder				■		■	
Tennis elbow			■	■			Eccentric Training

recommended

Tips and tricks

- Exercise produces pain-relieving substances in the body. Exercise also stimulates blood circulation, metabolism and the supply of nutrients to the bones and cartilage, which can help to alleviate pain.
- **Meditative forms of exercise** include, for example, tai chi, qigong, yoga, or Pilates.
- Low-intensity **endurance training** includes, for instance, brisk walking, hiking, cycling, dancing, gymnastics or swimming.
- **Strengthening exercises** may be performed using light weights, resistance bands or other equipment.
- Movement therapy for **osteoarthritis** should be tailored to the affected joint (possibly with the assistance of an occupational therapist).
- When suffering from **fibromyalgia**, movement exercises should be started slowly and then increased gradually over time. Combining different types of movement exercise provides additional benefit.
- **Golfer‘s elbow / tennis elbow:** Exercise should be started slowly and carefully, taking care to not put too much strain on the arm. Eccentric training involves special exercises to stretch and strengthen the arm and wrist muscles. These should be carried out 3 times a day over a period of around 1 to 3 months.
- Bed rest is not recommended for **acute lower back pain**! Avoiding physical activity may temporarily help to relieve pain, but in the long term it will increase the pain and lead to pain-related activity restrictions.
- Exercise is the most effective treatment for **chronic and non-specific lower back pain**; but a regular basis is an important factor (at least twice a week). It is important to take into account a person’s individual fitness level as well as their preferences. Strengthening exercises are particularly recommended for the deep abdominal, back and pelvic muscles. Studies have shown that gardening may have a preventive effect on chronic lower back pain in men.
- In the case of **lower back pain due to a herniated disc**, prolonged bed rest can weaken the muscles and bones, thus causing further health problems.
- Standing on one leg on an unstable surface (air cushion, foam surface, balance board, vibration plate, etc.) is a simple balance and coordination exercise which is recommended for **neuropathic pain**.
- Walking training for **PAD pain** should be performed at least 3 times a week for 30-60 minutes over a period of at least 3 months.
- In the case of **rheumatoid arthritis**, physical activity should be tailored to the individual severity of symptoms/complaints and the disease stage. It is important to avoid excessive strain! If severe joint damage has occurred, overly intensive training should be avoided. To strengthen the arm and leg muscles, strengthening exercises can be carried out with light weights or using fitness equipment (2-3 times a week, 30-60 minutes). Modelling clay may be used for functional training and hand-strengthening.
- To alleviate **non-specific pain**, movement exercises should be started gently to avoid excessive strain.

- A simple exercise to gently mobilize the shoulder joint and to alleviate **shoulder pain** is to hold on to a table or chair with the pain-free arm, bend the upper body slightly forward and let the painful arm hang freely. Then, like a pendulum of a clock, let the arm circle or swing back and forth gently. This exercise can be repeated 2-3 times a day for 1-2 minutes. Consulting a physician is imperative if severe shoulder pain, redness, swelling or mobility restriction occurs.
- When suffering from a **frozen shoulder**, it is important to start any exercises very gently to avoid exacerbating symptoms and pain.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from systematic reviews or evidence-based guidelines.

Relaxation techniques

Recommended

List of measures – depending on the indication

- Autogenic training (visualization of individual body parts, focusing attention on them, and purposefully relaxing them) for non-specific physical complaints (functional physical complaints), acute pain and chronic lower back pain.
- Progressive muscle relaxation (=Jacobson's relaxation technique or deep muscle relaxation) for non-specific physical complaints (functional physical complaints), non-specific back pain, non-specific lower back pain, pain due to a herniated disc in the lumbar spine, acute pain, and chronic lower back pain.

Contraindications/adverse effects

These measures have no known adverse effects.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and retrieved from systematic reviews or evidence-based guidelines.

Unclear evidence

List of measures

- Biofeedback
- Progressive muscle relaxation
- Autogenic training

Indications

- Fibromyalgia

Contraindications/adverse effects

These measures have no adverse effects.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies.

Self-hypnosis and fantasy journeys

Recommended

List of measures – depending on the indication

- Guided self-hypnosis: This is a form of hypnosis which is practiced independently, i.e., on one's own, or using recorded instructions.
- Fantasy journeys, fairytale journeys, dream journeys, or „guided imagery" are all guided associations and a subset of imaginative therapeutic approaches. During the imagery session, the resident is encouraged to visualize a certain scene, place or event which evokes exclusively positive emotions. The imagery session is guided by a narrator or by means of recorded instructions (e.g., CD). The participant follows the instructions to generate and evoke mental images which incorporate as many positive sensory perceptions as possible, thus creating a beneficial inner journey.

Indications

- Acute pain
- Chronic pain
- Chronic lower back pain
- Non-specific physical complaints (functional physical complaints)
- Pain due to a herniated disc in the lumbar spine

Contraindications/adverse effect

These measures have no known adverse effects.

Tips and tricks

- Guided self-hypnosis: For beginners, the use of an audio file or recording may help and guide them along an individually appealing session to achieve the desired deep relaxation.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from systematic reviews or evidence-based guidelines.

Unclear evidence

List of measures

- Guided self-hypnosis
- Fantasy journeys

Indication

- Fibromyalgia

Contraindication/adverse effect

These measures have no adverse effects.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies.

Relieving pressure on affected body parts/ positioning

Recommended

List of measures – depending on the indication

- Walking sticks/canes for knee arthrosis (gonarthrosis) and hip arthrosis (coxarthrosis)
- Splints and bandages
- Grip pens, gripping and opening devices for finger arthrosis
- Decompressing position (lying down briefly in a position that relieves as much pressure as possible) for herniated disc pain
- Elevating extremities (the person lies on their back, with their lower legs on a supporting surface enabling a 90-degree angle of the legs) for acute back pain
- Elevating extremities for hand-foot syndrome
- Use of specific aids and devices (see tips and tricks) for rheumatoid joint inflammation (rheumatoid arthritis)

Contraindications/adverse effects

Carpal tunnel syndrome: After having removed splints in the morning, the skin may occasionally tingle, be swollen or feel numb for a short time. Studies suggest that wearing a splint may provide relief within a few weeks. However, this relief is often only temporary and/or symptoms may return after a while.

No adverse effects are known with regard to positioning and elevation of extremities. However, individual needs and preferences must be taken into account.

Tips and tricks

- **Hand-foot syndrome:** Friction and/or rubbing, heat, and pressure (e.g., from lifting and carrying heavy loads, long walks, tight-fitting footwear) should be avoided as much as possible.
- Affected persons should avoid lying down for long periods but rather stay as active as possible.
- Walking sticks/canes should have an easy-to-grip handle.

- **Carpal tunnel syndrome:**
  - The wrists should be moved as usual during the day to avoid stiffening and weakening muscles.
  - A wrist support bandage may be worn instead of a support splint.
  - For mild to moderate complaints, a splint may be used for a few weeks at night in order to keep the wrist in a neutral position. Symptoms and complaints are usually most severe at night because wrist flexion often occurs during sleep involuntarily.
  - There are numerous models of splints and braces. If one model does not fit properly or provide the desired relief, it is suggested to try another one.
- Numerous aids and devices are available specifically for **rheumatoid arthritis** to prevent or alleviate pain:
  - **Walking and standing:** shoe inserts, special footwear (to relieve pressure on the foot joints), walking sticks/canes, walking frames, rollators and non-slip mats.
  - **Eating and drinking:** cutlery with extra-large rubber or foam handles, angled cutlery, specially shaped can and bottle openers, special cups/ glasses, and holders for cups and glasses.
  - **Getting dressed:** various types of dressing aids for socks/ stockings/ trousers, buttoning aids, or even wall-mounted racks to facilitate putting on tops.
  - **Personal hygiene:** Shower stools or bathtub lifts may help to make personal care and hygiene routines less difficult. Combs, brushes and bath sponges with long handles are also useful aids when suffering from impaired mobility.
  - **Gripping and holding:** Grip/handle attachments and extensions placed on objects make it easier to grasp, hold or operate them (e.g., cutlery, keys, door handles, pens and water taps). Special gripping aids such as buttoning and zip aids make getting dressed/undressed easier. Non-slip pads prevent, for example, plates or chopping boards from slipping away..

Specific recommendations for the use of mattresses and pillows

List of measures – depending on the indication

- Use of pillows (feather pillows or foam pillows)
- Use of medium-firm mattresses (preferable to firm/hard mattresses)

Indications

- Neck pain
- Back pain

Contraindications/adverse effects

There are no known adverse effects.

Tips and tricks

- There is currently no evidence supporting that a contour pillow is more beneficial than a normally shaped pillow in terms of pain.
- The measures should be tailored to the residents' individual needs and preferences.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from systematic reviews or evidence-based guidelines.

Unclear evidence

List of measures – depending on the indication

- Special mattresses for rheumatic pain
- Bandages and splints worn around the elbow or the forearm to provide relief for the muscles when suffering from tennis elbow and golfer‘s elbow
- Posture correctors (straps or braces that improve posture) for neck pain

Contraindications/adverse effects

Posture correctors only provide short-term relief and improvement. It is unclear whether wearing them for longer periods may entail harmful effects. If wearing a posture corrector for extended periods indeed supports the posterior back muscles and thus improves posture, it may, however, also cause muscle dependency, i.e., weaken the muscles responsible for maintaining a proper/straight posture. This, in turn, may cause lower back pain due to the weakened muscles.

There are no other known adverse effects.

Tips and tricks

When suffering from tennis elbow/golfer‘s elbow, it is advisable to rest the arm, avoid strain, and avoid/reduce triggering activities during the first few days/weeks after the symptoms occur.

Once the pain has subsided, usual activities may gradually be resumed.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies.

List of measures

- Splints and braces are aids designed to correct the inward deviation of the big toe. They are designed to straighten and realign it in order to alleviate pain and slow the progression of the bunion. However, they cannot correct the deformity of the toe.
- Shoe inserts are used to support the arch of the foot.

Indication

Bunion (hallux valgus)

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies. Due to contradictory findings and biases in the studies as well as inconclusive results (due to very small study populations), the confidence in the findings is very low. Knowledge about this topic is likely to change as a result of further, well-conducted studies.

Distraction

Recommended

List of measures – depending on the indication

- Crafting with beads, e.g., making jewelry/sun catchers/bells using wires or cord
- Meeting with friends
- Engaging in textile/fiber crafts (knitting, crocheting, etc.)
- Pursuing creative activities (e.g., plasticine, paper crafts like collages or papier-mâché, making/decorating wooden objects, etc.)
- Maintaining hobbies (e.g., dancing, painting, playing a musical instrument)
- Painting and drawing (e.g., painting objects/on canvas/on paper with acrylic paint, painting tiles with alcohol ink, watercolor painting on paper)
- Participating in social activities, engaging in social interactions

Indications

- Neoplasm
- Neurological disorders
- Gastrointestinal diseases
- Non-specific physical complaints (functional physical complaints)

Contraindications/adverse effects

These measures have no adverse effects.

Tips and tricks

- Women accept and appreciate these measures particularly well.
- A significant decrease in pain has been observed before and after such activities at the patient‘s bedside. There was no observed difference with respect to the type of activity (painting, creative crafts, textile crafts).

Source of knowledge (evidence)

The knowledge presented in this chapter is based on an uncontrolled or less carefully conducted individual study.

Promoting sleep

Recommended

List of measures – depending on the indication

- Adhering to fixed bedtimes
- Making sure the residents get enough sleep at night
- Tailoring sleep-promoting measures to the individual residents

Indications

- Non-specific physical complaints (functional physical complaints)
- Restless legs syndrome
- Migraine

Contraindications/adverse effects

These measures have no adverse effects.

Tips and tricks

Good sleeping habits:

- It is recommended to avoid excessive naps during the day because these can delay falling asleep or cause interrupted sleep.
- Light physical activity during the day helps to feel sleepy in the evening, but it should be avoided shortly before bed or after 6 p.m.
- Soaking up the morning sun reinforces the sleep-wake cycle.
- Spending the day doing things which bring joy also helps.
- It is recommended to prefer light and easily digestible meals for dinner because heavy food can cause heartburn and acid reflux.
- Avoiding nicotine (cigarettes etc.) and caffeine-containing beverages (coffee, black/green tea) in the late afternoon or in the evening helps night sleep.
- It is also important to avoid alcohol in the late afternoon or in the evening; because although it makes it easier to fall asleep, it is likely to cause interrupted sleep at night.
- Sleep-related adverse effects and other aspects of any medication should be discussed with a physician (medication times, dosage, effect on sleep).

Building a routine:

- The bed should only be used for sleeping. Other activities like reading or watching TV should take place somewhere else (e.g., chair, sofa).
- Falling asleep on the sofa, in the lounge chair/recliner should be avoided.
- Establishing and adhering to consistent morning and evening rituals/times has proven helpful.
- A resident should only go to bed when they are truly tired.
- If a resident struggles with falling asleep, they should not remain in bed. If they are still awake after more than 30 minutes, it is recommended that they sit up or get out of bed. Afterwards, they should do something "boring" or relaxing/ calming (i.e., not watch an exciting or gripping TV program) and wait until they feel sleepy again. Then they can try again to go to bed and sleep.
- Midday naps should not last longer than 30 minutes and should not be taken after 3 p.m., as this might make it more difficult to fall asleep in the evening.

Things to keep in mind or try when in bed:

- Relaxation exercises, such as mindfulness exercises or abdominal and diaphragmatic breathing (i.e., belly breathing), can help to relax and fall asleep.
- If somebody struggles with falling asleep, they should avoid looking at their watch or clock repeatedly.
- Arising thoughts may be registered and allowed as such – but without fussing over them or getting stuck in the subject.
- Any obtrusive thoughts relating to a negative or worrying topic should better be pushed aside to be dealt with during the next day. Residents may be suggested to keep a notepad to write them down for this purpose.

Words of encouragement:

- Reassure and remind residents that it is absolutely normal to not fall asleep immediately or easily when suffering from pain.
- Help residents not to get frustrated with themselves if they struggle with falling asleep or if they wake up during the night.
- Explain to the residents that even if they are unable to fall asleep, their body will still benefit from the time to rest and recover.

Creating a sleep-friendly environment:

- The bedroom or area around a resident's bed should be a pleasant place to sleep - photos prompting positive feelings/memories or a pleasant scent may help to achieve this goal.
- Additional pillows or bed support cushions may help them to find a more comfortable sleeping position.
- The room should be clean and tidy.
- Disturbing noises should be avoided or reduced (with the help of earplugs, if necessary).
- It is important to adjust the lighting conditions (not too bright/too dark; a night-light may help).

- A bedroom temperature of 16-18 °C (60-65°F) is considered best for sleep (i.e., no open windows overnight when it is cold outside; it is sufficient to air the room twice).
- If couples share a bed, a sufficiently large bed (at least 1.80m x 2m) with separate mattresses and blankets which match their individual needs is ideal to foster restful sleep.
- Electronic devices emit blue light which corresponds to the midday sun. This type of light suppresses melatonin production (sleep hormone). When using such devices at night, it is important to switch on an additional light source in the room and to activate its night mode.

How health care employees may help to improve the residents' quality of sleep

- All sleep-related requirements and preferences should be included in the resident's care plan.
- Night-time care delivery should be timed and structured in a way that does not unnecessarily disturb the residents.
- Switching on main/bright lights during care delivery should be avoided, as this will fully wake up the residents and make it harder for them to fall asleep again. A torch, for example, may provide sufficient safety when going to the toilet without waking up anybody else in the room.
- If a resident wakes up, it may be helpful to offer them a warm drink and some relaxing breathing exercises.
- If a resident shows behavioral problems at night, it is suggested to review their pain management therapy and to discuss other possible causes within the multidisciplinary team.

Source of knowledge (evidence)

The knowledge presented in this chapter was derived from expert knowledge (Australian Pain Society 2019).

Psychological support

Recommended

Type of measure

- Cognitive behavioral therapy (CBT)

Indications

- Chronic pain
- Fibromyalgia (if other therapeutic approaches have proven to be insufficient)
- Back and lower back pain (if other therapeutic approaches have proven to be insufficient)

Contraindications/adverse effect

No contraindications or adverse effects are to be expected.

Tips and tricks

- CBT does not make the pain disappear, but it does alleviate it, and people learn to deal with it better. It should be noted that waiting times between referral and the first appointment may be longer for CBT.
- CBT is particularly recommended for chronic pain.
- Psychotherapists also use CBT as a treatment approach.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from systematic reviews or evidence-based guidelines.

Additional tips and tricks for promoting positive thoughts

(Australia Pain Society 2019)

- In principle, even the briefest conversation or interpersonal exchange may still convey compassion and empathy.
- It is best to start by acknowledging/validating the resident‘s situation („I am sorry to hear how much you are suffering right now“).
- Validation techniques can be used to reduce the pressure of residents having to explain or “prove” the extent of their pain.
- It is helpful for healthcare professionals to put themselves in the residents‘ shoes and imagine what they, personally, would appreciate being told in such a situation.

- It is important to work with the residents and their relatives and significant others in order to become aware of and get an insight into their thoughts.
- Within this context, it is important to identify any thoughts about pain which are currently maintaining a negative cycle.
- It is beneficial to try and change these thoughts (see Table below: „Examples of how to promote positive thinking or react to negative statements“).

Examples of how to promote positive thinking or react to negative statements:

Negative thoughts	**Possible answers**
„I cannot deal with it (anymore).“	„You may perhaps be able to deal with it better if you manage to relax, at least a little bit. Concentrate on your deep breathing to make the pain easier to bear.“
„I cannot go on like this.“	„Maybe take one step at a time; this may help you to get through the day better.“
„It is terrible and it will never get better. I cannot take it anymore.“	„Pain is usually worse on some days and better on others. Let‘s see what tomorrow brings. Maybe you can try and manage to feel better tomorrow. Perhaps you can take a short walk and try to distract yourself a little bit.“
„I cannot bear this pain, it is terrible and overwhelming, there is nothing I can do to ease my pain. I cannot enjoy anything because I am in so much pain.“	„I have trust in you. You can deal with this pain because you have done it before, and I trust that you can do it again. Pain also tells you that your body is healing. If you plan and engage in activities, you can prevent your pain from getting worse. There are many options to help you to deal with pain better.“

Cold application

Recommended

Type of measure

- Application of low-temperature agents (e.g., frozen or cold water) around the affected area (e.g., by means of gel pads, cooling pads or cold packs)

Indications

- Acute shoulder pain
- Baker's cysts
- Diseases of the musculoskeletal system
- Rheumatic diseases
- Pain after total knee endoprosthesis (total knee joint replacement)
- Ankle joint fracture
- Traumatic pain
- Injuries
- General inflammation and pain
- General knee pain

Adverse effects

- Irritation of the skin
- Discomfort
- Hypothermia (freezing or shivering)

Tips and tricks

- A combination with other physiotherapeutic approaches has proven beneficial.
- When suffering from inflammatory diseases of the knee (e.g., rheumatoid joint inflammation/rheumatoid arthritis), the application of cold agents is often perceived as more pleasant, while heat may feel more beneficial for cartilage damage.
- The cold pack must not be too cold.
- A cloth around the pack protects the skin from injury.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. controlled individual studies

Unclear evidence

Type of measure – depending on the indication

- Application of low-temperature agents (e.g., frozen or cold water) around the affected area (e.g., by means of gel pads, cooling pads or cold packs)

Indications

- Acute pain due to chronic diseases
- Nerve irritation due to a herniated disc
- Diseases of the musculoskeletal system
- Golfer‘s elbow
- Lower back pain
- Back pain

Contraindications/adverse effects

- Irritation of the skin
- Discomfort
- Hypothermia (freezing or shivering)

Tips and tricks

- A combination with other physiotherapeutic approaches has proven beneficial.
- When suffering from inflammatory diseases of the knee (e.g., rheumatoid joint inflammation/rheumatoid arthritis), the application of cold agents is often perceived as more pleasant, while heat may feel more beneficial for cartilage damage.
- Cold applications may provide short-term pain relief for lower back and back pain.
- The cold pack must not be too cold.
- A cloth around the pack protects the skin from injury.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. controlled individual studies

Heat application

Recommended

Type of measure – depending on the indication

- Application of a heat agent warmer than the skin (e.g., self-heating patches without capsaicin/chili pepper extract, heat ointments)

Indications

- Baker's cysts
- General knee pain
- Non-specific lower back pain
- Lower back pain

Contraindications/adverse effects

Contraindications include:

- Allergies
- Skin diseases
- Wounds and injuries of the skin
- Note: Do not use heat patches during the night to avoid overheating!

Adverse effects include:

- Skin irritation/reddening which will disappear within a few days
- Possible skin irritation/reddening due to heat patches
- Feeling overheated
- Burning and itching upon application of a heat ointment
- In principle, no serious adverse effects are to be expected.

Tips and tricks

- Heat applications are recommended for longer-lasting complaints.
- A combination with other physiotherapeutic approaches has proven beneficial.
- When suffering from inflammatory diseases of the knee (e.g., rheumatoid joint inflammation/rheumatoid arthritis), the application of cold agents is often perceived as more pleasant, while heat may feel more beneficial for cartilage damage.
- The heat agent must not too hot!
- A cloth around the heat agent protects the skin from injury.

- Wearing self-heating patches for three days may alleviate lower back pain. The improvement may not be great, but it is still noticeable.
- When suffering from lower back pain, movement exercises or analgesics are recommended in addition to heat patches, or the pain relief will be only temporary.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. uncontrolled or less carefully conducted individual studies

Unclear evidence

List of measures – depending on the indication

- Heat application for back pain, neck pain, and non-specific neck pain
- Hot baths for herniated discs
- Sauna session for herniated discs
- Infrared radiation for herniated discs
- Thermal ultrasound therapy (heat generated by vibrations) for herniated discs
- Heat plasters (self-heating, without capsaicin/chili pepper extract) for neck pain
- Warm/woolen scarves for non-specific neck pain

Contraindications

- Allergies
- Skin diseases
- Wounds and injuries of the skin
- Note: Do not use heat patches during the night to avoid overheating!

Adverse effect

- Skin irritation/reddening which will disappear within a few days
- Possible skin irritation/reddening due to heat patches
- Feeling overheated
- Burning and itching upon application of a heat ointment
- No serious adverse effects were observed.

Tips and tricks

- Heat applications are recommended for longer-lasting complaints.
- Heat applications may provide short-term relief from back pain and lower back pain.
- A combination with other physiotherapeutic has proven beneficial.
- When suffering from inflammatory diseases of the knee (e.g., rheumatoid joint inflammation/rheumatoid arthritis), the application of cold agents is often perceived as more pleasant, while heat may feel more beneficial for cartilage damage.
- The heat agent must not be too hot.
- A cloth around the heat agents protects the skin from injury.
- Applied in addition to movement exercises or analgesic medication, heat patches are likely to provide pain relief.
- Heat may improve a person's well-being.
- Heat is not a viable solution for chronic back pain and can only be used as a possible supplement to other treatment approaches.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. uncontrolled or less carefully conducted individual studies

Wraps and compresses

Recommended

Type of measure

- Cold or warm compresses

Indication

- Restless legs syndrome

Source of knowledge (evidence)

The knowledge presented in this chapter was derived from expert knowledge or is based on experiences of affected individuals, without any direct corroboration by scientific studies.

Unclear evidence

List of measures – depending on the indication

- Warm and humid throat compress for a sore throat that has persisted for several days
- Cold throat compress for severe pain due to acute sore throat
- In some countries (esp. Middle Europe), compresses with curd/cottage cheese are applied when suffering from pain and inflammation due to muscle and joint injuries, phlebitis (inflammation of a vein) after insertion of an intravenous catheter, and general pain.
- Warm ear compresses with chamomile extract for ear pain

Contraindications/adverse effects

Warm ear compresses: If the compresses cause discomfort or even worsen the pain, it is suggested to remove them.

Curd/cottage cheese compresses: It is important to consider possible adverse effects, e.g., in individuals with sensitive skin or with allergies to milk components.

Tips and tricks

Cold neck compress: may provide relief. The inner layer is a cloth soaked in cool water which is wrung out and then wrapped around the neck for 20-40 minutes.

Curd/cottage cheese compress: This traditional household remedy may well have a beneficial soothing and cooling effect. Perhaps the positive effect is due to the ritual of applying the curd/cottage cheese wrap and the associated feeling of being able to do something. However, it is unclear whether the applied curd/cottage cheese has any other benefits.

In some countries, curd/cottage cheese wraps are also available as a ready-to-use product (e.g., “Quarkpack”/curd pack in Germany).

Source of knowledge (evidence)

The knowledge presented in this chapter was derived from expert knowledge or is based on experiences of affected individuals, without any direct corroboration by scientific studies.

Laughter therapy

Recommended

Type of measure

- Laughing

Indication

- Pain due to chronic disease

Contraindications/adverse effects

No adverse effects or contraindications have been specified for this measure.

Tips and tricks

- Laughter therapy increases pain tolerance.
- Laughter is more contagious, the more, louder, and more boomingly someone is laughing.
- During guided therapy sessions, participants first practice simulated laughter and then real laughter.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. carefully conducted, controlled individual studies of high quality

Massage

Recommended

Type of measure

- Massage

Indications

- Non-specific chronic lower back pain
- Pain due to malignant diseases (cancer)
- Restless legs syndrome
- Back pain

Tips and tricks

- **Chronic lower back pain:** Massages are not very effective and provide only short-term relief.
- **Chronic, non-specific lower back pain:** The effect of massages is rather small, but they can improve well-being and, consequently, encourage the willingness for physical activity.
- **Restless legs syndrome:** Massaging the legs has proven beneficial.
- **Back pain:** Massages provide only short-term relief.
- Depending on the health care regulations of the respective countries, medical massage therapy needs a physician/therapist referral and must be performed by qualified professionals.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. expert knowledge or experiences of affected individuals, without any direct corroboration by scientific studies

Unclear evidence

List of measures – depending on the indication

- Massage for back pain, chronic lower back pain, acute lower back pain, non-specific acute lower back pain, non-specific acute back pain, non-specific physical complaints (functional physical complaints), and pain due to a herniated disc
- Prostate massage for chronic prostatitis and chronic pelvic pain syndrome
- Deep friction massage (at the tendons and muscles, with one or two fingertips transversely to the specific tissue) for tennis and golfer‘s elbow
- Therapeutic massages for non-specific neck pain

Contraindications/adverse effects

Some people should not have a prostate massage (e.g., people with sexual problems, depressive disorders or anxiety disorders)

No adverse effects are reported for these measures.

Tips and tricks

Non-specific neck pain: Therapeutic massages may only provide short-term relief from acute pain.

Non-specific physical complaints: Massages provide only short-term relief.

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. uncontrolled or less carefully conducted individual studies
3. expert knowledge or experiences of affected individuals, without any direct corroboration by scientific studies

Not recommended

Type of measure – depending on the indication

- Matrix therapy (= matrix rhythm therapy, ZRT® Matrix Therapy, biomechanical muscle stimulation) for chronic lower back pain, frozen shoulder, upper back pain, neck pain

Which measures and indications were studied?

Massage & fibromyalgia

Three systematic reviews were identified. There were no significant differences to the control groups in terms of pain reduction. Acceptance of this massage therapy among study participants was moderate. In addition, this massage can significantly increase pain in some patients.

Matrix therapy & lower back pain

This measure was investigated in participants suffering from lower back pain for at least six months. The treatment group received Matrix therapy, while the control group received a massage treatment using a spiked hedgehog ball. There was no difference between the two groups in terms of symptoms or pain relief.

Matrix therapy & frozen shoulder

This measure was investigated in people suffering from frozen shoulder. The treatment group received Matrix therapy, while the control group received stretching exercise. There was no difference between the two groups in terms of symptoms or pain relief.

Matrix therapy & neck pain/upper back pain

This measure was investigated in people with neck and upper back pain. The treatment group received Matrix therapy, while the control group received a combination of myofascial release massage therapy and Kinesio taping. There was no difference between the two groups in terms of symptoms or pain relief.

To which extent can we trust this knowledge (evidence)?

Due to the contradictory results and biases in the studies as well as the imprecise results (very small study groups), the level of confidence in the effectiveness of this therapeutic approach must be rated as very low. This knowledge is likely to change due to further, well-conducted studies. There is also no scientifically conclusive explanation how the Matrix therapy method is supposed to work.

Music

Recommended

List of measures

- Active – making music, or passive – listening to music
- Can be performed by a music therapist, a health care professional or the residents themselves

Indications

- Pain due to malignant diseases (cancer)
- Non-specific pain
- Fibromyalgia
- Chronic pain

Contraindications/adverse effects

No negative effects are to be expected. The acceptance of music as a therapeutic approach is generally high.

Tips and tricks

- In shared rooms, music can be played via headphones to avoid disturbing others.
- It is important to analyze and consider the respective resident's music preferences.
- Not only the choice of music is important but also the place and duration of making/playing it (once/regularly).
- It is also possible to apply this measure within a group setting (e.g., making music together or listening to live music together)

Source of knowledge (evidence)

The knowledge summarized in this chapter was obtained and derived from systematic reviews or evidence-based guidelines.

Aromatherapy: massage with essential oils

Recommended

Type of measure

- Repeated massages with essential oils (e.g., peppermint, chamomile, rosemary, ginger) in a carrier oil (e.g., coconut oil)

Indication

- Neuropathic pain
- Pain due to malignant diseases (cancer)

Contraindications/adverse effects

Allergic or intolerance reactions may occur, depending on the selected oil. It is therefore imperative to consult with trained aromatherapy staff and to test for allergies/intolerances before applying a product.

Essential oils should always be used in diluted form (e.g., in a carrier oil).

Tips and tricks

Massages without essential oils may also help to alleviate pain in cancer patients.

Depending on the individual preferences of the residents, this massage may be applied to any area of discomfort.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies.

Aromatherapy: gargling with essential oils

Recommended

List of measures

- Application: 2-3 times a day for about 8 days
- Gargling solution: one drop of the chosen essential oil in 15ml of warm water
- Gargling with manuka and kanuka essential oils

Indication

- Oral mucositis

Contraindications/adverse effects

Allergic or intolerance reactions may occur. It is therefore imperative to consult with trained aromatherapy staff and to test for allergies/intolerances before applying a product.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies.

Aromatherapy: inhalation of essential oils

Unclear evidence

Type of application

Inhalation of essential oils (especially lavender oil) by means of a diffuser or soaked pads

Indications

- Pain due to malignant diseases (cancer)
- Nociceptive pain

Contraindications/adverse effects

Allergic or intolerance reactions may occur. It is therefore imperative to consult with trained aromatherapy staff and to test for allergies/intolerances before applying a product.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies with contradictory results and small study populations. Confidence in the evidence must be rated as very low, and the results are likely to change with further, well-conducted studies.

Aromatherapy: lymphatic drainage with essential oils

Not recommended

Type of measure

Lymphatic drainage with frankincense oil (essential oil) in almond oil (carrier oil)

Which measures and indications were studied?

A study investigated the effectiveness of lymphatic drainage with an essential oil in patients with breast cancer. The measure has not proven to be effective in alleviating pain.

How much can we trust knowledge?

Due to possible biases in the study, confidence in the evidence must be rated as very low. This knowledge is likely to change due to further, well-conducted studies.

Mindfulness exercises

Unclear evidence

Type of measure

- Mindfulness training (mindfulness-based stress reduction/MBSR)

Indication

- Fibromyalgia (if other therapeutic approaches have proven to be insufficient)

Contraindications/adverse effects

This measure has no contraindications/adverse effects.

Tips and tricks

The aim of mindfulness is to pay more attention to one's own thoughts and feelings and to what is happening around oneself – without judgement or a wish for change. This may improve self-perception: Events, activities or single moments may be experienced and enjoyed more intensely. Negative thoughts and feelings are acknowledged as such.

Various methods:

- One technique is to endeavor to pay more attention to everyday things, such as sensations when eating, or the wind blowing towards you while taking a walk.
- Another is to resolve to not react immediately to statements or actions, but to "shift down a gear" and take one's time.

These techniques can also be learnt by means of an online course, a CD or an audio file. Psychotherapists also apply this method.

Source of knowledge (evidence)

The knowledge presented in this chapter is based on uncontrolled or less carefully conducted individual studies.

Hypes

Recommended

List of measures – depending on the indication

- Avocado/soybean unsaponifiables (oral) dietary supplements for osteoarthritis
- Boswellia serrata extract (oral) for osteoarthritis
- Tripterygium wilfordii (tablet) for rheumatoid joint inflammation (rheumatoid arthritis)
- High-dose (8%) capsaicin patches for pain after shingles, pain caused by diabetes mellitus (neuropathic pain) or by HIV-infection
- Heat patches with capsaicin (chili pepper extract) for lower back pain
- Frankincense extract (tablet or capsule) for hip osteoarthritis (coxarthrosis) or knee osteoarthritis (gonarthrosis)

Contraindications/adverse effects

Adverse effects of frankincense have been little researched to date.

The following adverse effects may occur when using capsaicin heat patches:

- In rare cases, blood pressure may rise temporarily.
- After removing the patch, many patients complain of temporary reddening and a burning sensation on the application site.
- In rare cases, inflammation or haematoma may occur.

Tips and tricks

- Due to possible adverse effects, only medical professionals may apply the capsaicin patch to the painful area! To prevent pain and/or burning, an anaesthetic cream is applied to the application site beforehand. Medical staff should also wear gloves to protect themselves from the capsaicin when applying the patch.
- There is an important difference between these products and homeopathy: Plant-based substances are also often used in homeopathy. However, these are diluted to such an extent that the end product contains little or no active ingredients anymore. In contrast to herbal medicine, homeopathy is not based on medical and scientific principles. This is why homeopathic remedies undergo a different approval procedure than herbal medicines. Homeopathic remedies must be labelled accordingly.
- If residents are already using herbal or plant-based remedies, it should be checked whether any adverse effects have occurred.

Source of knowledge (evidence)

- **Tripterygium wilfordii (tablet):** The knowledge presented above is based on uncontrolled or less carefully conducted individual studies.
- **Capsaicin (chili extract) patches:** The knowledge presented above is based on uncontrolled or less carefully conducted individual studies. In addition, all studies were financed by the manufacturer and can, therefore, not be regarded as independent.
- **Avocado-soya unsaponifiables, boswellia serrata and frankincense extract:** The knowledge presented above was obtained and derived from systematic reviews or evidence-based guidelines.

Unclear evidence

List of measures – depending on the indication

- Stinging nettle for hip osteoarthritis (coxarthrosis)
- Comfrey (ointment) for back pain, knee pain, sprained ankles and sore muscles
- Gargling with salt water or herbal infusions (e.g., sage or chamomile tea) for sore throat
- Tropaeolum (nasturtium) and horseradish (tablet) for complaints due to urinary tract infections
- Cat‘s claw for rheumatoid joint inflammation (rheumatoid arthritis) and knee osteoarthritis (gonarthrosis)
- Leoligin from edelweiss (leontopodium alpinum) for abdominal pain
- Devil‘s claw (hapargophytum) for hip osteoarthritis (coxarthrosis) and knee osteoarthritis (gonarthrosis)
- Frankincense extract for hip osteoarthritis (coxarthrosis)

Contraindications/adverse effects

The following adverse effects may occur when using devil‘s claw remedies:

- Diarrhea
- Nausea
- Vomiting
- Abdominal pain
- Headache
- Dizziness
- Allergic reactions

The following adverse effects may occur when using capsaicin heat patches:

- In rare cases, blood pressure may rise temporarily.
- After removing the patch, many patients complain of temporary reddening and a burning sensation on the application site.
- In rare cases, inflammation or haematoma may occur.

The use of comfrey remedies may cause skin rash.

Tips and tricks

There is an important difference between these products and homeopathy: Plant-based substances are also often used in homeopathy. However, these are diluted to such an extent that the end product contains little or no active ingredients anymore. In contrast to herbal medicine, homeopathy is not based on medical and scientific principles. This is why homeopathic remedies undergo a different approval procedure than herbal medicines. Homeopathic remedies must be labelled accordingly.

If residents are already using herbal or plant-based remedies, it should be checked whether any adverse effects have occurred.

Source of knowledge (evidence)

- **Cat's claw (capsule), Tropaeolum (nasturtium), and horseradish:** The knowledge presented above is based on uncontrolled or less carefully conducted individual studies.
- **Frankincense:** The knowledge presented above was obtained and derived from systematic reviews or evidence-based guidelines.
- **Ingested herbal medicines:** The knowledge was obtained and derived from systematic reviews or evidence-based guidelines.
- **Comfrey:** The knowledge presented above is based on uncontrolled or less carefully conducted individual studies.
- **Leoligin/Edelweiss (leontopodium alpinum):** Not a single study has been conducted in humans.

Not recommended

List of measures – depending on the indication

- FGXpress Power Strips for general pain
- Kinesio taping for chronic lower back pain
- Magnets embedded in jewelry, shoe inserts or in sports wristbands for general pain
- Super Patch (with a pattern on the underside of the patch) for general pain
- Neuro Socks (with a special pattern on the underside/sole designed to stimulate sensitive points on the sole of the foot) for pain in the feet, the back and elsewhere

Which measures and indications were studied?

Kinesiotapes have no proven effect on chronic lower back pain.

The pain-relieving effect of Neuro Socks, Super Patches and FGXpress Power Strips has not been proven and is, in addition, not plausible.

The effectiveness of magnets for pain has not been proven.

Source of knowledge (evidence)

The knowledge presented in this chapter was obtained and derived from:

1. systematic reviews or evidence-based guidelines
2. carefully conducted, controlled individual studies of high quality.

Note: There is a lack of scientific evidence for FGXpress Power Strips, Super Patches and Neuro Socks; and the mechanisms of the products (i.e., how they work), as stated by the manufacturer, are not plausible.