Physiotherapy works

Physiotherapy for patients with pain

Physiotherapy is an important part of the interdisciplinary management of patients with pain. An optimal course of treatment focuses on counselling, physical activation and supervised progressive exercises over a period of 2-3 months.
What is pain?
Pain is a cardinal symptom of many diagnoses related to injuries and diseases of nerves, muscles and joints (1,2). Pain is frequent and almost one in five Danes is affected by persistent pain (1-3). For the individual, pain is an unpleasant sensory and emotional experience associated with actual or potential tissue damage (1). Pain not only reflects the sensory experience associated with tissue damage, but also involves thoughts and an emotional response in the form of psychological distress. Psychological distress may be expressed as low mood, anxiety, restlessness, anger and a lack of belief in one’s ability to cope (4-6). Pain ranges from the acute pain associated with a physical injury to persistent pain, which often serves no useful purpose. The complexity of persistent pain may be due to the fact that there is often no clear correlation between the pain experienced and the physical or diagnostic imaging findings (7-12). Pain is also influenced by a variety of biopsychosocial and demographic factors, for example, gender, age, social status, education, employment status, concomitant diseases, ability to cope and legal and compensatory issues (13-16). The development of persistent pain and the degree of pain experienced by the individual therefore depend on several of these factors.

Pain varies. If the patient is to achieve the optimal result of the treatment, it should be based on knowledge of the underlying pain mechanisms. For example, the treatment should take into account whether the pain is acute or persistent and whether the underlying cause of pain is malignant or benign. The practitioner should evaluate the extent to which the pain is of inflammatory, neuropathic or unknown origin (4,17,18). In the case of acute pain, the objective of physiotherapy is to perform a clinical examination, advise on appropriate relief and normalise the patient’s customary level of physical activity, and possibly provide pain-relieving therapy (4,19). When pain is persistent, physiotherapy contributes to the interdisciplinary clinical evaluation and the choice of the best documented therapeutic strategy. The physiotherapist’s work may, for example, consist of counselling, self-help guidance, patient education in pain management techniques, pain treatment and progressive exercise (20-25). Through clear communication, the patient will be supported in understanding, managing and coping with his or her situation and the course of therapy (26,27). These interventions aim to relieve pain and re-establish the patient’s usual level of physical activity, capacity to work and social engagement to the extent possible.

THE EFFECT OF PHYSIOTHERAPY

The effect of the various physiotherapy interventions is measured by pain reduction, improvement of everyday functions and quality of life. Here it is important that the effect of such interventions is clinically relevant and meaningful for the patient and not just statistically significant (28,29). An improvement in pain relief and functional improvement of at least 30-50% is considered relevant (30). If the outcome of an intervention is below 30%, the effect is considered minimal and not clinically relevant. The treatment effect can, however, only be considered meaningful when it is consistent with the patient’s perception of pain reduction and improvement of function (30,31). In the following, we will describe the effect of physiotherapy from randomised clinical trials, systematic reviews and clinical guidelines relating to the treatment of common persistent pain conditions.

Pain and impairment of function caused by osteoarthritis of the knee treated with progressive, supervised exercise over a period of 2-3 months may have a clinically relevant and
meaningful effect (32,33). The interventions are function-orientated and focus on increasing strength, flexibility and aerobic capacity (32,33). The same effect can be expected from physiotherapeutic exercises for subacromial shoulder pain, where the interventions can be supplemented with manual physiotherapy (34-37).

Physiotherapeutic exercises for non-specific neck pain may also have clinical relevance (38,39). The effect achieved often depends on the intensity, duration and frequency of the exercises, with more intensive exercises having the best effect (38,40,41). The exercise can be combined with manual physiotherapy, which may contribute with minor additional effects (42-45).

The effect of counselling, specific exercises and manual treatment of neck pain associated with whiplash is minimal and not clinically relevant (46-48). However, the effect of physiotherapy in patients with whiplash symptoms depends on the degree of biopsychosocial complexity. In uncomplicated cases, physiotherapy may consist of counselling, self-help guidance and maintenance of physical activity. In more complex cases, physiotherapy is part of a comprehensive multidisciplinary intervention, the focus of which is to optimise the patient’s capability to work, quality of life, health and level of social activity (49-52).

In non-specific low back pain, physical exercise generally only has a minimal effect, and in most cases the effect is not clinically relevant (36,53-59). The same applies to manual and manipulative treatment (45,56,60-62). The diagnosis and treatment of low back pain may be a complex process. Patients with persistent low back pain often have more than one type of pain, often in combination with neuropathic pain components, comorbidities or complex psychosocial factors (63-66). Physiotherapy is, however, an important part of the un- and interdisciplinary evaluation of such patients in order to identify the optimal individual treatment strategy (59,63,66). Depending on the degree of complexity, patients need counselling and self-help guidance to increase their level of physical activity in order to restore or maintain their ability to work, health and quality of life (60,67).

Physiotherapy and exercise can contribute with clinically relevant effects in the management of headaches and provide important supplements to pharmacological treatments (68-74). Exercises must be adapted to the specific type of headache, for example, tension-type headache, cervicogenic headache or migraine. It is important to differentiate between the different types of headache in order to achieve the optimal effect and to avoid exacerbation of the condition (70). The interventions should be adapted to the individual patient and can comprise relaxation exercises, biofeedback, strength exercise or general fitness training (65,70,75,76). In cervicogenic and tension headaches, a combination of manual physiotherapy and strength exercises may optimise the outcome of physiotherapy (74,77-79).

Physiotherapy is an important part of the interdisciplinary treatment of patients with fibromyalgia. In these cases, counselling and physical exercise have clinically relevant effects and are often superior to pharmacological treatment (63,64). The physiotherapist may focus on patient education in pain management and how pain can be controlled and modulated (23,85). Armed with this knowledge, the patient is well equipped to form suitable strategies for managing pain, minimising inappropriate behavioural reactions to pain and normalising functional capability by means of progressive strength and fitness training (83,84,86).

Physiotherapy is a cornerstone in the interdisciplinary treatment of patients with neuropathic pain and complex regional pain syndrome (CRPS), although the effects are only minimal, poorly researched or unknown (87-89). When receiving pharmacological treatment, only 30-40% of these patients can expect more than 50% pain reduction (90,91). Therefore, these patients have a strong need for therapy to maintain and restore their quality of life and daily
functional capacity. The contribution of physiotherapy comprises individualised exercises, pain management strategies, graded motor imagery and mirror therapy (92-94).

THE SOCIO-ECONOMIC EFFECTS

Pain is one of the most serious issues facing the healthcare sector. The human and socio-economic costs of treatment, absence due to illness and support allowances are immense (13,95).

In Denmark, the annual social costs of pain-related disorders are estimated to be in excess of 2.5-3.3 billion € (1,13,95). Physiotherapy is an important part of the active interdisciplinary rehabilitation of patients with pain. Physiotherapy has been shown to be cost effective in the treatment of lumbar, knee and shoulder pain when its focus is to provide a cohesive, active intervention in order to normalise the patients’ physical functional capacity and optimise their pain management strategies. This approach has shown that it is possible to reduce absence due to illness in the long term and to help maintain patients’ capability to work and optimise quality of life (67,96-98).

CONCLUSIONS

Pain is a frequent primary symptom in patients who contact the healthcare sector. The goal of these patients is to restore and regain their level of physical and psychosocial activity to the extent possible. In the process of achieving this goal, physiotherapy can contribute with treatment strategies with documented and clinically relevant effects. An optimal course of treatment initially focuses on clinical examination and diagnosis followed by individualised counselling, physical activation and supervised progressive exercises over a period of 2-3 months. Physiotherapy is therefore a key component in the interdisciplinary rehabilitation of most patients with pain.

One in five Danes suffer from persistent pain

Physiotherapy is a key component in the management of patients with:

- Headache
- Fibromyalgia
- Neuropathic pain
- Complex regional pain syndrome
- Low back pain
- Neck pain
- Knee pain
- Shoulder pain

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The Association of Danish Physiotherapists has asked a group of experts to present a short summary of the latest evidence in a specific topic/area of physiotherapy. The summaries are meant to be used as tools to highlight and promote physiotherapy. This summary about pain management is written by Bjarne Rittig-Rasmussen, PT, PhD, November 2014.

REFERENCES


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