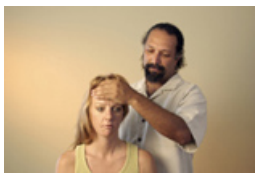


Neck pain: Does manipulation or mobilisation help?



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Neck pain is a common problem. It can be acute, sub-acute or chronic. If it lasts less than 30 days it is called acute neck pain, and if it lasts between 30 and 90 days it is called sub-acute neck pain. Neck pain that lasts longer than 90 days is considered to be chronic. The pain can spread to the arms or head, and particular movements or positions might make it worse.

Neck pain can be caused by many things. For example, people may get neck pain after acute strain injuries like whiplash, because of a poor posture, or due to wear and tear of the joints. But the exact cause is not always clear.

Manipulation and mobilisation are manual therapy techniques. They aim to relieve pain and improve the mobility of joints. In mobilisation, the therapist slowly moves the joint within its natural range of movement. Manipulation therapy, on the other hand, involves using short, sharp movements to push a joint beyond its normal range of movement.

Manipulation and mobilisation techniques can be used on both the neck (cervical spine) and the upper back (thoracic spine) to treat neck pain. They are usually carried out by physiotherapists and chiropractors, but sometimes doctors use these techniques too.

Research on mobilisation and manipulation for neck pain

Researchers from the Cochrane Collaboration, an international network of researchers, wanted to find out whether manipulation or mobilisation of the neck or upper back can relieve neck pain. But they did not include trials that looked at people whose neck pain was indirectly caused by another medical problem, such as a spinal cord injury.

The researchers looked for trials which, for instance, compared these techniques with a dummy treatment (placebo) or another treatment. If someone had dummy treatment, the therapist only pretended to use a mobilisation technique, for example.

So-called randomised controlled trials ensure the most

reliable results. In this kind of trial, people volunteer to be randomly assigned to one of two (or more) groups. Each group has a different treatment, such as mobilisation or a dummy treatment. At the end of the trial it is then possible to see which of the treatments relieved pain better. You can read more about why trials like this are important here (URL: <http://www.gesundheitsinformation.de/evidence-based-medicine>).

The researchers found 27 trials involving about 1,800 participants in total. But some questions remained unanswered. Many of the trials had scientific weaknesses and were too small to draw reliable conclusions. There was an average of less than 70 participants in each trial. Different kinds of treatments were used in the trials too. And there are also a lot of different factors that can influence how well manual therapy works, such as the therapist's training and experience. That means that trials of this kind of treatment have to be of particularly good quality to be able to draw clear conclusions.

Mobilisation or manipulation of the cervical spine (neck)

Three of the trials looked at whether using a manipulation technique on the neck just once can relieve chronic neck pain. The methods used in these trials, however, were not good enough to be able to provide conclusive results. Overall, the results indicated that this treatment can reduce pain immediately after it is applied, but this effect had worn off after several weeks. The treatment may be more effective if it is repeated a few times. But there is hardly any research on how many treatment sessions are needed to get the best result.

The researchers did not find any trials that compared mobilisation of the neck with a dummy treatment. But two trials compared manipulation and mobilisation of the neck with each other. They found that there were no differences in the efficacy of these two techniques. Because the trials were fairly small, however, we cannot be certain that there are no differences between them.

Mobilisation or manipulation of the thoracic spine (upper back)

One trial indicated that manipulation of the upper back could also relieve chronic neck pain in the short term. But the trial did not look at whether this treatment was effective in the longer term. The researchers did not find any trials that looked at mobilisation of the upper back.

In the rest of the trials that the researchers found, different types of manipulation or mobilisation techniques were either compared with each other, or with other treatments for pain. Examples of other treatments include acupuncture, painkillers, heat therapy and TENS (transcutaneous electrical nerve stimulation). They did not find that any of the treatments had clear advantages over others. But bigger and more reliable trials are needed to determine how the various manipulation and mobilisation techniques compare to each other, as well as how they compare with other treatments.

Adverse effects

The researchers also tried to find out how common it was for manipulation or mobilisation techniques to have harmful effects. In the trials that the researchers included in their analysis, the people only had mild and temporary adverse effects like headaches or dizziness. The 1,800 people in the trials did not have any serious adverse effects such as strokes caused by damage to blood vessels. Complications like this are probably rare.

Overall, the researchers concluded that research has not shown any clear differences between mobilisation and manipulation. Both techniques appear to relieve neck pain in the short term without making symptoms worse, but more research is needed to be sure.

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Glossary

Cochrane Collaboration

The Cochrane Collaboration is an international network of thousands of researchers and others. They work together in teams called Cochrane Review Groups to answer questions about health care by doing systematic reviews of evidence. To achieve this, the members of the Collaboration have developed systems and methods for systematically finding and analysing the results of trials of health care interventions. The goal of the Cochrane Collaboration is to help patients, health care practitioners and others make more informed decisions about health care. You can read more about the Cochrane Collaboration at their website.

evidence

Evidence is what we call scientific proof from well-conducted, good-quality scientific trials that have been carefully designed to answer specific questions. Depending on the types of questions, different scientific research methods (types of study) are most appropriate to find reliable answers to these questions. Randomized controlled trials (RCTs), for example, are the best way to get reliable evidence on the effectiveness of medical treatments (interventions). This type of study, however, is not the best form of evidence for all possible questions, and does not provide the best answers to all kinds of questions, either. Epidemiological studies, for example, are very suitable for establishing well-founded proof for the spreading of a disease in the population.

acupuncture

Acupuncture is a complementary form of therapy used in traditional Chinese medicine. A doctor inserts thin needles at precisely defined points on the body. This is supposed to loosen what are thought to be blockages in the body or to stimulate or calm different organs.

Sources

IQWiG health information is based on research in the international literature. We identify the most scientifically reliable knowledge currently available, particularly so-called “systematic reviews”. These summarise and analyse the results of scientific research on the benefits and harms of treatments and other health care interventions. This helps medical professionals and people who are affected by the medical condition to weigh up the pros and cons. You can read more about systematic reviews and why these can provide the most trustworthy evidence about the state of knowledge here (URL: <http://www.gesundheitsinformation.de/evidence-based-medicine.61.en.html>) . The authors of the major systematic reviews on which our information is based are always approached to help us ensure the medical and scientific accuracy of our products.

Gross A, Miller J, D'Sylva J, Burnie SJ, Goldsmith et al. Manipulation or Mobilisation for Neck Pain. *Cochrane Database of Systematic Reviews* 2010, Issue 1. [Cochrane summary (URL: <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD004249/frame.html>)]

The German Institute for Quality and Efficiency in Health Care (IQWiG)

The German Institute for Quality and Efficiency in Health Care (IQWiG) was established by legislation to provide evaluations of the effectiveness, quality and efficiency of healthcare services. This includes the assessment of medicines as well as the publication of health information for consumers and patients.

Evidence basis of our health information

Our information is based primarily on systematic reviews of the effects of health care. Systematic reviews are necessary to gain an objective picture of health care. In order to do this, a clear question is formulated. Researchers then find all the relevant studies that could answer this question. They then evaluate those studies.

You can find a list of the evidence and other scientific literature on which this information is based at [**www.informedhealthonline.org**](http://www.informedhealthonline.org)

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