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## Rheumatoid arthritis: How helpful are low-dose corticosteroids against flares?



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Arthritis is a chronic inflammation of the joints. Its causes are still unknown, but it is typical of the disease that defense cells of the immune system move to parts of the joint capsules of the fingers, knees and elbows. These inflammations can cause joints to become swollen and very painful. Phases of less joint pain often alternate with phases of more intense inflammation. These intense phases are called flares. Sometimes arthritis leads after many years to a joint becoming completely stiff or damaged.

Glucocorticosteroids can be used to treat arthritis. They are similar to anti-inflammatory hormones in the body and are part of a group of hormones that can also be called "cortisone" or "steroids". Synthetic glucocorticosteroids such as prednisone or prednisolone are strong drugs that also have many adverse effects if they are used in high doses for a longer period of time. One of these adverse effects is that they can slow bone metabolism so much that the risk of breaking a bone increases by a lot.

Because of adverse effects like this, people with arthritis often use medications called non-steroidal anti-inflammatory drugs (NSAIDs) instead of glucocorticosteroids. This group relieves symptoms in a different way and includes drugs such as diclofenac, ibuprofen and indomethacin. These drugs can also cause adverse effects, particularly affecting the stomach.

In order to see which of these groups of medicines is more effective and better tolerated, researchers from the Cochrane Collaboration summarized and analyzed the results of 11 trials involving a total of 462 people with severe forms of arthritis that tested glucocorticosteroids and non-steroidal anti-inflammatory drugs. They focused on trials in which glucocorticosteroids were taken only in lower doses, and for less than one month. They wanted to find out whether this type of short-term use could reduce symptoms mostly for people who were not helped by other medications, and whether severe adverse effects could be avoided at the same time. Most of the people in the trials were using the glucocorticosteroids to relieve flares.

One of the results they found was that even in lower doses prednisolone or prednisone led to a greater reduction in pain than other anti-inflammatory drugs. This could be seen, for example, in the number of painful joints. People

who had taken low-dose steroids had fewer painful joints than the people on non-steroidal anti-inflammatory drugs.

To get a better picture of the range of adverse effects, the researchers also analyzed results of trials in people who took low-dose glucocorticosteroids for several months or years. Those trials showed that the risk of bone breaks increases noticeably only after long-term use of steroids.

You can find information about more treatment options for arthritis here (URL: <http://www.gesundheitsinformation.de/arthritis-rheumatoid.224.5>).

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## Glossary

### hormones

“Hormones” is the collective term for different types of messenger substances in the body. They are produced in different organs or tissues and released into the blood or the lymphatic system to be distributed throughout the body. Hormones only have an effect on those parts of the organism that have a corresponding docking site. This is how hormones can have such specific effects. Insulin, estrogens, vasopressin and thyroxine are some well-known hormones. Many medical ingredients imitate the effect of hormones.

### 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.

### immune system

The immune system is the body's defense system and its task is to protect the body against germs or degenerated cells (like cancer cells). The immune system is very complex and has not been understood in every detail yet. There are two components: the cellular immune defense (for example “scavenger cells” and “killer cells”) and the complement system (“antibodies”, for example).

### inflammation

An inflammation is a (defense) reaction of the body to an injury, irritation or infection. More blood is brought to the respective body part to protect the body. This is why this body part feels warmer, becomes swollen and red and is usually more sensitive. If the inflammation affects the mucous membranes, they secrete more fluid than usual. This helps to wash out the germs that have entered.

## Sources

Gøtzsche PC, Johansen HK. Short-term low-dose corticosteroids vs placebo and nonsteroidal antiinflammatory drugs in rheumatoid arthritis. *Cochrane Database of Systematic Reviews*: Version 2007, Issue 4. CD000189 [Cochrane summary (URL: <http://www.mrw.interscience.wiley.com/cochrane/clsysrev/articles/CD000189/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)

## **Disclaimer**

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