

Mobilise against
osteoarthritis!



A guide by Recosyn®

An active life: Fulfilment and **exertion** at the same time.

Dear Patient,

Living means motion! Our joints also need motion to function correctly.

However, an active life also takes its toll, and not just at an advanced age. Physical stress at the workplace, or during sports, can also cause signs of wear and pain in those joints that are particularly exerted! This is called osteoarthritis.

Your doctor has recommended hyaluronan treatment. This leaflet tells you about the role of hyaluronan in our joints, and what treatment with Recosyn® can do for you.



For more information
about osteoarthritis and
its treatment, please visit
www.recosyn.de



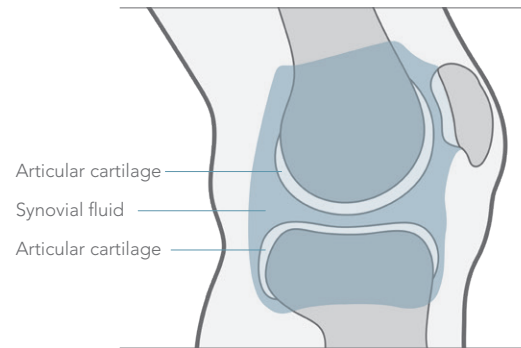
Our **joints**: The hinges and pivots of our lives.

Rotating, flexing, stretching: It is our joints that make us mobile, they are moveable hinges that link our bones together.

The ends of our bones are covered with a cartilage layer to enable low-friction movement of the joints. Inside the joint capsule, and between the cartilage layers, is the synovial fluid (joint fluid).



Healthy knee joint



The tasks of the synovial fluid:

- 'Lubrication' of the joint
- Supply of nutrients to the cartilage
- Cushioning of impacts

Osteoarthritis may develop when the cartilage wears and the synovial fluid gets thinner.

Tip: Losing as little as 5 kg of body weight may already dramatically reduce joint pain in the knees and hip!

Osteoarthritis: When your joints go on strike.

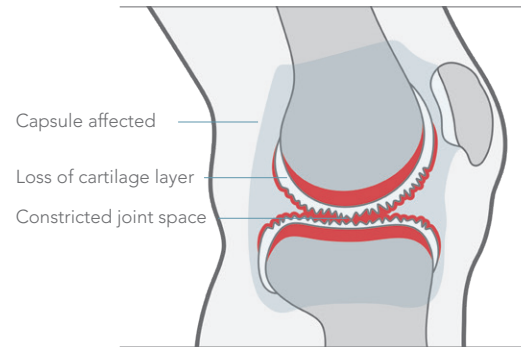
Osteoarthritis is a widespread disease and is the most common reason for joint pain. The typical cause is the wearing of the articular cartilage. The synovial fluid also gets thinner and loses its cushioning effect, and this leads to ever more pain and impaired mobility.

Root causes:

- Great physical stress during sports
- One-sided load or posture at the workplace
- Permanent physical stresses in the course of a lifetime
- Sudden overload after an accident



Arthritic knee joint



Typical symptoms:

- Pain after periods of inactivity (morning stiffness)
- Sensitivity to changes in the weather
- Stress-induced pain
- Impaired mobility
- Swelling
- Hyperthermia of the joint
- Rest and night pain
- Grating of the joints

Osteoarthritis has a physical and a mental component. Ideally, you should start your therapy as soon as possible to avoid unnecessary pain and possible depressive episodes.

Osteoarthritis therapy:

What are the options?

The aim of symptomatic therapy is to alleviate the pain and to restore mobility. There are various options for this:

Pain relievers:

Non-steroidal anti-inflammatory drugs (NSAIDs, such as ibuprofen or diclofenac) are among the most commonly-used osteoarthritis drugs. They involve a high risk because of possible serious side-effects, such as gastric ulcers and gastric bleeding.

Cortisone preparations:

These are used to treat acute osteoarthritis. Although cortisone may have a cartilage-degrading effect in the long-term, it has positive effects in short-term therapy.

Hyaluronan therapy:

Hyaluronan injections are a standard in osteoarthritis treatment and comply with the guidelines when NSAIDs are not recommended, or there is an increased risk of side-effects.

Surgical procedures:

They include so-called arthroscopy (irrigation and smoothing of the joint space) and, at a late stage, artificial joint replacement.



Hyaluronan:

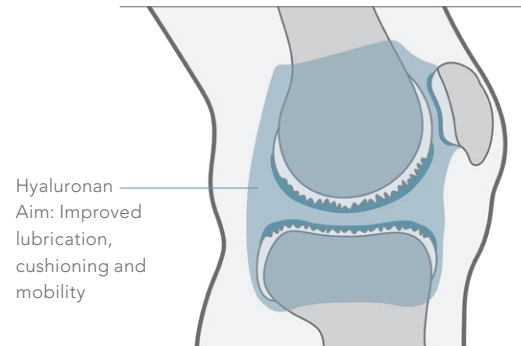
Modelled on nature.

Hyaluronan (hyaluronic acid) is an important constituent of the connective tissue, plays a major role in wound-healing and occurs naturally in many parts of the body. Hyaluronan is also a constituent of the synovial fluid that makes it viscous and ensures slipperiness of the joints.

Hyaluronan in medicine:

Among other things, hyaluronan is an ingredient in nasal sprays and eye-drops and is used for wrinkle treatment by injection. Hyaluronan has also been injected into arthritic joints for several decades. Hyaluronan injection is becoming more important as a treatment for osteoarthritis, especially where NSAIDs are contraindicated.

Knee joint after hyaluronan treatment



Injecting hyaluronan into the joint space ensures new lubrication of the joint and can

- alleviate pain
- improve mobility
- reduce inflammation
- delay progression of the disease



Recosyn®:

More mobility, less pain.

The Recosyn® hyaluron products offer you suitable solutions for your individual osteoarthritis therapy, either as serial, or single injections.



Recosyn®:
The ideal standard
therapy



Recosyn® forte N:
Highly-concentrated
solution



Recosyn® m. d. N:
Mini-dose for small
joints



Recosyn® Uno ultra:
Highly-concentrated
one-shot therapy

The hyaluronan in all the Recosyn® products is produced in a biotechnological process and is of the highest purity. At the end of the production process, the blisters are sterilised at temperatures of between 121°C and 134°C and under high pressure. This way, the Recosyn® product range meets the high requirements for hyaluron preparations:

- Contain no animal protein (low allergy potential)
- Individual solutions for osteoarthritis therapy
- Filtered and sterilised
- Tried-and-tested
- Very well-tolerated



Studies: Safety in treatment.

The effect of the hyaluronan lasts for many months beyond the treatment cycle and is based on its multi-faceted properties. Hyaluronan injected into a joint

- has a viscoelastic effect (increases the viscosity of the synovial fluid)
- has an anti-inflammatory effect
- has a pain-relieving effect
- stimulates the body's own hyaluronan production

The effect often already sets in after the first treatment, and even increases during treatment.

1

"In patients with knee osteoarthritis, hyaluronic acid treatment can delay the progression of osteoarthritis ..."

Altman R et al., PLoS One 2015, 10:e0145776

2

"Viscosupplementation (hyaluronic acid injected into osteoarthritic joints in order to lubricate the joint and act as a 'shock-absorber') is safe and well-tolerated in patients with osteoarthritis of the knee and in other joints."

Jerosch J, Z Rheumatol 2015, 74:764–773

3

"Viscosupplementation is an effective treatment option for gonarthrosis with a positive influence on pain, function and patient sensation."

Bellamy N et al. Cochrane Database Syst Rev 2006; Apr 19;(2)

My treatment:

Questions and answers

Is the injection painful?

A hyaluronan injection sometimes causes slight pain and a feeling of warmth, and is usually no more problematic than the drawing of blood. A local anaesthetic is administered in most cases, if the injection is into joints located deep under the tissue.

What are the costs?

This depends on the dosage, the product, and the treatment cycle necessary for the individual joint situation. Hyaluronan treatment is a self-pay service. Private health insurance companies may reimburse the costs.

Are there any side-effects?

More than two million Recosyn® injections were administered between 2014 and 2018. Only a few cases of adverse drug reactions occurred in all these treatments.

How long does the effect last?

The mobility-improving and pain-relieving effects of Recosyn® products can last for several months following a treatment cycle. The success depends on the degree of osteoarthritis, the affected joint, and the load.

How many times can the treatment be repeated?

Recosyn®, Recosyn® m. d. N and Recosyn® forte N:

The treatment cycles can be repeated if necessary. For multiple injections, the Recosyn® products are injected into the joint at weekly intervals.

Recosyn® Uno ultra: Recosyn® Uno ultra can be injected as a single shot into the knee joint and other synovial joints. The beneficial effects of one treatment last for at least six months. Treatment cycles can be repeated if necessary.



Motion: Quality-of-life regained.

You may find it easier to move after hyaluronan treatment. Whether everyday errands, convivial outings, or even sporting activities – make use of this positive aspect and integrate moderate, but regular, exercise into your everyday life! This will not only give you pleasure, but will also benefit your joints.



Please remember: Move your joints, but do not overburden them!

Joint-friendly sports that have proven to be especially suitable include

- swimming
- aqua-aerobics
- cycling
- Nordic-walking
- cross-country skiing
- dancing



Osteoarthritis check: Do the interactive test!

Where do you experience discomfort?
What are the treatment options?
Simply scan the QR-code, or go to
www.recosyn.de/arthrose-check.

The test results form the ideal
basis for your next visit
to your doctor!





Your personal treatment plan.

Date	Time

Please remember:



Recordati Pharma GmbH
Eberhard-Finckh-Str. 55
D-89075 Ulm

Please do not hesitate to contact your doctor
if you have any further questions.



Doctor's personal stamp



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