

Introduction

- Ostenil® hyaluronan injection is a new treatment for the symptoms of osteoarthritis and joint inflammation.
- It can be used in any joint in the body that is classified as 'synovial'.
- This leaflet gives you some basic information about hyaluronan injections for the Shoulder and Ostenil®.
- If you have any questions after you have read the leaflet, please ask your doctor.

The Shoulder

The shoulder is a series of five joints linked together by bones, muscles and ligaments.

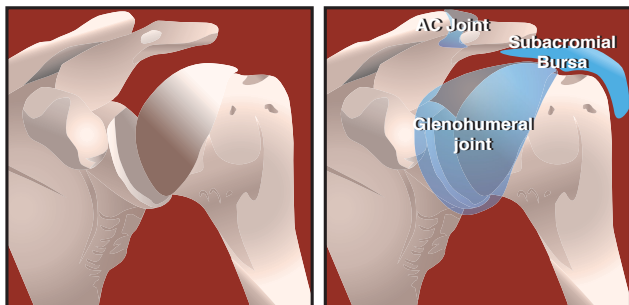
The most commonly affected shoulder joints are the glenohumeral joint, the subacromial bursa and the acromio-clavicular joint.

The glenohumeral joint is lined by a synovial membrane, which produces synovial fluid.

The synovial fluid in the joint has five important functions:

1. It keeps the articulations slightly apart, protecting their coverings from wear and tear
2. It absorbs shock
3. It lubricates the joint, helping it to work freely and easily
4. It acts as a filter, letting nutrients reach the tendons and cartilage, but blocking the passage of harmful cells and substances
5. It eliminates harmful inflammatory proteins, reducing pain and swelling when the joint is injured.

The most important component of synovial fluid is a substance called **Hyaluronan**. It is this substance that lets synovial fluid perform the 5 different functions all at the same time.



Hyaluronan Injections

The principles behind Hyaluronan injections are to decrease pain and improve function in patients with joint pain.

Hyaluronan injections have been shown to have the following beneficial effects on joints:

1. They replace some of the normal ingredients found in synovial fluid (hyaluronans) improving the lubricating ability.
2. They help to stimulate the joint lining (the synovium) manufacture more normal synovial fluid.
3. The Hyaluronan coats the lining of the damaged joint surfaces and lining, covering pain nerve endings. This reduces pain and protects the joint surfaces from joint inflammation.
4. Hyaluronans also act directly to reduce inflammation in a joint, like a steroid, but without the harmful side-effects of steroids.

Ostenil

Ostenil (TRB Chemedica), is a high molecular weight derivative of hyaluronic acid. In this form, the majority of the hyaluronic acid is in a gel-like state which improves the ability of this hyaluronan to remain in the joint for a longer period of time.

Ostenil is delivered through a series of injections into the joint. The number of injection differs according to the reason for the injection and the joint to be injected.

Usually for arthritis a weekly course of three to five injections is recommended. In our experience less injections are required for shoulder impingement, where the injection works as an adjuvant to exercise and physiotherapy.

After your injection

To gain the most benefit from this injection it is important that you rest the joint from any strenuous activity for 1-2 days. You will be able to carry out activities of daily living as normal.

The clinician who has given you the injection will have checked your medical history to ensure that you are at minimal risk of any adverse reaction. Adverse reactions are extremely unusual with Ostenil injections, but if you notice any of the following symptoms: swelling, redness or warmth around the injection site, or you feel generally unwell, please contact your GP or casualty.

It is important that you attend your review appointment so that your clinician can assess the effects of the injection and provide you with additional advice as appropriate

Clinical research

Hyaluronan Injections has been found to be a very effective tool to decrease pain and improve function in patients with shoulder joint inflammation.

A large amount of research has demonstrated it's benefits since the 1980s. When injections of the shoulder are indicated, we have found it to be more effective and safer than steroid injections of the shoulder.

Ostenil is a very effective tool to treat:

1. Subacromial impingement of the shoulder
2. Patients with early stage arthritis who wish to improve both their pain and function
3. Patients with more advanced arthritis who would like to postpone the need for a total joint replacement.

For more information and full research data please see:



www.shoulderdoc.co.uk

Research references

1. Shibata et al. Clinical evaluation of sodium hyaluronate for the treatment of patients with rotator cuff tear. *Shoulder Elbow Surg.* 2001 May-Jun;10(3):209-16.
2. Funk L. Ostenil Hyaluronan vs. Corticosteroid injections for subacromial impingement of the shoulder. *OARSI*, 2005
3. Funk L. Ostenil Hyaluronan for Inoperable Arthritis of the shoulder. *Osteoarthritis & Cartilage* 2004; 12(Suppl B)
4. Leardini G., Perbellini A., et al. "Intra-Articular Injections of Hyaluronic Acid in the Treatment of Painful Shoulder," *Clinical Therapeutics* 1988/ Vol 10.No.5.
5. Raynauld J.P., Choquette D., et al. "Hylan versus Triamcinolone Acetonide Injection for Acute Supraspinatus Tendinitis: Early Report of a Randomised Controlled Trial," *Arthritis Rheum* (1994) 37 Supp. 9 (S346)
6. Abatangelo G., O'Regan M. "Hyaluronan: Biological role and Function in Articular Joints" *European Journal of Rheumatology and Inflammation* 1995; 15: 9-16
7. Shibata et al. Presented at the AAOS, Anaheim, Ca. Feb 1999. Press release from the Academy News Newsletter. 05/02/1999. "Hyaluronate Sodium Eases Pain of Rotator Cuff Tear."
8. Simon LS. Viscosupplementation therapy with intra-articular hyaluronic acid – fact or fantasy? *Rheum Dis Clin N Am.* 1999. 25(2): 345-357.

Appointment Information

Follow Up Appointment:

Hospital:

Date:

Time:

Physiotherapy Appointment:

Therapist:

Assress:

Date:

Time:

Shoulderdoc.co.uk provides the latest information and Education on Shoulder and Elbow Problems.



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OSTENIL INJECTIONS FOR THE SHOULDER

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This guide is to provide you with important information and to assist you with your recovery following your shoulder injection.



Manchester Sports Medicine Clinic