INTRO

Congratulations on your download!

This guide is designed to help you and other doctors all over the world to become proficient in the art of injection. You will be given everything you need to make injections a powerful tool in your everyday practice. Even though injections have proven far superior for treating localized inflammatory pain, a lot of doctors today still prefer systemic treatments like the widely used NSAIDs. This is strange considering that injections are, if done right, less expensive and has lesser side effects. The reason is often fear. The doctors own fear of doing wrong and even hurting the patient in the process. This application will give you the support you need to feel comfortable and to cast those fears aside. As a doctor you already have vast knowledge of the human body. We aim to expand your knowledge even further. With a little practice you will be able to turn away the anxiety of hurting your patient and instead feel excited knowing that you are a skilled doctor giving them a safe, documented and effective treatment. The right treatment delivered exactly at the right place. This is the art of injection.

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WHY INJECTIONS?

Why do we doctors need to provide this type of injections?

1. MONOPOLY - Only doctors have the right to give these injections in most countries. Patients expect, and rightly so, that we are skilled in injection techniques.

2. EFFECT - Cortisone injections are by far the most effective treatment for inflammatory pain. Moreover, it is cheaper and has fewer side effects.

3. PREVENT CHRONIFYING - Occasionally an adequate rehabilitation cannot begin when the pain is too great. A well-aimed cortisone injection can contribute to rehabilitation and be implemented and prevent chronic pain syndrome through peripheral and central sensitization.

THE ART OF INJECTION

Good knowledge of anatomy, physiology and good technique are obvious prerequisites to be proficient in the art. But the core competence lies in the execution. Especially when the patient, with his gaze, questioning your skill. This is when you have to stay calm, professional and perform injection as skillfully as possible.

Theoretically, it is easy – “We just deliver the contents of the syringe to the correct destination and then call it a day". In practice it is often more complicated. When it comes to finding the target, it can sometimes lead to reversing the process, tilt, pulling out or switching the angle. Always use the bones as "markers". Like any art it takes practice to master so don’t be discouraged. Over time and with more experience it will get easier and easier. As your skill increases the patient experiences less pain and greater trust. This is a great reward, both for you and the patient, and another reason to master the art.

JOINTS VS ATTACHMENTS

In this application we have divided INJECTIONS into joints and, besides muscle pain, muscular/ligament attachments. This is because the injection techniques differ between the two. If the goal of the injection is the joint, make sure that you reach intra-articularly. Remember that you are in the joint, as soon as you are inside the joint capsule. If the goal is a muscular/ligament insertion, make sure that you have bone contact. Give the injection with a light pecking motion against the periosteum. This is done to stimulate the immune system and increase the healing. In the old days, before local anesthesia (la) this was a method, called “dry needling”. This is a big difference from joint injections.

Arthritis & Synovitis
Inflammation in the joint. Non-specific arthritis / synovitis are quite common in primary health care. Please note that this is a clinical diagnosis. Rarely do we get any help from blood tests, x-ray or MRI. Some arthritis are posttraumatic. Although osteoarthritis has occasionally signs of arthritis and must then be treated as such. One reason is to ease the pain, but also to slow down the development of osteoarthritis. Small joints often suffer synovitis / arthritis, not just pure osteoarthritis.

**REMEMBER:** Repeated joints injections can be done up to 6 times / year.

TOP TIP: One large patient category is the ones suffering from rheumatologic arthritis (RA). This disease is best handled by rheumatologists and is not discussed in this simple script. BUT would any RA patient show up, do not hesitate to help out! These patients respond extremely well to cortisone injections and can also help you with improving your skills.

**Tendinitis & Tendalgia**

Inflammation in muscular or ligament attachment. This comes in many forms and names, but has basically a similar genesis. When other treatment options have been exhausted, the patient seeks help. Even in these cases, the diagnosis is often clinical. In the more advanced tendinitis pain is highly localized, and limited to the insertion of the muscle or ligament to the periosteum. If so, the injection is given into the periosteum. Myotendinites often involves the muscle belly, but here cortisone injections should NOT be given.

**REMEMBER:** Repeated injections in muscular attachments max 3 times / year in the same place.

TOP TIP: In my experience, there are two diagnoses in this group where I do not recommend cortisone injection. It is tendinitis of the Akillesinsertion and the Suprapsinatusinsertion. This is because the risk of rupture. If you are stuck with the old diagnosed supraspinatus tendinitis, treat them as a subacromial pain syndrome/impingement. For all types of tendalgi, especially Piriformissyndrome / trokanteritis, specific stretching is the foundation for optimal treatment.

**MATERIAL & MEDICATION**

The syringe, dose and choice of needle size will be presented individually for each technique. This can be found under the section RECIPE.

**Syringes**

2, 5 and 10 ml (cc)

**Needles**

GRAY (Mosquito) 0.4 x 19 mm
Recipe:
This syringe will illustrate the mix of local anesthetics (blue) and cortisone (yellow).

For example:

RECIPE
4 ml (cc) + 1 ml (cc) cortisone

SYRINGE
5 ml (cc)

NEEDLE
0.7 x 50 mm intramuscular

Local anesthetics (la) without adrenaline is recommended. Store it in room temperature as the client can experience discomfort if the mixture is distributed too cold. Ordinary Xylocain 10 mg/ml is good enough. In regards of cortisone I strongly recommend Triamcinolone, especially Triamcinolonehexacetonide 20 mg/ml (Lederspan®, Aristospan®). All recipes in this app are meant for this solution. I use this for all injections, both joints and muscular attachments. The alternative is Triamcinoloneacetonide 40 mg/ml (Trigon-depot®, Kenacort-T®….). The recipes are applicable even for this solution.
Inspect the patient and examine the area that is bothering the patient. Always compare with the healthy side of the body. Look for differences like muscle atrophy and signs of inflammation. Remember: Rubor, Tumor, Dolor, Calor and Functio leasae.

Palpate and localize the pain. Use the palm of your fingers. Palpate lightly for best sensitivity. Closing your eyes might improve your sensitivity even further. Examine the range of motion and the joint play. Get a feeling how to enter the joint.

THE INJECTION

1) Find anatomical markers to confirm the right spot for injection.
2) Try manipulating the joint or muscular/ligament attachment to better make out the anatomical parts. This especially important when preparing to inject in small joints.
3) In regards to pain in muscular attachments or ligaments, always try to find the exact point of origin for optimal outcome after injection. Let the client confirm that this is “bull’s eye”. Use the true motto: “No pain - no gain”
4) Mark with a pen, with indrawn ink, and wash with disinfectant.
5) Go quickly with the needle through the skin for less pain.
6) Aim the needle towards the goal. If you get stuck, pull out and readjust your aim. Never realign without pulling the needle out a bit due to the risk of unnecessary tissue damage.
7) When in desired location, aspire and inject. Remember, if you don’t succeed the first time – try again.
8) After a cortisone injection, 24h of relative rest is recommended, especially for weight bearing joints.

TRICKS OF THE TRADE

• Traction and "open up". This is the basic rule. It can be applied on joints (see e.g. MCT). But also applies to the current patient anatomy / posture. The typical example is the subacromial pain syndrome. Does the patient have the typical collapsed posture "he opens up" for the dorsal technique
• **Aseptic Wash with** alcohol is enough for all injections.

• **Dart quickly through the skin**
In the skin, the density of nociceptors are high. Therefore, go quickly through the skin so that you will reach a couple of mm inside.

• When you want to **change the needle position**, pull up just under the skin, angle and go in again. Repeat until you have reached the goal. Do not change the needle position laterally, when you are deep inside as the needle could cause unnecessary tissue damage.

• **Mixing** for all muscular attachments and major joints.
I recommend a mixture of cortisone and local anesthesia. Please use local anesthesia without epinephrine. I do not use pre-fabricated solutions.

• **Act as professionals.**
Most patients are uncomfortable with the injection. More important is that we as doctors can act professionally. Avoid questions like "How does it feel?" Or "Does it hurt?" Such insecurities makes the patient feel even more discomfort. Obviously it will be more or less painful. But accept and respect the patient's sensitivity! The more skilled we become as doctors, the less pain the patient experiences.

• **Patient position.**
Many techniques leave no room for choice. If there is a risk of vasovagal reaction and you have a choice, perform the injection in lying. Even injections of small joints and thumb base (CMC1) are given with advantage to the relaxed supine patient.

• **Manipulation.**
If you are right handed, hold the syringe in your right hand. Position yourself
comfortably relative to the patient. When you put the needle in the right place, shift hands and take a firm support with the ulnar side of your left hand against the patient's body. Take the syringe with the thumb-index finger grip of the left hand, aspirate and inject. For left-handed, of course do exactly the opposite.

**manipulation-a steady grip creates trust**

![Injection Image](image)

**INJECTIONS:**

**JOINTS**
- ACROMIOCLAVICULAR SYNOVITIS
- CARPOMETACARPAL ARTHRITIS
- COCCYGODYNIA
- KNEE SYNOVITIS
- FROZEN SHOULDER
- HALLUX RIGIDUS
- SACROILEITIS
- SHOULDER SYNOVITIS
- SMALL JOINT SYNOVITIS
- STERNOCLAVICULAR SYNOVITIS
ATTACHMENTS
APICITIS PATELLAE
LATERAL EPICONDYLITIS
PARASACRAL LIGAMENT
PIRIFORMIS SYNDROME
PLANTAR FASCITIS
SUBACROMIAL PAIN SYNDROME

MUSCLE PAIN
TORTICOLLIS
MYALGIA THORACICA

JOINTS:

ACROMIOCLAVICULAR JOINT SYNOVITIS

Intro
Most often following a trauma. type contact sports, conductors, violinists, accordionists. But even bearing the heavy burden of bad straps, or heavy bust with narrow bra straps. Diagnosis is clinical. Palpation of the joint space trigger pain. Radiology adds little. Osteoarthritis has limited clinical relevance.
Recipe

Only cortisone 1 ml

Syringe

2ml (cc)

Needle

grey/blue  0,4 x 19 mm / 0,6 x 30 mm

Approach

The injection should be administered intra-articularly. This is often a bottleneck point. Can be difficult. Palpate carefully, feel joint play. Mark, wash and go. Be prepared to back and tilt several times. The small gray needle will disappear completely when you are in the joint. May work hard to inject. Sometimes it helps to rotate the needle. This is a “small joint”, i.e. pure cortisone. Very good effect.

Injection ACJ joint.
CARPOMETACARPAL ARTHRITIS

Intro

Quite common. Women dominate, especially at sewing, needlework, pincer grip. The diagnosis is made clinically. X-rays can verify. Often pronounced symptoms despite ringing radiographic changes (synovitis). Awaiting referral to hand surgeon until surgery becomes necessary. Hypotrophies of the adductor thumb muscles are relatively early and is a natural reaction to pain in the thumb base joint.

Recipe

Only cortisone 0,6 – 0,8 ml

Syringe

2ml (cc)

Needle

gray 0,4 x 19 mm

Approach

This is included in the term "small joint". We therefore use only pure cortisone. As before, especially for "small joint", traction and upward slant. Palpate joint play carefully. Mark, wash and go. With gray needle, the entire needle to disappear, then you are in the trail. I prefer to knit from the palmar side to avoid blood vessels and nerves in the fossa Tabatiere. Effect very good, duration up to 1 year.
COCCYGODYNIA

Intro
Pain from the tailbone (Coccyx) is well known, often difficult to treat and associated with prolonged suffering of the patient. Many suffer for a long time with this handicap before seeking help. Seat cushion and NSAIDs often relieves. The injection is usually effective, but recurrences are common. A persistent use of the pillow is the best prophylaxis of recurrence. The injection may be repeated two to three times per year for many years. Extirpation may be necessary in rare cases.
Recipe
Local anesthetics 1 ml + cortisone 1 ml

Syringe
2 ml (cc)

Needle
blue 0,6 x 30 mm

Approach
This is a joint injection! The injection should be given in the articulation between sacrum and coccyx, on both sides. Using the motto "traction - open up", to make it easier.

Coccyx – principle, direction and angle, traction and “angle up”
Coccyx injection right side.

FROZEN SHOULDER

Intro
Injection into the humeroscapular joint is usually easy to perform. Whether you choose the dorsal or ventral approach. Choose variant according to the patient's anatomy and posture. Most people are "opening up" for injection from behind. In primary care Frozen Shoulder (Adhesive capsulitis) is a frequently occurring diagnosis. This condition usually defy all possible treatment. For several years, I have successfully dealt with this inflammatory condition with large volume local anesthetics mixed with cortisone. The first syringe 4 +1, the second 10ml pure local anesthesia.
The effect is very good, after only one injection.

**Recipe**

**First syringe:** local anesthetics 4 ml + cortisone 1 ml

**Second syringe:** only local anesthetics 10 ml (SIC)

**Syringe**

5 ml (cc) + 10 ml (cc)

**Needle**

black 0.7 x 50 mm
**Ventral approach**

Palpate proc. Coracoideus, go 1 cm laterally, aim dorsally.

**Dorsal approach**

Palpate "soft spot" under acromion, between humerus and scapula. This is the same plug as for impingement, but walk ventral- caudal and aim for proc. coracoideus.
KNEE SYNOVITIS

Intro

Again, the trick is "traction - upward slant." Here, naturally, when seated, the leg gravity gives traction and flexion 90 degrees provides "upward bias". An elegant technique, which often is painless.

Recipe

Local anesthetics 2 ml + cortisone 1 – 2 ml

Syringe

5 ml (cc)

Needle

blue 0,6 x 30 mm

Approach

Palpate the "soft spot" between the top edge of the tibial and femoral condyle. Choose the easiest part, laterally or medially. (Eases as some patients have more osteoarthritis on one side).

Mark, wash and go. Aim to the cruciate ligaments = the center of the knee. Move horizontally. You can usually feel when you walk through the joint capsule. "Loss of resistance" is a clear sign that you are in the ranks. The small image in the top left is taken from the top to show the direction and relative to patella. Effect of synovitis / arthritis is very good. In osteoarthritis with hyaluronic acid decent.
Sacroileitis

Intro

The nonspecific sacroileitis is more prevalent than many peers perceive and the diagnosis is often missed. Symptoms are usually lengthy, sometimes chronic. Symptoms of relapse, although the ache is chronic. Symptomatology may be difficult to interpret with "sciatica character." Most patients, however, clearly point out the SPIS (superior posterior iliac spine), as the point where the pain originates from. MRI can show positive findings, but the diagnosis is clinical. This is “the great mystery of pain generator”
Recipe
Local anesthetics 4 ml + cortisone 1 ml

Syringe
5 ml (cc)

Needle
black / green 0,7 x 50 mm / 0,8 x 80 mm

Approach
This is a particular joint. Almost no movement with rough joint surfaces, which often complicates injection execution. You need to go deep with the needle. Note, there are no risks of adverse side effects. The worst that can happen is lack of efficacy. It is usually easiest to go from the bottom as shown. Here you have a good opportunity to help patients who have gone far with their problems. The effect is very good and long lasting. Repeated injection is common after ½ - 1 year.
Intro

Injection into the humeroscapular joint is usually easy to perform. Whether you choose the dorsal or ventral approach. Choose variant according to the patient's anatomy and posture. Most people are "opening up" for injection from behind. In primary care, the nonspecific synovitis / arthritis is not very common. However, Frozen Shoulder is a frequently occurring diagnosis. The effect is very good for both synovitis and Frozen Shoulder.
Recipe

Local anesthetics 2 ml + cortisone 1 ml

Syringe

5 ml (cc)

Needle

black 0,7 x 50 mm

Ventral approach

Palpate proc.Coracoideus, go 1 cm laterally, aim dorsally.
**Dorsal approach**

Palpate "soft spot" under acromion, between humerus and scapula. This is the same plug as for impingement, but walk ventral-caudal and aim for proc. coracoideus.

**SMALL JOINTS**

**Intro**

In this group we encounter

MCP (Meta Carpo Phalangeal) and MTP (Meta Tarso Phalangeal)

DIP (Distal Inter Phalangeal) and PIP (Proximal Inter Phalangeal)

These joints all have a similar anatomy. Acetabulum is located distally - condyles proximally. Here are eminently the motto: "traction – angle up".

Synovitis and arthritis in small joints are relatively common, although osteoarthritis is present. **In this section I will demonstrate PIP and DIP.** For MTP and MCP please watch Hallux Rigidus.
Recipe

Only cortisone 0,4 – 0,6 ml for PIP,
0,2 – 0, 4 ml for DIP

Syringe
2ml (cc)

Needle
gray 0,4 x 19 mm

Approach

In addition, the finger is held on joint opposite side to angle up, and controlling the injection in the joint. Joint capsule bulges on your finger when you inject. The injection can be a little tricky and you do not always get the feeling of being "inside the joint." Remember you are intraarticularly, once you are inside the joint capsule. The capsule bulging against the palpations finger confirm that you are right. Clean cortisone. The effect is severe and prolonged.
Principle “small joints”

Injection PIP dig 3 left

Note with my middle finger under the wrist I palpate the bulge, while my thumb and forefinger "open up" the joint.
STERNOVICULAR SYNOVITIS

Intro

Synovitis in this joint is rare. The pain causes severe symptoms around the joint, with radiation up by the neck to the jaw, and down over the pectoral muscles. A very unpleasant feeling in the jugulum area is reported by many customer. The diagnosis is often missed and the patient has to visit many doctors before adequate treatment is obtained. This despite the fact that of ev. MRI shows findings.

Recipe

Local anesthetics 1 ml + cortisone 1 ml

Syringe
2 ml (cc)

Needle
blue 0,6 x 30 mm

Approach

The joint is usually swollen, heavily sensitive to palpation and the medial end of clavicle inflated.

Palpate the joint opening. It is quite big, which gives you a lot of space. Mark, wash and go!

The injection is not particularly difficult, and the result is very positive.
ATTACHMENTS:

APICITIS PATELLAE

Intro
Not unusual for downhill skiing, spec. moguls, hurdles, very much up and down on ladders or stairs.

Dosage
Recipe
Local anesthetics 2 ml + cortisone 1 ml

Syringe
5 ml (cc)

Needle
blue 0.6 x 30 mm

Approach
Peck the tip against and around the apex patellae. Good effect.

Apicitis patellae
LATERAL EPICONDYLITIS

Intro
Synonyms are Tennis elbow, radial epicondylalgia ....

Corticosteroid injections for this diagnosis has been increasingly questioned in recent years. This is rightly so. We have alternative therapies with good effect. Both acupuncture and lithotripsy have equivalent power. The fastest relief is obtained, however, by cortisone injections. But the risk for relapse should be considered. The clearer the connection with professional practice has been diagnosed, the greater the contraindications.

Dosage

Recipe
Local anesthetics 2 ml + cortisone 1 ml

Syringe
5 ml (cc)

Needle
blue 0,6 x 30 mm

Approach
Here "broken stick channel" is used to avoid subcutaneous atrophy.
Pull the soft tissue medially, mark, wash and go. Go straight down to
bone contact, peck around and deposit the mixture in the fossa above capitulum radii. Good effect, but risk for relapse

*Injection lateral epicondylitis*

**PARASACRAL LIGAMENT**

**Intro**

*Parasacral tendalgia* is still too many doctors an unknown concept. This problem is quite common in primary care. Often this tendalgi is hidden in other diagnoses like Piriformissyndrom, Sacroileitis, Pelvic Dysfunction and others, but needs to be treated specifically. The diagnosis is clinical and reset by palpating while letting the patient certify that this is the spot where the pain originates from.
**Dosage:**

Recipe (both sides)

Local anesthetics 8 ml + cortisone 2 ml

**Syringe**

10 ml (cc)

**Needle**

black / green 0,7 x 50 mm / 0,8 x 80 mm

**Approach**

The ligaments of the pelvic floor (lig. sacrotuberale and sacrospinale) are the body's strongest ligaments. They hold together the entire pelvic ring lower opening and subjected to enormous pressure. The tendalgi points are usually located to the sacral edge and can be palpated as finger point end big sharply sore and hard parts of the ligaments. In sacroileitis there is often a tendalgi in the caudal pole of ISJ. The symptoms are pain in the buttocks area, sometimes with radiation down to the knee. Simultaneously palpation PR (per rectum) to find the sacral edge. The effect is good - very good.

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Palpation of parasacral ligament.

Right thumb is relaxed detection finger. Locate the edge of sacrum. Push down with your left hand ulnar side through the powerful gluteal muscles. Go from the caudal edge of the ligamentet and proceed cranially. Note the texture and the patient's pain experience.

Injection parasacral ligament. Simultaneously palpation PR to find the sacral edge.
PIRIFORMISSYNDROME

Intro

Very common in primary care, called Tochanteritis. Treatment always starts with stretching, since most of these painful conditions are caused by short muscles. Stretch need to be done properly and is painful (“No pain - no gain”). NSAIDs can contribute to mitigation. Cortisone injections are very effective if given in the right way. The "Piriformis group" consists of five different muscles, half attaches to the top of major Trochanter and the rest in the Intertrochanteric fossa. We must therefore endeavor us to inject both these mounts, to achieve full effect.

Dosage:

Recipe

Local anesthetics 8 ml + cortisone 2 ml

Syringe

10 ml (cc)

Needle

green 0,8 x 80 mm

Approach

Let the patient lie on the healthy side with the bottom leg straight and the top leg bent at the knee and hip, as in the picture. Rotate the hip through the leg and palpate trochanter major as it slides over your fingers. Palpate the depth of trochanter and down cranially above this. Locate the
most painful point (almost always the tip of the trochanter). Allow the patient to certify that you are at the right place. Mark, wash and go! Go straight down the trochanter, peck around the periosteum, while injecting here. Back up, tilt and go down about 2 cm cranial to the tip of the trochanter. Search bone contact. Now you're down to the intertrochanteric fossa. Dispose rest here while pecking.

Result mostly good - very good. Risk for relapse when no stretching.

Trochanteritis injection

½ to tip of trochanter, ½ in fossa intertrochanterica

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PLEASE OBSERVE – the stretching technique! It is quite effective and painful. Teach the client to do auto stretching. In that way she no create more pain, than she can absorb.

PLANTAR FASCITIS

Intro

Common, often called “Heel spurs”, especially among runners and athletes, but can affect anyone. Treatment always begins with foot beds, good shoes and NSAID´s. In case of no response usually injection cause healing or effective relief.
**Dosage:**

**Recipe**

Local anesthetics 2 ml + cortisone 1 ml

**Syringe**

5 ml (cc)

**Needle**

blue 0,6 x 30 mm

**Approach**

Please Note, here it is extremely important to move quickly through the skin! Go straight down from the medial side and get bone contact. Peck gently around, while you are giving the injection.

Taping the arch after injection is important.
**SUBACROMIAL PAIN SYNDROME**

**Intro**

Very common in primary care. Difficult to treat without cortisone injection.

Synonyms are Impingement shoulder, Rotator cuff syndrome and Supraspinatus tendinitis

In patients with more hunched posture and anti-postured shoulders are the dorsal techniques preferable ("tilt and open up"). When the gap between the humeral head and the acromion is large and joint play clearly, the lateral technique is simple.

Good collaboration with the physical therapist or personal trainer is a
great advantage. Effect good - very good. Reinjections after 1 month are common.

**Dosage**

Syringe

5 ml (cc)

Recipe

Local anesthetics 4 ml + cortisone 1 ml

Needle

black 0,7 x 50 mm

Effect good - very good. Quite often necessary to make customer available for rehab to begin. Reinjections after 1 month are common.

Good collaboration with a physical therapist or personal trainer is a great advantage for rehabilitation.

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**Lateral approach**

Palpate the gap between the humeral head and the acromion. Mark, wash and go parallel under the acromion. Do you get bone contact, it's usually the acromion. Back, realign and go into more horizontal. In patients who have gone long in this condition, the inflammatory tissue subacromial can be tough and a bit difficult to penetrate. Inject while moving the needle gently back and forth.
Dorsal approach

Palpate the "soft spot" under acromion, between scapula and humeral head. Mark, wash and go. Go diagonally upwards medially towards the ACJ. If you reach bone contact under acromion, back and tilt a little more horizontally. Know that you are free in the subacromial space. Aspirate and inject.

MUSCLE PAIN:

MYALGIA THORACICA

Intro

The only technique without cortisone, only isotonic saline (0.9% NaCl).

A risk-free technique without any contraindications. This is an old method using wheals or papules to restart the autonomous nerve system.
Best suitable for **acute myotonic pain conditions** e.g. Lumbago and Torticollis. May have some effect on chronic myalgias, e.g. WAD, Trapezius myalgia, Cervical tension syndrome and like in this section, Myalgia Thoracica.

**Dosage**

![Syringe Image]

**Syringe**

10 ml (cc)

**Recipe**

Isotonic (0,9%) NaCl 10 ml

**Needle**

gray 0,4 x 19 mm

**Approach**

PLEASE NOTE! Syringe barrel holding. This is a hard work. The injections are given intradermally. with a thin needle. Hold the syringe like an ice prod (SIC). Lean the hand steadily to the clients body.

Try getting wheals with about 10 mm diam. and as white as possible!

Place the wheals over the most tense muscle. Results are astonishing positive for acute muscular pain. Hyperaemia around the wheals is a good indication of this methods efficiency. Increased blood circulation and decreased mucletonus are often reported by the client as warmth and relaxation.
chronic thoracic myalgia

TORTICOLLIS
**Intro**

The only technique without cortisone, only isotonic saline (0.9% NaCl).

A risk-free technique without any contraindications. This is an old method using wheals or papules to restart the autonomous nerve system.

Best suitable for **acute myotonic pain conditions** e.g. Lumbago and Torticollis, showed here. May have some effect on chronic myalgias, e.g. WAD, Trapezius myalgia, Cervical tension syndrome and Myalgia Thoracica.

**Dosage**

![Syringe with needle](image)

**Syringe**

10 ml (cc)

**Recipe**

Isotonic (0,9%) NaCl 10 ml

**Needle**

gray 0,4 x 19 mm

**Approach**

PLEASE NOTE! Syringe barrel holding. This is a hard work. The injections are given intradermally with a thin needle. Hold the syringe
like an ice prod (SIC). Lean the hand steadily to the clients body.

Try getting wheals with about 10 mm diam. and as white as possible!

Place the wheals over the most tense muscle. In Torticollis often the Sternocleidomastoid muscle. Results are astonishing positive for acute muscular pain. Hyperemia around the wheals is a good indication of this methods efficiency. Increased blood circulation and decreased mucletonus are often reported by the client as warmth and relaxation.
THE EDUCATIONAL FILM

This guide is based on the instructional film, Injectionart®. The film was made after 25 years of teaching medical doctors. Now after another 10 year this guide is born. Please visit www.artofinjection.com. There you can apply for the course, find recipes for all injections, reviews and how to find the App for Iphones and Androids.

ABOUT THE AUTHOR

“Never try – never know”

is my truth and motto in life.

After high school, I started working as a hospital orderly in long-term care. I advanced quickly to assistant nurse in an emergency room in Stockholm. The year was 1970. It was here I first got a syringe in my hand and learned how to inject. Since then the syringe and injection has become a natural tool in my future career. Now, 43 years later, I have trained nearly 3000 doctors in injection technique, or as I prefer to call it the Injectionart ®.

After having received my license to practice medicine in 1982, I specialized in orthopedic medicine. 1987 I graduated with my degree as specialist within general medicine, 1991 Higher Diploma in Orthopedic Medicine and manipulation direction, 1995 Orthopedic Manual Therapy Step 3 (OMT3). Since then I have mainly worked with orthopedic medicine. Here I developed injection techniques as an excellent tool.

The app, ArtofInjection, is based on my educational film in, the “Injectionart®”, and this guide. The app is the best and smartest teaching tool I ever made. I highly
recommed it.

And it is cheap.

The intention is to make it easy for the treating physician and as little painful as possible for the patient. And of course, the injection ports in the right place so that optimal performance is achieved.

"If I can - you can." Good Luck!

Koh Lanta, Thailand, 2013

Roger Stadra  M.D.

www.artofinjection.com

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