At the end of the day, it's all about making a difference!
Less Fear of Going to the Dentist

Contrary to conventional local injection methods, infiltration anaesthesia with INOJEX delivers the local anaesthetic submucously down the periosteum.

This leads to a more rapid diffusion and resorption and a quicker rise to the effective concentrations. The past decades have been dedicated to research and development in collaboration with dentists to develop a solution for local anesthesia, without using needles.

The solution is to apply a local anesthetic in the mucous membrane where it is spreading in the deeper layers of the gums, creating a sufficient effect much faster than the anesthesia needle.
InoLife, now offer to patients almost painless and safe local anesthesia, while preserving the skin through the needle-free system Inojex. Each injector can be reused a minimum of 5000 times. The single-use ampoules (made by Makrolon from Bayer) can be disposed as domestic waste and are completely recyclable.

Many clinical trials have proved that drug distribution is done in more suitable way than while using a traditional syringe (multi-jet technology). The given doses are definitely much lower and the risk of side effects is considerably reduced.

Disposable components necessary for dental application are:

- Ampoules
- Transporter adaptors
- Silitops
INOJEX30
NEEDLE FREE

- Needle-free
- Virtually painless
- Subcutaneous injection
- Convenient for delivery of variable doses
- Fast, easy, and safe in use and effect
- No risk of needle-stick injuries
- Eliminates cross-contamination
- Reduces disposal costs
- Compact and can be used anywhere
- Easy to operate and user-friendly
NEEDLE FREE INJECTORS

Needle Syringe

0.39 mm

Needle-Free Injection

0.17 mm

The Needle Syringe causes a pool of medication and long term tissue damage.

The InoLife Needle Free dispenses the medication uniformly in a spray-like pattern.
Quick and efficient anaesthesia and thus time saving treatment

Contrary to conventional local injection methods, infiltration anaesthesia with INOJEX delivers the local anaesthetic submucously down to the periosteum. This leads to a more rapid diffusion and resorption and a quicker rise to the effective concentrations.

Positioning of the injector on the attached gingiva of a front teeth.
Reduced doses are necessary

Sufficient anaesthesia is achieved with comparably low doses. This is especially important with children who have a lower dose limit.

The total required amount of local anaesthesia is even further reduced due to the extended effective window and the targeted anaesthetising of the individual tooth.

This is especially important with children who have a lower dose limit.
Less numbness after treatment

A shorter duration of soft tissue numbness is observed as a positive side effect, which pleases patients additionally.

Less fear of going to the Dentist

Small children are frequently less willing to cooperate with the dentist. This is where INOJEX reduces the stress of administering a local anaesthetic.

Eliminates risk of infection at injection site.
**INOJEX Components & Technology**

**Injector**

The INOJEX injector is the size of a ballpoint pen, lightweight (approx. 75g) and reusable. A spring integrated into the injector produces the required energy to apply the medication in the subcutaneous fatty tissue. An ampoule filled with the medication is screwed into the injector.

**Ampoule**

The sterile-packed plastic ampoules are single-use disposables and medical repositories in regard to the different uses. Two types of ampoules are available: U100 for insulin and 0.3ml for local anaesthesia and other pharmaceutical liquids.

**Reset Box / Charger**

The reset box is for resetting/charging the injector. When the reset box is closed, a lever mechanism compresses the spring in the injector for recharging.

**Transporter**

The reusable transporter is a dosing tool designed for transferring liquid medication from cylinder cartridges to the INOJEX system ampoules. It is used in combination with the transporter adapter. After inserting the cylinder cartridge, the transporter adapter is screwed onto the transporter for transferring the medication. Subsequently the ampoule is screwed into the open end of transporter adapter.

**Transporter Adapter**

The transporter-adapter is a sterile disposable product designed for transferring medications from cylinder cartridges to the ampoules. It is used for connecting transporter and ampoule. Once the contents of the cartridge have been used up, the cartridge and the adapter are disposed of.

**Vial Adapter (14mm Small)**

The sterile Vial Adapter 14mm enables the transfer of pharmaceutical liquids from vials (crimp-diameter of 14mm) to the Ampoule. The Vial Adapter 14 is pressed firmly onto the head of the vial. Now the Ampoule can be screwed into the Vial Adapter 14. Once the contents of the vial have been used up, the Vial Adapter 14 and the vial are disposed of.

**Vial Adapter (22mm Large)**

The sterile Vial Adapter 22mm enables the transfer of pharmaceutical liquids from vials (crimp-diameter of 22mm) to the Ampoule. The Vial Adapter 22 is pressed firmly onto the head of the vial. Now the Ampoule can be screwed into the Vial Adapter 22. Once the contents of the vial have been used up, the Vial Adapter 22 and the vial are disposed of.

**Luer Adapter**

The luer adapter and a cannula with Luer lock enable to fill the ampoules with liquid medications from all commercially available containers (e.g., snap-off ampoules, vials). Thru tro the Luer lock cannula is connected to the Luer cone of the adapter. The ampoule is screwed into the adapter and the cannula inserted into the desired medicine container (e.g., snap-off ampoule). By slowly pulling out the ampoule plunger the ampoule is filled with the desired dose of medication.

**Pen Adapter**

The pen adapter can be used to transfer insulin directly from the pen into the ampoule and matches with most of the available pens. It is screwed on the pen instead of the needle. Then the ampoule has to be screwed into the pen adapter. The ampoule is filled making the usual setting on the pen for the required number of units. By activating the pen trigger the ampoule will be filled automatically. The units do not have to be read. The pen adapter thus utilizes the dosing options of a pen.

**SiliTop**

SiliTop is a cap, especially developed for the dental application. It is placed on the tip of the ampoule and recovers pressure sensations when the injection is released. SiliTop's are sterile packed and single-use disposables.
Operating instructions for INOJEX30 in dentistry

INOJEX30 is approved for infiltration anaesthesia into all teeth of permanent and deciduous dentition.

InoLife
Innovation for Life
How it works

The INOJEX30 system for Dental application is a stainless steel device for delivery of anaesthetic from sterile disposable 0.3ml ampoules and sterile disposable silicone cushioning caps though a micro nozzle in the ampoule into the gum at a consistent pressure by means of an integrated spring.

0.3ml of anaesthetic injected with INOJEX is sufficient for superficial fillings to all teeth of deciduous and permanent dentition under normal circumstances.

Top up anaesthetic as required for other procedures.

The anaesthetic is transferred from standard containers into the ampoules using a range of adapters.

The sensation that the patient should feel will vary from none, to a flick of the fingernail - instant then gone immediately.

The injection site

Best practice for maximum patient comfort:

The Injector is placed in the same position and angle as the traditional needle into the buccogingival sulcus, at the point of the sulcus that is as close as possible to the attached gingival, ensuring that the Injector is held with medium pressure and at 90 degrees to the point of injection (nb. not at 90 degrees to the teeth)

WARNING: The injection must be into the buccogingival area at the point of the sulcus that is as close as possible to the attached gingival. If the injection is too close to the buccal and lip areas there may be some bruising or bleeding.
The injection

INOJEX30 can be used on all teeth. Prepare the Injector following the guidelines on pages 5 and 6. Always inform your patients of the trigger sound before injecting. Once your Injector is ready proceed as follows:

1. Open the sterile packaging and remove one SiliTop. Push the Ampoule tip completely into the SiliTop. Now withdraw the Injector with the SiliTop attached to the Ampoule tip, out of the package.

2. Place a sterile, disposable bag over the body of the Injector if required.

3. Push the green safety ring forward into the 'safe off' position. Now the second safety mechanism is deactivated and the Injector is ready for use.

4. The Injector can be used on all teeth in the same position and angle as with a traditional needle (See recommendations for site selection).

5. Hold the Injector between thumb and index finger to the injection site with medium pressure. Activate and continue to hold in position for two seconds to allow the anaesthetic to be fully absorbed.

6. Unscrew the Ampoule from the Injector. The used Ampoules are disposable as normal domestic waste. Push the green safety ring back into the 'safe' position.

Store the secured and non-reset Injector and its accessories in the INOJEX Bag.

Note that storage of a reset Injector in the Reset Box will shorten the life of the product.

⚠️ CAUTION: For the best patient experience, fully brief the patient on what to expect. For the first treatment, a demonstration using water into a foam 'Smiley Ball' is very effective, especially for children. A 3.2.1 countdown will avoid reflex reactions to the sound.

⚠️ CAUTION: Please consider general contraindication for local anaesthesia. One should not inject with INOJEX over nerve - exits (i.e. N. mentalis). Please follow the same general guidelines when injection in inflamed gingiva/tissue is considered necessary (i.e. antibiotic prophylaxis).
Filling the Ampoule
from cylinder cartridges with the transporter

Preparing the Transporter

1. Turn the green knob of the Transporter until the cylinder cartridge can be placed in the Transporter chamber.

2. Take the cartridge and place it in the Transporter chamber.

3. To make sure the cartridge is firmly in place turn the green knob until the Transporter piston is in slight contact with the rubber seal of the cartridge.

4. Take the Transporter-Adapter out of its sterile packaging. Screw it fully onto the Transporter. During this process the needle of the Adapter must pierce the rubber seal of the cartridge.

To guarantee sterility & eliminate the risk of injuries:
- Avoid any contact with the head of the Ampoule!
- Avoid any contact with openings and needles of the Adapters!

Filling the Ampoule

1. Take an Ampoule out of its sterile packaging and pull the Ampoule plunger about halfway out.

2. Open the lid of the Transporter-Adapter and screw the Ampoule as far as it will go into the Adapter.

3. Turn the green knob of the Transporter until the desired dose of medicine is transferred into the Ampoule – without air bubbles. Unscrew the Ampoule from the Adapter and reseal with the lid.

Tip: Slightly screw back the Transporter knob after the Ampoule is filled, in order to prevent the inner piston of the Transporter from pressing against the rubber seal of the cartridge. This eliminates medication leakage.
Preparing the Injector

1. Put the Injector into the Reset box. Make sure that the green safety ring is in ‘safe’ position.

2. Close the lid of the Reset Box

3. Open the lid of the Reset Box and take out the reset and secured Injector.

Preparing for the injection

1. Unscrew the filled Ampoule from the Adapter and close the lid.

2. Now screw the filled Ampoule as far as it will go into the open end of the Injector. NOTE: As the screw tightens, the first safety mechanism will be deactivated.

3. If required, place a sterile disposable bag over the body of the injector.

4. Push the green safety ring forward into the ‘safe off’ position. Now the second safety mechanism is deactivated and the Injector is ready for use.
Warnings & precautions

- After preparing the Injector for injection do not point the Injector at yourself or other persons (especially the eyes and other sensitive body parts). Accidental release may cause injuries!
- Do not place anything other than the Ampoule into the open end of the Injector.
- Check to see that the sterile packaging of the Ampoule and the Adapter is intact prior to opening. Do not use if packaging is damaged.
- Fill the medication into the Ampoule without air bubbles.
- Avoid any contact with the Ampoule tip before and after filling it with medication to avoid contamination.
- The Adapter needle is sharp. Take care to avoid injury.
- Always hold the Injector perpendicular (90°) to the injection site and press it with medium pressure onto the surface before activating the trigger.
- During the injection, always hold the Injector firmly in position with a medium pressure as injuries can otherwise occur. Do not crease the skin!
- After activation hold the Injector in place for two seconds to allow the anaesthetic to be fully absorbed. If this is not done some anaesthetic may leak out.
- Do not autoclave the Injector. Protect with a sterile plastic bag if required by the procedure. Clean the injector between patients using a sterile antiseptic wipe.
- In the event of loss or malfunction of the INOJEX, you should always have a backup injection method available.
Cleaning & storage

It is important that you keep your INOJEX Injector clean and free from dust and medication residues. Clean the outside of the Injector with a solvent-free cloth.

The Transporter may be cleaned by rinsing it with (warm) water. If soiled (e.g. sticky threads due to medication residues) soak the Transporter in water. For maintaining function, please make sure that all liquid has been removed after cleaning.

The INOJEX30 System and its accessories should be stored between +5°C and +35°C, as malfunctions could otherwise occur. Store the secured and non-reset Injector and its accessories in the INOJEX Bag. Note that storage of the reset Injector in the Reset Box can cause functional damage to the Injector and shorten the life of the product.

**CAUTION:** The Injector and its accessories must not be sterilized. Avoid getting water or cleaning liquid inside the Injector.

**CAUTION:** Do not use the Ampoule and Adapter after the expiry date (see packaging).

Disclaimer & warranty

The INOJEX30 System has been produced with the utmost care and has been delivered in perfect technical condition. The warranty period after the date of purchase for the proper working order of the INOJEX System is in accordance with current legislation.

Should, contrary to expectations and despite careful handling of the INJEX30 System, any material or production related defect occur during the warranty period, we will, at our own discretion, replace products which prove to be defective. In the event of a claim please provide the defective product together with your purchase receipt, your complete contact data and the address of the source of supply.

Please note that we do not assume any liability for damage caused by improper handling of the INJEX30 System and its accessories.