

The insulin injection without a needle. *Virtually painless, tissue preserving and safe.*



INJEX. The soft way to inject.

Especially type 2 diabetics who are worried about changing from oral anti diabetic drugs to insulin injections can now be offered INJEX. The reusable, needle-free injection system provides a solution by making life easier. Patients who have a strong tendency to suffer from scar formation resulting from several needle injections a day can also inject insulin with tissue-preserving INJEX.

Preserve tissue, avoid injuries

INJEX is an easy-to-use, safe injection system for virtually painless, strictly subcutaneous administration of liquid drugs.

An injection ampoule with a micro-orifice of \varnothing 0.18 mm is used instead of the conventional syringe with a needle. The insulin passes as a fine jet through the micro-orifice of the ampoule into the skin in a veritably

tissue-preserving way. The injected liquid spreads homogenously in a cone shape in the subcutaneous fatty tissue in a fraction of a second. The required pressure is produced by a compressed spring in the interior of the device. Depending on the injected volume the depth of penetration is 4 to 9 mm.

Infections resulting from needle-stick injuries are ruled out with INJEX.



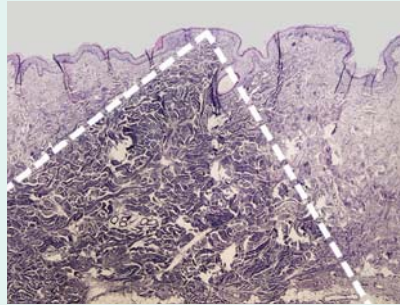
INJEX ○ virtually painless ○ tissue preserving ○ strictly subcutaneous ○ safe

INJEX – needle-free and reusable.

Easy and safe to use.

Using INJEX is extremely simple and does not require any special skills even when the patient is self-injecting:

- The ampoule especially developed for the system is simply filled with the individual choice of insulin.
- Replaceable adapters and a reusable transporter facilitate fast and easy transfer of the insulin from all the usual types of drug containers into the sterile ampoule.
- After the ampoule has been filled, it is screwed in the injector.
- Once prepared, the injector is placed firmly and vertically on the skin at an appropriate site for subcutaneous injection.
- Exert slight pressure on the trigger of the INJEX and the injection is carried out in a fraction of a second. The injector should be held at the injection site for two seconds after the injection has been carried out.
- Trials with this system have shown that the injected drug selects the route of least resistance; this means it does not enter blood vessels, nerve fibres or even osseous tissue. The injection spreads homogenously and in a cone shape in the subcutaneous fatty tissue. (See picture above)¹
- The subsequent disposal of the ampoule is carried out without the risk of injury from unintended needle-sticks. The used ampoule which is manufactured using the high-tech plastic Makrolon® from Bayer can be disposed of as normal domestic waste.
- INJEX is designed for multiple use (at least 7,000 injections).



Cone-shaped spread of injected liquid



It is important to place the injector firmly in a vertical position at the injection site

The benefits at a glance:

- Insulin injection without a needle – virtually painless²
- Veritably tissue preserving¹
- Without risk of injury
- No risk of infection from needle-stick injuries
- Compact and can be used anywhere
- Fast, easy and safe in use and effect³
- Strictly subcutaneous injection¹
- The structural properties of the insulin are preserved⁴
- Individual dosing and mixture of insulins with different periods of effect possible (mixture as recommended by manufacturer)
- Economical
- Can be used with all licensed insulin
- The required units of insulin must not be altered when you change to INJEX

Additional information:

The needle-free, reusable injection system INJEX can be used with a wide range of drugs which have to be administered subcutaneously, e.g. also with local anaesthetics or heparin for thrombosis prophylaxis.

¹ Investigation of Penetration Depth and Histologic Dispersion of dye injected with the INJEX-Jet Injector. Mediport Biotechnik GmbH, Berlin, August 2000

² Blood sugar and insulin kinetics with needle-free insulin injections versus pen injection, Pfohl M.; Ehren M. et al.: Diabetes and Metabolism; 10 th Supplement 1 May 2001, 19-09

³ INJEX Injector Efficacy Study Technical Report 006, Equidyne Systems Inc. San Diego, California, August 1999

⁴ Retention of Structural Potency Characteristics of Insulin, Technical Report 105, Vision Biotechnology Consulting, California, April 2000



If you have queries or suggestions please contact us.