Scheduling Status
S4

Proprietary name and dosage form
Victoza®, solution for injection in a pre-filled pen.

Composition
1 ml contains 6 mg of liraglutide (produced by recombinant DNA technology in *Saccharomyces cerevisiae*) and phenol 0,55 % m/v as the preservative.
Each pre-filled pen contains 3 ml equivalent to 18 mg sodium-free anhydrous liraglutide, a human Glucagon-Like Peptide -1 (GLP-1) analogue.

Other excipients
Disodium phosphate hydrate, propylene glycol, water for injections.

Pharmacological classification
A 21.13 Other hormones

Pharmacological action
Pharmacodynamic properties
Mechanism of action
Liraglutide is a human Glucagon-Like Peptide-1 (GLP-1) analogue with 97 % homology to human GLP-1 that binds to and activates the GLP-1 receptor. The GLP-1 receptor is the target for native GLP-1, an endogenous incretin hormone that potentiates glucose-dependent insulin secretion from the pancreatic beta cells. Unlike native GLP-1, liraglutide has a pharmacokinetic and pharmacodynamic profile in humans, suitable for once daily administration.

Following subcutaneous administration, the protracted action profile is based on three mechanisms: self association, which results in slow absorption, and binding to albumin and enzymatic stability towards the DPP-IV and NEP enzymes resulting in a long plasma half-life.

Liraglutide action is mediated via a specific interaction with GLP-1 receptors, leading to an increase in cAMP. Liraglutide stimulates insulin secretion in a glucose-dependent manner and improves beta-cell function. Simultaneously, liraglutide lowers inappropriately high glucagon secretion, also in a glucose-dependent manner. Thus, when blood glucose is high, insulin secretion is stimulated and glucagon secretion is inhibited. Conversely, during hypoglycaemia liraglutide diminishes insulin secretion and does not impair glucagon secretion. The mechanism of blood glucose lowering also involves a delay in gastric emptying.

Liraglutide reduces body weight and body fat mass through mechanisms involving reduced hunger and lowered energy intake.
Liraglutide has been shown in vitro to be a potent agent for specific stimulation of beta cell proliferation and prevention of both cytokine and free fatty acid induced beta-cell death (apoptosis). In vivo, liraglutide increases insulin biosynthesis, and beta-cell mass in diabetic animal models. When glucose is fully normalised, liraglutide does not increase beta-cell mass.

Pharmacodynamic effects
Liraglutide has 24-hour duration of action and improves glycaemic control by lowering fasting and postprandial blood glucose in patients with type 2 diabetes mellitus.

The difference between liraglutide 1,8 mg/1,2 mg and placebo in reduction of mean fasting glucose was found to be 3,90 mmol/l (70 mg/dl)/3,33 mmol/l (60 mg/dl). Following a standard meal, the difference in mean 2-hour postprandial glucose concentration was 6,02 mmol/l (108 mg/dl)/5,63 mmol/l (101 mg/dl). In addition, liraglutide decreased postprandial glucose excursion (incremental postprandial glucose) on average by 1,1 mmol/l (20 mg/dl)/1,08 mmol/l (19 mg/dl).

Pharmacokinetic properties
Absorption
The absorption of liraglutide following subcutaneous administration is slow, reaching maximum concentration 8 - 12 hours post dosing. Estimated maximum liraglutide concentration was 9,4 nmol/l for a subcutaneous single dose of liraglutide 0,6 mg. At 1,8 mg liraglutide, the average steady state concentration of liraglutide ($AUC_{\tau/24}$) reached approximately 34 nmol/l. Liraglutide exposure increased proportionally with dose. The intra-subject coefficient of variation for liraglutide AUC was 11 % following single dose administration. Liraglutide can be administered subcutaneously in the abdomen, thigh, or upper arm. Absolute bioavailability of liraglutide following subcutaneous administration is approximately 55 %.

Distribution
The apparent volume of distribution after subcutaneous administration is 11 – 17 l. The mean volume of distribution after intravenous administration of liraglutide is 0,07 l/kg. Liraglutide is extensively bound to plasma protein (> 98 %).

Metabolism
During 24 hour following administration of a single [3H]-liraglutide dose to healthy subjects, the major component in plasma was intact liraglutide. Two minor plasma metabolites were detected (≤ 9 % and ≤ 5 % of total plasma radioactivity exposure). Liraglutide is endogenously metabolised in a similar manner to large proteins without a specific organ as major route of elimination.

Elimination
Following a [3H]-liraglutide dose, intact liraglutide was not detected in urine or faeces. Only a minor part of the administered radioactivity was excreted as liraglutide-related metabolites in urine or faeces (6 % and 5 %, respectively). The urine and faeces radioactivity was mainly excreted during the first 6 - 8 days, and corresponded to three minor metabolites, respectively.
The mean clearance following s.c. administration of a single dose liraglutide is approximately 1,2 l/h with an elimination half-life of approximately 13 hours.

Renal impairment
The pharmacokinetics of liraglutide was evaluated in subjects with varying degrees of renal impairment in a single-dose trial. Subjects with mild (estimated creatinine clearance 50 − 80 ml/min) to severe (estimated creatinine clearance < 30 ml/min) renal impairment and subjects with end

stage renal disease requiring dialysis were included in the trial. Renal impairment did not have any clinically relevant effect on the pharmacokinetics of liraglutide.

Special populations
Refer to section on Dosage and directions for use

Indications
Victoza® is indicated as an adjunct to diet and exercise to achieve glycaemic control in patients with type 2 diabetes mellitus. Victoza® is indicated for once-daily administration as:
- monotherapy
- combination therapy with one or more oral antidiabetic medicines (metformin, sulphonylureas or a thiazolidinedione) when previous therapy does not achieve adequate glycaemic control.

Contra-indications
- Hypersensitivity to liraglutide or any of its excipients
- A history of previous pancreatitis
- Type 1 diabetes mellitus
- Pregnancy and lactation (see Pregnancy and lactation)

Warnings and special precautions
Victoza® should not be used in patients with type 1 diabetes mellitus or for the treatment of diabetic ketoacidosis.
Victoza® should not be administered intravenously or intramuscularly.
Victoza® is not a substitute for insulin.
Safety and efficacy of Victoza® in patients below 18 years of age has not been established.
Safety and efficacy of Victoza® in patients with any degree of hepatic impairment has not been established.

Patients above 70 years may experience more gastrointestinal effects when treated with Victoza®.

Patients with mild and moderate renal impairment (creatinine clearance 60 − 90 ml/min and 30 − 59 ml/min, respectively) may experience more gastrointestinal effects when treated with Victoza®.

There is no therapeutic experience in patients with severe renal impairment (creatinine clearance below 30 ml/min). Victoza® is not recommended for use in patients with severe renal impairment including patients with end stage renal disease.

Hypoglycaemia
Patients receiving Victoza® in combination with a sulphonylurea may have an increased risk of hypoglycaemia. The risk of hypoglycaemia can be lowered by a reduction in the dose of sulphonylurea.
There is limited experience in patients with congestive heart failure New York Heart Association (NYHA) class I – II and Victoza® should therefore be used with caution. There is no experience in patients with congestive heart failure NYHA class III – IV and Victoza® is therefore not recommended in these patients.

There is limited experience in patients with inflammatory bowel disease and diabetic gastroparesis and Victoza® is therefore not recommended in these

patients. The use of Victoza® is associated with gastrointestinal adverse reactions, including nausea, vomiting and diarrhoea.

Immunogenicity
Consistent with the potentially immunogenic properties of protein and peptide pharmaceuticals, patients may develop anti-liraglutide antibodies following treatment with Victoza®. On average, 8,6 % of patients developed antibodies. Antibody formation has not been associated with reduced efficacy of Victoza®.

Injection site reactions
Injection site reaction has been reported in approximately 2 % of subjects receiving Victoza® in long-term (26 weeks or longer) controlled trials. These reactions have usually been mild and did not lead to discontinuation of Victoza®.

Acute pancreatitis
The use of Victoza® has been associated with a risk of developing acute pancreatitis. Acute pancreatitis was reported in clinical trials and in marketed use. Patients should be informed of the characteristic symptoms of acute pancreatitis. If pancreatitis is suspected, Victoza® should be discontinued. Once acute pancreatitis is confirmed, Victoza® or any other GLP-1 receptor agonist should never again be restarted. Caution should be exercised in patients with a history of pancreatitis.

Thyroid events
In Victoza® - treated patients, thyroid neoplasms, increased blood calcitonin and goitres have been reported in clinical trials in particular in patients with pre-existing thyroid disease, and Victoza® should be used with caution in these patients.

Allergic reactions
Allergic reactions including urticaria, rash and pruritus have been reported from marketed use of Victoza®. Cases of anaphylactic reactions with additional symptoms such as hypotension, palpitations, dyspnoea, oedema have been reported with marketed use of Victoza® (see Contra-indications).

Increased heart rate
Signs and symptoms of increased heart rate were reported with the use of Victoza®. Mean increase in heart rate from baseline of 2 to 3 beats per minute has been observed with Victoza® in long-term clinical trials. The long term clinical effects of increase in heart rate have not been established.

Dehydration
Signs and symptoms of dehydration, including renal impairment and acute renal failure have been reported in patients treated with Victoza®. Patients treated with Victoza® should be advised of potential risk of dehydration in relation to gastrointestinal side effects and take precaution to avoid fluid depletion.

Effects on ability to drive and use machines
No studies on the effects on the ability to drive and use machines have been performed. Victoza® may affect the ability to drive or use machines. Patients should be advised to ensure that they are aware of the effect of Victoza® on their abilities beforehand and to take precautions to avoid hypoglycaemia

while driving and using machines, in particular when Victoza® is used in combination with a sulphonylurea (see Side Effects).

Interactions

In vitro assessment of interaction studies
Victoza® has shown a low potential involvement in pharmacokinetic interactions with other active substances related to cytochrome P450 (CYP) and plasma protein binding.

In vivo assessment of interaction studies
Interaction has been investigated using paracetamol, digoxin, lisinopril, griseofulvin and atorvastatin representing various degrees of solubility and permeability properties. In addition, the effect of liraglutide on the absorption of ethinyloestradiol and levonorgestrel administered in an oral combination contraceptive medicine has been investigated (see table below).

The minor delay of gastric emptying caused by liraglutide did not affect the absorption of orally administered medicinal products to any clinically relevant degree and therefore no dose adjustment is required. Few patients treated with Victoza® reported at least one episode of severe diarrhoea. Diarrhoea may affect the absorption of concomitant oral medicinal products.

Warfarin and other coumarin derivatives:
No interaction study has been performed. A clinically relevant interaction with active substances with poor solubility or with narrow therapeutic index such as warfarin cannot be excluded. Upon initiation of Victoza® treatment in patients on warfarin or other coumarin derivatives, more frequent monitoring of INR (International Normalised Ratio) is recommended.

Insulin
No pharmacokinetic or pharmacodynamic interactions were observed between Victoza® and insulin detemir when administering a single dose of insulin detemir 0,5 U/kg with Victoza® 1,8 mg at steady state in patients with type 2 diabetes.

Product	Dose	C_{max}	Median t_{max}	Comments
Paracetamol	Single dose of 1000 mg	Decreased by 31 %	Delayed up to 15 min	No dose adjustment for concomitant use of paracetamol is required
Atorvastatin	Single dose of 40 mg	Decreased by 38 %	Delayed from 1 h to 3 h	No dose adjustment of atorvastatin is required when given with Victoza®
Griseofulvin	Single dose of 500 mg	Increased by 37 %	Did not change	Dose adjustments of griseofulvin and other compounds with low solubility and high permeability are not required

Product	Dose	C_{max}	Median t_{max}	Comments
Lisinopril	Single dose of 20 mg	Decreased by 27 %	Delayed from 6 h to 8 h	No adjustment of lisinopril dose is required
Digoxin	Single dose of 1 mg	Decreased by 31 %	Delayed from 1 h to 1,5 h	No adjustment of digoxin dose is required
Oral Contraception:	Single dose		Delayed up to 1,5 h for both compounds	The contraceptive effect is anticipated to be unaffected when co-administered with Victoza®
Ethinyloestradiol		Decreased by 12 %		
Levonorgestrel		Decreased by 13 %		

Pregnancy and lactation

Victoza® is contraindicated during pregnancy and lactation.

Pregnancy

There are no adequate data for use of Victoza® in pregnant women.
Victoza® crossed the placental barrier in rabbits.
Studies in animals have shown reproductive toxicity and Victoza® should therefore not be used during pregnancy. The use of insulin is recommended.
If a patient wishes to become pregnant, or pregnancy occurs, treatment with Victoza® should be discontinued.

Lactation

It is not known whether Victoza® is excreted in human milk.
In lactating rats, up to 3 % of the maternal dose was present in breast milk.
Women on treatment with Victoza® should not breastfeed.

Dosage and directions for use

Monotherapy

Victoza® is administered once daily at any time, independent of meals, and can be injected subcutaneously in the abdomen, in the thigh or in the upper arm. The injection site and timing can be changed without dose adjustment.

To reduce gastro-intestinal adverse effects for all patients, Victoza® should be initiated with a dose of 0,6 mg for at least one week, after which the dose may be increased to 1,2 mg. Based on clinical response and after at least one week the dose can be increased to 1,8 mg to achieve maximum efficacy. Daily doses higher than 1,8 mg are not recommended.

Combination therapy

Victoza® can be added to existing metformin or combined metformin and thiazolidinedione therapy. The current dose of metformin and thiazolidinedione can be continued unchanged.

Victoza® can be added to existing sulphonylurea or combined metformin and sulfonylurea therapy. During clinical trials physicians were advised, at their

discretion, to lower the dose of the sulphonylurea by approximately half to minimize the risk of unacceptable hypoglycaemia.

Self-monitoring of blood glucose is not needed in order to adjust the dose of Victoza®. However, when initiating treatment with Victoza® in combination with a sulphonylurea, blood glucose self-monitoring may become necessary to adjust the dose of the sulphonylurea.

Incompatibilities
Substances added to Victoza® may cause degradation of liraglutide. Victoza® must not be mixed with other medicinal products, e.g. infusion fluids.

Specific patient groups:
Elderly and Gender
No dosage adjustment is required based on age and gender.

Obesity
Population pharmacokinetic analysis suggests that body mass index (BMI) has no significant effect on the pharmacokinetics of liraglutide.

Hepatic impairment
The therapeutic experience in patients with all degrees of hepatic impairment is too limited to recommend the use in patients with mild, moderate or severe hepatic impairment (see Warnings and Special precautions).

Renal impairment
No dose adjustment is required for patients with mild or moderate renal impairment (creatinine clearance between 60 - 90 ml/min and 30 – 59 ml/min respectively).
There is no therapeutic experience in patients with severe renal impairment (creatinine clearance below 30 ml/min).

Victoza® is not recommended for use in patients with severe renal impairment including patients with end-stage renal disease (see Warnings and Special precautions)

Paediatrics
Victoza® has not been studied in paediatric patients below 18 years of age (see Warnings and Special precautions).

Side effects
The most frequently reported adverse events during clinical trials were gastrointestinal adverse events: nausea and diarrhoea (reported by > 10 % of patients) and vomiting, dyspepsia, upper abdominal pain, constipation, gastritis, flatulence, abdominal distension, gastro-oesophageal reflux disease and eructation (reported by ≥ 1 % and ≤ 10 % of patients).
Headache and upper respiratory tract infections were common. Furthermore, hypoglycaemia was common and very common especially when Victoza® is used in combination with sulphonylurea.

Major hypoglycaemia may occur uncommonly and has only been observed when combined with a sulphonylurea.

Tabulated summary of side effects occurring during clinical trials and spontaneous (post-marketing) reports

Body system/ adverse reaction terms	**Frequency of occurrence**				
Reactions	**Very Common (≥ 1/10)**	**Common (≥ 1/100, < 1/10)**	**Uncommon (≥ 1/1000, < 1/100)**	**Rare (≥ 1/10000, < 1/1000)**	**Very Rare (≤1/10000)**
Infections and infestations		Upper respiratory tract infection	Bronchitis Gastroenteritis Osteomyelitis		
Neoplasms benign, malignant and unspecified (incl. cysts and polyps)			Papillary thyroid cancer Prostate cancer Breast cancer		
Blood and the lymphatic system disorders			Thrombocytopenia		
Metabolism and nutrition disorders		Hypoglycaemia Anorexia Decreased appetite	Dehydration*		
Nervous system disorders		Headache	Cerebrovascular accident Syncope		

Body system/ adverse reaction terms	Frequency of occurrence				
Reactions	**Very Common (≥ 1/10)**	**Common (≥ 1/100, < 1/10)**	**Uncommon (≥ 1/1000, < 1/100)**	**Rare (≥ 1/10000, < 1/1000)**	**Very Rare (≤1/10000)**
Eye disorders			Cataract		
Cardiac disorders		Increased heart rate*	Angina pectoris Acute myocardial infarction Coronary artery disease Atrial fibrillation Congestive cardiac failure Supraventricular tachycardia		
Respiratory, thoracic and mediastinal disorders			Pulmonary embolism		
Gastro-intestinal disorders	Nausea Diarrhoea	Vomiting Dyspepsia Abdominal pain upper Constipation Gastritis Flatulence Abdominal distension Gastro-oesophageal reflux disease Eructation	Appendicitis with perforation Inguinal hernia Pancreatitis		Pancreatitis* (including necrotising pancreatitis)
Musculoskeletal, connective tissue and bone disorders			Intervertebral disc protrusion Osteoarthritis		
General disorders and administration site conditions		Fatigue Injection site reactions	Chest pain Malaise*		
Injury, poisoning and procedural complications			Fall		

Body system/ adverse reaction terms	Frequency of occurrence				
Reactions	**Very Common (≥ 1/10)**	**Common (≥ 1/100, < 1/10)**	**Uncommon (≥ 1/1000, < 1/100)**	**Rare (≥ 1/10000, < 1/1000)**	**Very Rare (≤1/10000)**
Immune system disorders				Anaphylactic reaction*	
Hepatobiliary disorders			Cholelithiasis Cholecystitis		
Skin and subcutaneous tissue disorders		Rash*	Urticaria* Pruritus*		
Renal and urinary disorders			Renal failure acute* Renal impairment*		
Investigations		Increased lipase Increased amylase			

**spontaneous reports*

Known symptoms of overdosage and particulars of its treatment

With overdose, the patients reported severe nausea, vomiting and diarrhoea, but recovered without complications. None of the patients reported severe hypoglycaemia.
In the event of overdosage, appropriate supportive treatment should be initiated according to the patient's clinical signs and symptoms.

Identification

Victoza® is a colourless or almost colourless liquid, free from turbidity and essentially free from particulate matter.

Presentation

Pre-filled (multidose, disposable) light blue pen, comprising of a slim pen-shaped injector assembled with a cartridge (3 ml). The cartridge is made of colourless glass (type 1), containing a bromobutyl rubber closure shaped as a plunger and closed with a bromobutyl/ polyisoprene rubber closure.
The pen injector is made of polyolefin and polyacetal.

Each pen contains 3 ml of solution, delivering 30 doses of 0,6 mg, 15 doses of 1,2 mg or 10 doses of 1,8 mg.

Pack sizes of 2 or 3 pens are packed in a cardboard box.

Storage instructions

Store in a refrigerator (2 °C – 8 °C).

Do not store in the freezer or directly adjacent to the refrigerator cooling element.
Do not freeze Victoza® and do not use Victoza® if it has been frozen.
After first use of the Victoza® pen, the product can be stored for 1 month at room temperature (not above 30 °C) or in a refrigerator at (2 °C – 8 °C).

Victoza® should be protected from excessive heat and sunlight.
Always remove the injection needle after each injection and store the Victoza® pen without an injection needle attached. This prevents contamination, infection and leakage. It also ensures that the dosing is accurate.
Recap pen to protect from light.
Keep out of reach and sight of children.

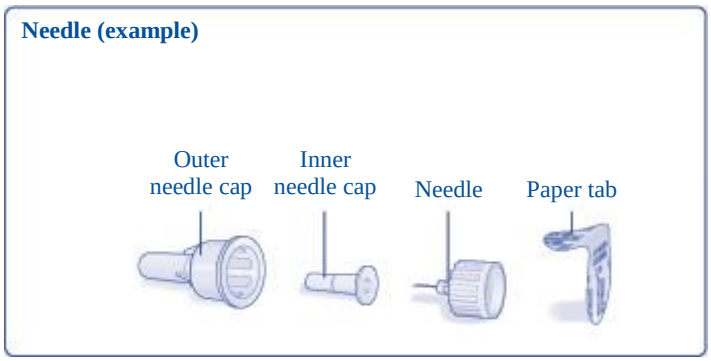
Registration number
43/21.13/0781

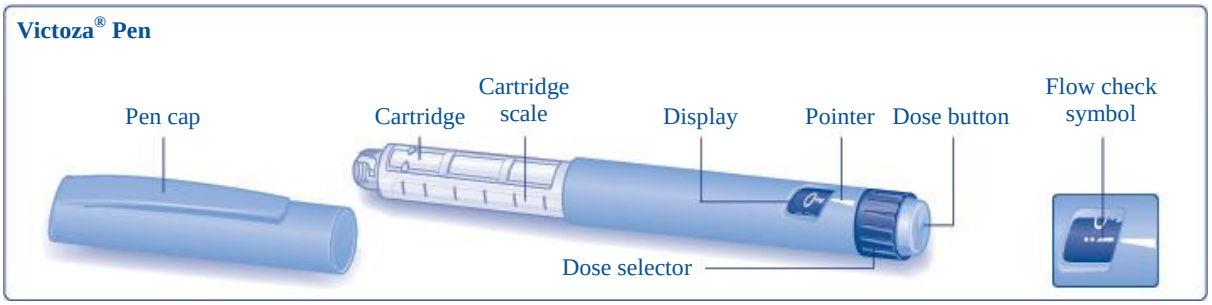
Name and business address of the holder of the certificate of registration
Novo Nordisk (Pty) Ltd
150 Rivonia Road
10 Marion Street Office Park,
Building C1 Sandton,
Johannesburg, 2196

Date of publication of this package insert
The date on the registration of the medicine: 25 November 2011
The date of the most recently revised package insert as approved by Council: 30 September 2016
SR-PINS implementation date: 07 May 2019

Instructions for using the Victoza® pen

Please read these instructions carefully before using your pen.
Your pen comes with 18 mg of liraglutide. You can select doses of 0.6 mg, 1.2 mg and 1.8 mg.
The pen is designed to be used with NovoFine® or NovoTwist® disposable injection needles up to a length of 8 mm and as thin as 32G (0.25/0.23 mm).





Prepare your pen
Check the name and coloured label of your pen to make sure that it contains liraglutide. Using the wrong medicine could cause severe harm.
Pull off the pen cap.

Pull off the paper tab from a new disposable needle. Screw the needle straight and tightly onto your pen.

Pull off the outer needle cap and keep it for later.

Pull off the inner needle cap and dispose of it.

⚠ **Always use a new needle for each injection.** This reduces the risk of contamination, infection, leakage of liraglutide, blocked needles and inaccurate dosing.

⚠ Be careful not to bend or damage the needle.

⚠ Never try to put the inner needle cap back on the needle. You may stick yourself with the needle.

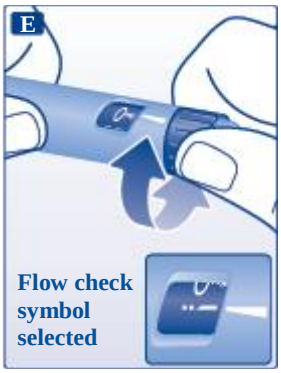
Caring for your pen

- Do not try to repair your pen or pull it apart.
- Keep your pen away from dust, dirt and all kinds of liquids.
- Clean the pen with a cloth moistened with a mild detergent.
- Do not try to wash, soak or lubricate it – this can harm the pen.

⚠ **Important information**

- Do not share your pen or needles with anyone else.
- Keep your pen out of the reach of others, especially children.

With each new pen, check the flow
Check the flow before your first injection with each new pen.
If your pen is already in use, go to 'Select your dose', step H.
Turn the dose selector until the flow check symbol lines up with the pointer.

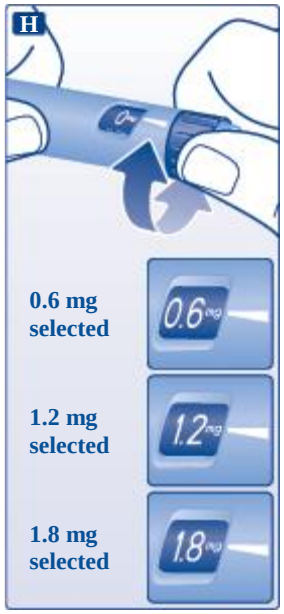


Hold the pen with the needle pointing up. Tap the cartridge gently with your finger a few times. This will make any air bubbles collect at the top of the cartridge.

Keep the needle pointing up and press the dose button until 0 mg lines up with the pointer.
A drop of liraglutide should appear at the needle tip. If no drop appears, repeat steps **E** to **G** up to four times.
If there is still no drop of liraglutide, change the needle and repeat steps **E** to **G** once more.
Do not use the pen if a drop of liraglutide still does not appear. This indicates the pen is defective and you must use a new one.

⚠ If you have dropped your pen against a hard surface or suspect that something is wrong with it, always put on a new disposable needle and check the flow before you inject.

Select your dose
Always check that the pointer lines up with 0 mg.
Turn the dose selector until your needed dose lines up with the pointer (0.6 mg, 1.2 mg or 1.8 mg).
If you selected a wrong dose by mistake, simply change it by turning the dose selector backwards or forwards until the right dose lines up with the pointer.
Be careful not to press the dose button when turning the dose selector backwards, as liraglutide may come out.
If the dose selector stops before your needed dose lines up with the pointer, there is not enough liraglutide left for a full dose. Then you can either:
Split your dose into two injections:
Turn the dose selector in either direction until 0.6 mg or 1.2 mg lines up with the pointer. Inject the dose. Then prepare a new pen for injection and inject the remaining number of mg to complete your dose.
You may only split your dose between your current pen and a new pen if trained or advised by your healthcare professional. Use a calculator to plan the doses. If you split the dose wrong, you may inject too much or too little liraglutide.
Inject the full dose with a new pen:
If the dose selector stops before 0.6 mg lines up with the pointer, prepare a new pen and inject the full dose with the new pen.

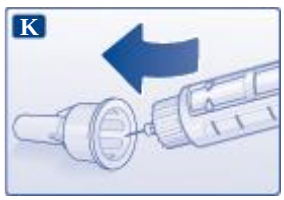


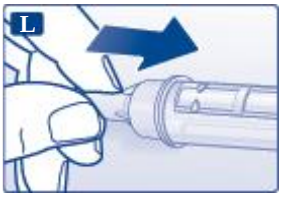
⚠ Do not try to select other doses than 0.6 mg, 1.2 mg or 1.8 mg. The numbers in the display must line up precisely with the pointer to ensure that you get the correct dose.
The dose selector clicks when you turn it. Do not use these clicks to select your dose.
Do not use the cartridge scale to measure how much liraglutide to inject – it is not accurate enough.

Inject your dose
Insert the needle into your skin using the injection technique shown by your doctor or nurse. Then follow the instructions below:
Press the dose button to inject until 0 mg lines up with the pointer.
Be careful not to touch the display with your other fingers or press the dose selector sideways when you inject. This is because it may block the injection.
Keep the dose button pressed down and leave the needle under the skin for at least 6 seconds. This is to make sure that you get your full dose.

Pull out the needle.
After that, you may see a drop liraglutide at the needle tip.
This is normal and does not affect your dose.

Guide the needle tip into the outer needle cap without touching the needle or the outer needle cap.



When the needle is covered, carefully push the outer needle cap completely on. Then unscrew the needle. Dispose of it carefully and put the pen cap back on. When the pen is empty, carefully dispose of it without a needle attached. Please dispose of the pen and needle in accordance with local requirements.	
⚠ **Always remove the needle after each injection,** and store your pen without a needle attached. ⚠ This reduces the risk of contamination, infection, leakage of liraglutide, blocked needles and inaccurate dosing. ⚠ Caregivers must **be very careful when handling used needles** – to prevent needle injury and cross-infection.	