ANNEX I

SUMMARY OF PRODUCT CHARACTERISTICS

1. NAME OF THE MEDICINAL PRODUCT

Saxenda 6 mg/ml solution for injection in pre-filled pen

2. QUALITATIVE AND QUANTITATIVE COMPOSITION

1 ml of solution contains 6 mg of liraglutide*. One pre-filled pen contains 18 mg liraglutide in 3 ml.

*human glucagon-like peptide-1 (GLP-1) analogue produced by recombinant DNA technology in *Saccharomyces cerevisiae*.

For the full list of excipients, see section 6.1.

3. PHARMACEUTICAL FORM

Solution for injection.

Clear and colourless or almost colourless, isotonic solution; pH=8.15.

4. CLINICAL PARTICULARS

4.1 Therapeutic indications

Adults

Saxenda is indicated as an adjunct to a reduced-calorie diet and increased physical activity for weight management in adult patients with an initial Body Mass Index (BMI) of:

- ≥ 30 kg/m² (obesity), or
- ≥ 27 kg/m² to <30 kg/m² (overweight) in the presence of at least one weight-related comorbidity such as dysglycaemia (prediabetes or type 2 diabetes mellitus), hypertension, dyslipidaemia or obstructive sleep apnoea.

Treatment with Saxenda should be discontinued after 12 weeks on the 3.0 mg/day dose if patients have not lost at least 5% of their initial body weight.

Adolescents (≥ 12 years)

Saxenda can be used as an adjunct to a healthy nutrition and increased physical activity for weight management in adolescent patients from the age of 12 years and above with:

- obesity (BMI corresponding to ≥ 30 kg/m^2 for adults by international cut-off points)* and
- body weight above 60 kg.

Treatment with Saxenda should be discontinued and re-evaluated if patients have not lost at least 4% of their BMI or BMI z score after 12 weeks on the 3.0 mg/day or maximum tolerated dose.

*IOTF BMI cut-off points for obesity by sex between 12-18 years (see table 1), in accordance with study design of the Trial 4180, see section 5.1.

Table 1 IOTF BMI cut-off points for obesity by sex between 12–18 years

Age (years)	**BMI corresponding to 30 kg/m^2 for adults by international cut-off points.**	
	Males	**Females**
12	26.02	26.67
12.5	26.43	27.24
13	26.84	27.76
13.5	27.25	28.20
14	27.63	28.57
14.5	27.98	28.87
15	28.30	29.11
15.5	28.60	29.29
16	28.88	29.43
16.5	29.14	29.56
17	29.41	29.69
17.5	29.70	29.84
18	30.00	30.00

Children (6 to <12 years)

Saxenda is indicated as an adjunct to healthy nutrition and increased physical activity for weight management in children from the age of 6 to <12 years with

- obesity (BMI ≥95th percentile)* and
- body weight ≥45 kg

Treatment with Saxenda should be discontinued and re-evaluated if patients have not lost at least 4% of their BMI or BMI z score after 12 weeks on the 3.0 mg/day or maximum tolerated dose.

*CDC BMI cut-off points for obesity (≥95th percentile) by sex between 6 to <12 years (see table 2), in accordance with study design of the Trial 4392, see section 5.1.

Table 2 Cut-off points for BMI (Weight in kg/Height in m2) for obesity (≥95th percentile) by sex for children from 6 and < 12 years of age

Age (Years)	**Obesity BMI ≥ 95th percentile**	
	Males	**Females**
6	18.41	18.84
6.5	18.76	19.23
7	19.15	19.68
7.5	19.59	20.17
8	20.07	20.70
8.5	20.57	21.25
9	21.09	21.82
9.5	21.62	22.40
10	22.15	22.98
10.5	22.69	23.57
11	23.21	24.14

Age (Years)	Obesity BMI ≥ 95th percentile	
	Males	**Females**
11.5	23.73	24.71

4.2 Posology and method of administration

Posology

Adults
The starting dose is 0.6 mg once daily. The dose should be increased to 3.0 mg once daily in increments of 0.6 mg with at least one-week intervals to improve gastro-intestinal tolerability (see table 3). If escalation to the next dose step is not tolerated for two consecutive weeks, consider discontinuing treatment. Daily doses higher than 3.0 mg are not recommended.

Table 3 Dose escalation schedule

	Dose	**Weeks**
Dose escalation 4 weeks	**0.6 mg**	**1**
	1.2 mg	**1**
	1.8 mg	**1**
	2.4 mg	**1**
Maintenance dose	**3.0 mg**	

Adolescents (≥ 12 years)

For adolescents from the age of 12 to below 18 years old a similar dose escalation schedule as for adults should be applied (see table 3). The dose should be increased until 3.0 mg (maintenance dose) or maximum tolerated dose has been reached. Daily doses higher than 3.0 mg are not recommended.

Children (6 to <12 years)

For children from the age of 6 to below 12 years old a similar dose escalation schedule as for adults should be applied (see table 3). The dose should be increased until 3.0 mg (maintenance dose) or maximum tolerated dose has been reached. Daily doses higher than 3.0 mg are not recommended. Liraglutide in children should be initiated by a physician experienced in the management of obesity in children.

Missed doses
If a dose is missed within 12 hours from when it is usually taken, the patient should take the dose as soon as possible. If there is less than 12 hours to the next dose, the patient should not take the missed dose and resume the once-daily regimen with the next scheduled dose. An extra dose or increase in dose should not be taken to make up for the missed dose.

Patients with type 2 diabetes mellitus
Saxenda should not be used in combination with another GLP-1 receptor agonist.

When initiating Saxenda, it should be considered to reduce the dose of concomitantly administered insulin or insulin secretagogues (such as sulfonylureas) to reduce the risk of hypoglycaemia. Blood glucose self-monitoring is necessary to adjust the dose of insulin or insulin-secretagogues (see section 4.4).

Special populations
Elderly (≥ 65 years old)
No dose adjustment is required based on age. Therapeutic experience in patients ≥ 75 years of age is limited and use in these patients is not recommended (see sections 4.4 and 5.2).

Renal impairment
No dose adjustment is required for patients with mild or moderate renal impairment (creatinine clearance ≥ 30 ml/min). Saxenda is not recommended for use in patients with severe renal impairment (creatinine clearance < 30 ml/min) including patients with end-stage renal disease (see sections 4.4, 4.8 and 5.2).

Hepatic impairment
No dose adjustment is recommended for patients with mild or moderate hepatic impairment. Saxenda is not recommended for use in patients with severe hepatic impairment and should be used cautiously in patients with mild or moderate hepatic impairment (see sections 4.4 and 5.2).

Paediatric population
No dose adjustment is required for adolescents and children from the age of 6 years and above.
The safety and efficacy of Saxenda in children below 6 years of age has not been established (see section 5.1).

Method of administration

Saxenda is for subcutaneous use only. It must not be administered intravenously or intramuscularly.

Saxenda is administered once daily at any time, independent of meals. It should be injected in the abdomen, thigh or upper arm. The injection site and timing can be changed without dose adjustment. However, it is preferable that Saxenda is injected around the same time of the day, when the most convenient time of the day has been chosen. Injection sites should always be rotated to reduce the risk of injection site amyloid deposits (see section and 4.8).

For further instructions on administration, see section 6.6.

4.3 Contraindications

Hypersensitivity to liraglutide or to any of the excipients listed in section 6.1.

4.4 Special warnings and precautions for us

Aspiration in association with general anaesthesia or deep sedation

Cases of pulmonary aspiration have been reported in patients receiving GLP-1 receptor agonists undergoing general anaesthesia or deep sedation. Therefore, the increased risk of residual gastric content due to delayed gastric emptying (see section 4.8) should be considered prior to performing procedures with general anaesthesia or deep sedation.

Traceability

In order to improve the traceability of biological medicinal products, the name and the batch number of the administered product should be clearly recorded.

Patients with heart failure

There is no clinical experience in patients with congestive heart failure New York Heart Association (NYHA) class IV, and liraglutide is therefore not recommended for use in these patients.

Special populations

The safety and efficacy of liraglutide for weight management have not been established in patients:
– aged 75 years or more,
– treated with other products for weight management,

– with obesity secondary to endocrinological or eating disorders or to treatment with medicinal products that may cause weight gain,
– with severe renal impairment,
– with severe hepatic impairment.

Use in these patients is not recommended (see section 4.2).
As liraglutide for weight management was not investigated in subjects with mild or moderate hepatic impairment, it should be used with caution in these patients (see sections 4.2 and 5.2).

There is limited experience in patients with inflammatory bowel disease and diabetic gastroparesis. Use of liraglutide is not recommended in these patients since it is associated with transient gastrointestinal adverse reactions, including nausea, vomiting and diarrhoea.

Pancreatitis

Acute pancreatitis has been observed with the use of GLP-1 receptor agonists. Patients should be informed of the characteristic symptoms of acute pancreatitis. If pancreatitis is suspected, liraglutide should be discontinued; if acute pancreatitis is confirmed, liraglutide should not be restarted.

Cholelithiasis and cholecystitis

In clinical trials for weight management, a higher rate of cholelithiasis and cholecystitis was observed in patients treated with liraglutide than in patients on placebo. The fact that substantial weight loss can increase the risk of cholelithiasis and thereby cholecystitis only partially explained the higher rate with liraglutide. Cholelithiasis and cholecystitis may lead to hospitalisation and cholecystectomy. Patients should be informed of the characteristic symptoms of cholelithiasis and cholecystitis.

Thyroid disease

In clinical trials in type 2 diabetes, thyroid adverse events, such as goitre, have been reported in particular in patients with pre-existing thyroid disease. Liraglutide should therefore be used with caution in patients with thyroid disease.

Heart rate

An increase in heart rate was observed with liraglutide in clinical trials (see section 5.1). Heart rate should be monitored at regular intervals consistent with usual clinical practice. Patients should be informed of the symptoms of increased heart rate (palpitations or feelings of a racing heartbeat while at rest). For patients who experience a clinically relevant sustained increase in resting heart rate, treatment with liraglutide should be discontinued.

Dehydration

Signs and symptoms of dehydration, including renal impairment and acute renal failure, have been reported in patients treated with GLP-1 receptor agonists. Patients treated with liraglutide should be advised of the potential risk of dehydration in relation to gastrointestinal side effects and take precautions to avoid fluid depletion.

Hypoglycaemia in patients with type 2 diabetes mellitus

Patients with type 2 diabetes mellitus receiving liraglutide in combination with insulin and/or sulfonylurea may have an increased risk of hypoglycaemia. The risk of hypoglycaemia may be lowered by a reduction in the dose of insulin and/or sulfonylurea.

Paediatric population

Episodes of clinically significant hypoglycaemia have been reported in adolescents (≥ 12 years) treated with liraglutide. Patients should be informed about the characteristic symptoms of hypoglycaemia and the appropriate actions.

Hyperglycaemia in insulin treated patients with diabetes mellitus

In patients with diabetes mellitus Saxenda must not be used as a substitute for insulin. Diabetic ketoacidosis has been reported in insulin-dependent patients after rapid discontinuation or dose reduction of insulin (see section 4.2).

Excipients

Saxenda contains less than 1 mmol sodium (23 mg) per dose, therefore the medicinal product is essentially 'sodium-free'.

4.5 Interaction with other medicinal products and other forms of interaction

In vitro, liraglutide has shown very low potential to be involved in pharmacokinetic interactions with other active substances related to cytochrome P450 (CYP) and plasma protein binding.

The small delay of gastric emptying with liraglutide may influence absorption of concomitantly administered oral medicinal products. Interaction studies did not show any clinically relevant delay of absorption and therefore no dose adjustment is required.

Interaction studies have been performed with 1.8 mg liraglutide. The effect on rate of gastric emptying was equivalent between liraglutide 1.8 mg and 3.0 mg, (paracetamol $AUC_{0\text{-}300\ min}$). Few patients treated with liraglutide 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 narrow therapeutic index such as warfarin cannot be excluded. Upon initiation of liraglutide treatment in patients on warfarin or other coumarin derivatives, more frequent monitoring of International Normalised Ratio (INR) is recommended.

Paracetamol (Acetaminophen)

Liraglutide did not change the overall exposure of paracetamol following a single dose of 1 000 mg. Paracetamol C_{max} was decreased by 31% and median t_{max} was delayed up to 15 min. No dose adjustment for concomitant use of paracetamol is required.

Atorvastatin

Liraglutide did not change the overall exposure of atorvastatin following single dose administration of atorvastatin 40 mg. Therefore, no dose adjustment of atorvastatin is required when given with liraglutide. Atorvastatin C_{max} was decreased by 38% and median t_{max} was delayed from 1 h to 3 h with liraglutide.

Griseofulvin

Liraglutide did not change the overall exposure of griseofulvin following administration of a single dose of griseofulvin 500 mg. Griseofulvin C_{max} increased by 37% while median t_{max} did not change. Dose adjustments of griseofulvin and other compounds with low solubility and high permeability are not required.

Digoxin

A single dose administration of digoxin 1 mg with liraglutide resulted in a reduction of digoxin AUC by 16%; C_{max} decreased by 31%. Digoxin median t_{max} was delayed from 1 h to 1.5 h. No dose adjustment of digoxin is required based on these results.

Lisinopril

A single dose administration of lisinopril 20 mg with liraglutide resulted in a reduction of lisinopril AUC by 15%; C_{max} decreased by 27%. Lisinopril median t_{max} was delayed from 6 h to 8 h with liraglutide. No dose adjustment of lisinopril is required based on these results.

Oral contraceptives

Liraglutide lowered ethinylestradiol and levonorgestrel C_{max} by 12% and 13%, respectively, following administration of a single dose of an oral contraceptive product. t_{max} was delayed by 1.5 h with liraglutide for both compounds. There was no clinically relevant effect on the overall exposure of either ethinylestradiol or levonorgestrel. The contraceptive effect is therefore anticipated to be unaffected when co-administered with liraglutide.

Paediatric population

Interaction studies have only been performed in adults.

4.6 Fertility, pregnancy and lactation

Pregnancy

There are limited data from the use of liraglutide in pregnant women. Studies in animals have shown reproductive toxicity (see section 5.3). The potential risk for humans is unknown.

Liraglutide should not be used during pregnancy. If a patient wishes to become pregnant or pregnancy occurs, treatment with liraglutide should be discontinued.

Breast-feeding

It is not known whether liraglutide is excreted in human milk. Animal studies have shown that the transfer of liraglutide and metabolites of close structural relationship into milk is low. Non-clinical studies have shown a treatment-related reduction of neonatal growth in suckling rat pups (see section 5.3). Because of lack of experience, Saxenda should not be used during breast-feeding.

Fertility

Apart from a slight decrease in the number of live implants, animal studies did not indicate harmful effects with respect to fertility (see section 5.3).

4.7 Effects on ability to drive and use machines

Saxenda has no or negligible influence on the ability to drive and use machines. However, dizziness can be experienced mainly during the first 3 months of treatment with Saxenda. Driving or use of machines should be exercised with caution if dizziness occurs.

4.8 Undesirable effects

Summary of the safety profile:

Saxenda was evaluated for safety in 5 double-blind, placebo-controlled trials that enrolled 5 813 adult patients with overweight or obesity with at least one weight-related comorbidity. Overall, gastrointestinal reactions were the most frequently reported adverse reactions during treatment (67.9%) (see section 'Description of selected adverse reactions').

Tabulated list of adverse reactions

Table 4 lists adverse reactions reported in adults. Adverse reactions are listed by system organ class and frequency. Frequency categories are defined as: very common (≥ 1/10); common (≥ 1/100 to < 1/10); uncommon (≥ 1/1 000 to < 1/100); rare (≥ 1/10 000 to <1/1 000); very rare (< 1/10 000). and not known (cannot be estimated from the available data). Within each frequency grouping, adverse reactions are presented in order of decreasing seriousness.

Table 4 Adverse reactions reported in adults

MedDRA system organ classes	Very common	Common	Uncommon	Rare	Not known
Immune system disorders				Anaphylactic reaction	
Metabolism and nutrition disorders		Hypoglycaemia*	Dehydration		
Psychiatric disorders		Insomnia**			
Nervous system disorders	Headache	Dizziness Dysgeusia			
Cardiac disorders			Tachycardia		
Gastrointestinal disorders	Nausea Vomiting Diarrhoea Constipation	Dry mouth Dyspepsia Gastritis Gastro-oesophageal reflux disease Abdominal pain upper Flatulence Eructation Abdominal distension	Pancreatitis*** Delayed gastric emptying****		Intestinal obstruction†
Hepatobiliary disorders		Cholelithiasis***	Cholecystitis***		
Skin and subcutaneous tissue disorders		Rash	Urticaria		Cutaneous amyloidosis
Renal and urinary disorders				Acute renal failure Renal impairment	
General disorders and administration site conditions		Injection site reactions Asthenia Fatigue	Malaise		
Investigations		Increased lipase Increased amylase			

*Hypoglycaemia (based on self-reported symptoms by patients and not confirmed by blood glucose measurements) reported in patients without type 2 diabetes mellitus treated with Saxenda in combination with diet and exercise. Please see section 'Description of selected adverse reactions' for further information.

**Insomnia was mainly seen during the first 3 months of treatment.

***See section 4.4.

****From controlled phase 2, 3a and 3b clinical trials.

†ADR from post marketing sources.

Description of selected adverse reactions

Hypoglycaemia in patients without type 2 diabetes mellitus
In clinical trials in overweight or obese patients without type 2 diabetes mellitus treated with Saxenda in combination with diet and exercise, no severe hypoglycaemic events (requiring third party assistance) were reported. Symptoms of hypoglycaemic events were reported by 1.6% of patients treated with Saxenda and 1.1% of patients treated with placebo; however, these events were not confirmed by blood glucose measurements. The majority of events were mild.

Hypoglycaemia in patients with type 2 diabetes mellitus
In a clinical trial in overweight or obese patients with type 2 diabetes mellitus treated with Saxenda in combination with diet and exercise, severe hypoglycaemia (requiring third party assistance) was reported by 0.7% of patients treated with Saxenda and only in patients concomitantly treated with sulfonylurea. Also, in these patients documented symptomatic hypoglycaemia was reported by 43.6% of patients treated with Saxenda and in 27.3% of patients treated with placebo. Among patients not concomitantly treated with sulfonylurea, 15.7% of patients treated with Saxenda and 7.6% of patients treated with placebo reported documented symptomatic hypoglycaemic events (defined as plasma glucose ≤ 3.9 mmol/L accompanied by symptoms).

Hypoglycaemia in patients with type 2 diabetes mellitus treated with insulin
In a clinical trial in overweight or obese patients with type 2 diabetes mellitus treated with insulin and liraglutide 3.0 mg/day in combination with diet and exercise and up to 2 OADs, severe hypoglycaemia (requiring third party assistance) was reported by 1.5% of patients treated with liraglutide 3.0 mg/day. In this trial, documented symptomatic hypoglycaemia (defined as plasma glucose ≤ 3.9 mmol/L accompanied by symptoms) was reported by 47.2% of patients treated with liraglutide 3.0 mg/day and by 51.8% of patients treated with placebo. Among patients concomitantly treated with sulfonylurea, 60.9% of patients treated with liraglutide 3.0 mg/day and 60.0% of patients treated with placebo reported documented symptomatic hypoglycaemic events.

Gastrointestinal adverse reactions
Most episodes of gastrointestinal events were mild to moderate, transient and the majority did not lead to discontinuation of therapy. The reactions usually occurred during the first weeks of treatment and diminished within a few days or weeks on continued treatment.

Patients ≥ 65 years of age may experience more gastrointestinal effects when treated with Saxenda.

Patients with mild or moderate renal impairment (creatinine clearance ≥ 30 ml/min) may experience more gastrointestinal effects when treated with Saxenda.

Acute renal failure
In patients treated with GLP-1 receptor agonists, there have been reports of acute renal failure. A majority of the reported events occurred in patients who had experienced nausea, vomiting or diarrhoea leading to volume depletion (see section 4.4).

Allergic reactions
Few cases of anaphylactic reactions with symptoms such as hypotension, palpitations, dyspnoea and oedema have been reported with marketed use of liraglutide. Anaphylactic reactions may potentially be life threatening. If an anaphylactic reaction is suspected, liraglutide should be discontinued and treatment should not be restarted (see section 4.3).

Injection site reactions
Injection site reactions have been reported in patients treated with Saxenda. These reactions were usually mild and transitory and the majority disappeared during continued treatment.

Tachycardia
In clinical trials, tachycardia was reported in 0.6% of patients treated with Saxenda and in 0.1% of patients treated with placebo. The majority of events were mild or moderate. Events were isolated and the majority resolved during continued treatment with Saxenda.

Cutaneous amyloidosis
Cutaneous amyloidosis may occur at the injection site (see section 4.2).

Paediatric population

In a clinical trial conducted in adolescents of 12 years to less than 18 years with obesity, 125 patients were exposed to Saxenda for 56 weeks.
Overall, the frequency, type and severity of adverse reactions in the adolescents with obesity were comparable to that observed in the adult population. Vomiting occurred with a 2-fold higher frequency in adolescents compared to adults.
The percentage of patients reporting at least one episode of clinically significant hypoglycaemia was higher with liraglutide (1.6%) compared to placebo (0.8%). No severe hypoglycaemic episodes occurred in the trial.

In a clinical trial conducted in children of 6 to less than 12 years with obesity (Trial 4392), 56 patients were exposed to Saxenda for 56 weeks.

Overall, the frequency, type and severity of adverse reactions in the children with obesity were comparable to that observed in the adolescent and adult population.

Children reported more GI events in both liraglutide and placebo groups compared to adolescents and adults, with a 2-fold increase in vomiting observed in children compared to adolescents.

Reporting of suspected adverse reactions

Reporting suspected adverse reactions after authorisation of the medicinal product is important. It allows continued monitoring of the benefit/risk balance of the medicinal product. Healthcare professionals are asked to report any suspected adverse reactions via the national reporting system listed in Appendix V.

4.9 Overdose

From clinical trials and post-marketing use of liraglutide overdoses have been reported up to 72 mg (24 times the recommended dose for weight management). Events reported included severe nausea, severe vomiting and severe hypoglycaemia.

In the event of overdose, appropriate supportive treatment should be initiated according to the patient's clinical signs and symptoms. The patient should be observed for clinical signs of dehydration and blood glucose should be monitored.

5. PHARMACOLOGICAL PROPERTIES

5.1 Pharmacodynamic properties

Pharmacotherapeutic group: Drugs used in diabetes, glucagon-like peptide-1 (GLP-1) analogues.
ATC code: A10BJ02

Mechanism of action

Liraglutide is an acylated human glucagon-like peptide-1 (GLP-1) analogue with 97% amino acid sequence homology to endogenous human GLP-1. Liraglutide binds to and activates the GLP-1 receptor (GLP-1R).

GLP-1 is a physiological regulator of appetite and food intake, but the exact mechanism of action is not entirely clear. In animal studies, peripheral administration of liraglutide led to uptake in specific brain regions involved in regulation of appetite, where liraglutide, via specific activation of the GLP-1R, increased key satiety and decreased key hunger signals, thereby leading to lower body weight.

GLP-1 receptors are also expressed in specific locations in the heart, vasculature, immune system and kidneys. In mouse models of atherosclerosis, liraglutide prevented aortic plaque progression and reduced inflammation in the plaque. In addition, liraglutide had a beneficial effect on plasma lipids. Liraglutide did not reduce the plaque size of already established plaques.

Pharmacodynamic effects

Liraglutide lowers body weight in humans mainly through loss of fat mass with relative reductions in visceral fat being greater than for subcutaneous fat loss. Liraglutide regulates appetite by increasing feelings of fullness and satiety, while lowering feelings of hunger and prospective food consumption, thereby leading to reduced food intake. Liraglutide does not increase energy expenditure compared to placebo.

Liraglutide stimulates insulin secretion and lowers glucagon secretion in a glucose-dependent manner which results in a lowering of fasting and post-prandial glucose. The glucose-lowering effect is more pronounced in patients with prediabetes and diabetes compared to patients with normoglycaemia. Clinical trials suggest that liraglutide improves and sustains beta-cell function, according to HOMA-B and the proinsulin-to-insulin ratio.

Clinical efficacy and safety

The efficacy and safety of liraglutide for weight management in conjunction with reduced calorie intake and increased physical activity were studied in four phase 3 randomised, double-blind, placebo-controlled trials which included a total of 5 358 adult patients.

- **Trial 1 (SCALE Obesity & Pre-Diabetes - 1839):** A total of 3 731 patients with obesity (BMI $\geq$ 30 kg/m²) or with overweight (BMI $\geq$ 27 kg/m²) with dyslipidaemia and/or hypertension were stratified according to prediabetes status at screening and BMI at baseline ($\geq$ 30 kg/m² or < 30 kg/m²). All 3 731 patients were randomised to 56 weeks of treatment and the 2 254 patients with prediabetes at screening were randomised to 160 weeks of treatment. Both treatment periods were followed by a 12-week off drug/placebo observational follow-up period. Lifestyle intervention in the form of an energy-restricted diet and exercise counselling was background therapy for all patients.
  The 56-week part of trial 1 assessed body weight loss in all the 3 731 randomised patients (2 590 completers).
  The 160-week part of trial 1 assessed time to onset of type 2 diabetes in the 2 254 randomised patients with prediabetes (1 128 completers).
- **Trial 2 (SCALE Diabetes - 1922):** A 56-week trial assessing body weight loss in 846 randomised (628 completers) obese and overweight patients with insufficiently controlled type

2 diabetes mellitus (HbA_{1c} range 7-10%). The background treatment at trial start was either diet and exercise alone, metformin, a sulfonylurea, a glitazone as single agents or any combination hereof.

- **Trial 3 (SCALE Sleep Apnoea - 3970):** A 32-week trial assessing sleep apnoea severity and body weight loss in 359 randomised (276 completers) obese patients with moderate or severe obstructive sleep apnoea.
- **Trial 4 (SCALE Maintenance - 1923):** A 56-week trial assessing body weight maintenance and weight loss in 422 randomised (305 completers) obese and overweight patients with hypertension or dyslipidaemia after a preceding weight loss of ≥ 5% induced by a low-calorie diet.

Body weight
Superior weight loss was achieved with liraglutide compared to placebo in obese/overweight patients in all groups studied. Across the trial populations, greater proportions of the patients achieved ≥ 5% and > 10% weight loss with liraglutide than with placebo (tables 5-7). In the 160-weeks part of trial 1, the weight loss occurred mainly in the first year and was sustained throughout 160 weeks. In trial 4, more patients maintained the weight loss achieved prior to treatment initiation with liraglutide than with placebo (81.4% and 48.9%, respectively). Specific data on weight loss, responders, time course and cumulative distribution of weight change (%) for trials 1-4 are presented in tables 5-9 and figures 1, 2 and 3.

Weight loss response after 12 weeks with liraglutide (3.0 mg) treatment
Early responders were defined as patients who achieved ≥ 5% weight loss after 12 weeks on treatment dose of liraglutide (4 weeks of dose escalation and 12 weeks on treatment dose). In the 56-week part of trial 1, 67.5% achieved ≥ 5% weight loss after 12 weeks. In trial 2, 50.4% achieved ≥ 5% weight loss after 12 weeks. With continued treatment with liraglutide, 86.2% of these early responders are predicted to achieve a weight loss of ≥ 5% and 51% are predicted to achieve a weight loss of ≥ 10% after 1 year of treatment. The predicted mean weight loss in early responders who complete 1 year of treatment is 11.2% of their baseline body weight (9.7% for males and 11.6% for females). For patients who have achieved a weight loss of < 5% after 12 weeks on treatment dose of liraglutide, the proportion of patients not reaching a weight loss of ≥ 10% after 1 year is 93.4%.

Glycaemic control
Treatment with liraglutide significantly improved glycaemic parameters across sub-populations with normoglycaemia, prediabetes and type 2 diabetes mellitus. In the 56-week part of trial 1, fewer patients treated with liraglutide had developed type 2 diabetes mellitus compared to patients treated with placebo (0.2% vs. 1.1%). More patients with prediabetes at baseline had reversed their prediabetes compared to patients treated with placebo (69.2% vs. 32.7%). In the 160-week part of trial 1, the primary efficacy endpoint was the proportion of patients with onset of type 2 diabetes mellitus evaluated as time to onset. At week 160, while on treatment, 3% treated with Saxenda and 11% treated with placebo were diagnosed with type 2 diabetes mellitus. The estimated time to onset of type 2 diabetes mellitus for patients treated with liraglutide 3.0 mg was 2.7 times longer (with a 95% confidence interval of [1.9, 3.9]), and the hazard ratio for risk of developing type 2 diabetes mellitus was 0.2 for liraglutide versus placebo.

Cardiometabolic risk factors
Treatment with liraglutide significantly improved systolic blood pressure and waist circumference compared with placebo (tables 5, 6 and 7).

Apnoea-Hypopnoea Index (AHI)
Treatment with liraglutide significantly reduced the severity of obstructive sleep apnoea as assessed by change from baseline in the AHI compared with placebo (table 8).

Table 5 Trial 1: Changes from baseline in body weight, glycaemia and cardiometabolic parameters at week 56

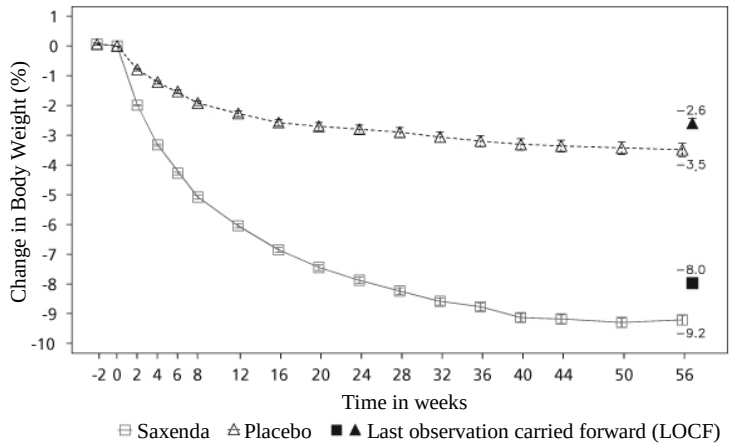
	Saxenda (N=2437)		Placebo (N=1225)		Saxenda vs. placebo
Body weight					
Baseline, kg (SD)	106.3 (21.2)		106.3 (21.7)		-
Mean change at week 56, % (95% CI)	-8.0		-2.6		-5.4** (-5.8; -5.0)
Mean change at week 56, kg (95% CI)	-8.4		-2.8		-5.6** (-6.0; -5.1)
Proportion of patients losing ≥ 5% body weight at week 56, % (95% CI)	63.5		26.6		4.8** (4.1; 5.6)
Proportion of patients losing > 10% body weight at week 56, % (95% CI)	32.8		10.1		4.3** (3.5; 5.3)
Glycaemia and cardiometabolic factors	Baseline	Change	Baseline	Change	
HbA_{1c}, %	5.6	-0.3	5.6	-0.1	-0.23** (-0.25; -0.21)
FPG, mmol/L	5.3	-0.4	5.3	-0.01	-0.38** (-0.42; -0.35)
Systolic blood pressure, mmHg	123.0	-4.3	123.3	-1.5	-2.8** (-3.6; -2.1)
Diastolic blood pressure, mmHg	78.7	-2.7	78.9	-1.8	-0.9* (-1.4; -0.4)
Waist circumference, cm	115.0	-8.2	114.5	-4.0	-4.2** (-4.7; -3.7)

Full Analysis Set. For body weight, HbA_{1c}, FPG, blood pressure and waist circumference, baseline values are means, changes from baseline at week 56 are estimated means (least-squares) and treatment contrasts at week 56 are estimated treatment differences. For the proportions of patients losing ≥ 5/> 10% body weight, estimated odds ratios are presented. Missing post-baseline values were imputed using the last observation carried forward. * p< 0.05. ** p< 0.0001. CI=confidence interval. FPG=fasting plasma glucose. SD=standard deviation.

Table 6 Trial 1: Changes from baseline in body weight, glycaemia and cardiometabolic parameters at week 160

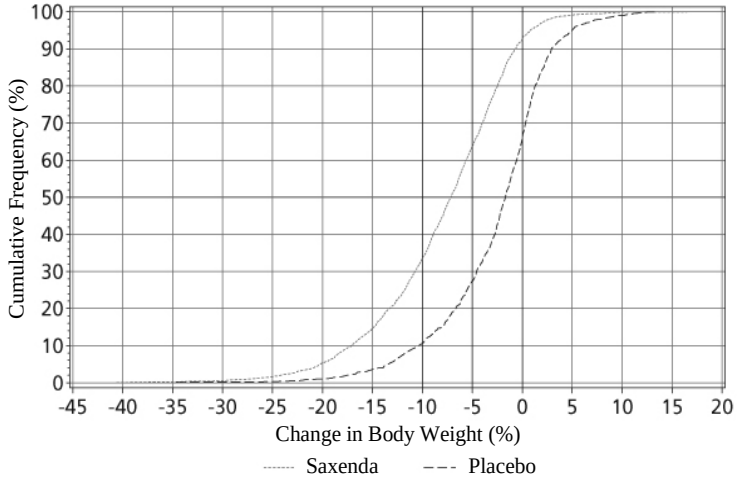
	Saxenda (N=1472)		Placebo (N=738)		Saxenda vs. placebo
Body weight					
Baseline, kg (SD)	107.6 (21.6)		108.0 (21.8)		
Mean change at week 160, % (95% CI)	-6.2		-1.8		-4.3** (-4.9; -3.7)
Mean change at week 160, kg (95% CI)	-6.5		-2.0		-4.6** (-5.3; -3.9)
Proportion of patients losing ≥ 5% body weight at week 160, % (95% CI)	49.6		23.4		3.2** (2.6; 3.9)
Proportion of patients losing > 10% body weight at week 160, % (95% CI)	24.4		9.5		3.1** (2.3; 4.1)
Glycaemia and cardiometabolic factors	Baseline	Change	Baseline	Change	
HbA_{1c}, %	5.8	-0.4	5.7	-0.1	-0.21** (-0.24; -0.18)
FPG, mmol/L	5.5	-0.4	5.5	0.04	-0.4** (-0.5; -0.4)
Systolic blood pressure, mmHg	124.8	-3.2	125.0	-0.4	-2.8** (-3.8; -1.8)
Diastolic blood pressure, mmHg	79.4	-2.4	79.8	-1.7	-0.6 (-1.3; 0.1)
Waist circumference, cm	116.6	-6.9	116.7	-3.4	-3.5** (-4.2; -2.8)

Full Analysis Set. For body weight, HbA_{1c}, FPG, blood pressure and waist circumference, baseline values are means, changes from baseline at week 160 are estimated means (least-squares) and treatment contrasts at week 160 are estimated treatment differences. For the proportions of patients losing ≥ 5/> 10% body weight, estimated odds ratios are presented. Missing post-baseline values were imputed using the last observation carried forward. ** p< 0.0001. CI=confidence interval. FPG=fasting plasma glucose. SD=standard deviation.



Observed values for patients completing each scheduled visit

Figure 1 Change from baseline in body weight (%) by time in trial 1 (0-56 weeks)



Last observation carried forward.

Figure 2 Cumulative distribution of weight change (%) after 56 weeks of treatment in trial 1

Table 7 Trial 2: Changes from baseline in body weight, glycaemia and cardiometabolic parameters at week 56

	Saxenda (N=412)		**Placebo (N=211)**		**Saxenda vs. placebo**
Body weight					
Baseline, kg (SD)	105.6 (21.9)		106.7 (21.2)		-
Mean change at week 56, % (95% CI)	-5.9		-2.0		-4.0** (-4.8; -3.1)
Mean change at week 56, kg (95% CI)	-6.2		-2.2		-4.1** (-5.0; -3.1)
Proportion of patients losing ≥ 5% body weight at week 56, % (95% CI)	49.8		13.5		6.4** (4.1; 10.0)
Proportion of patients losing > 10% body weight at week 56, % (95% CI)	22.9		4.2		6.8** (3.4; 13.8)
Glycaemia and cardiometabolic factors	Baseline	Change	Baseline	Change	
HbA_{1c}, %	7.9	-1.3	7.9	-0.4	-0.9** (-1.1; -0.8)
FPG, mmol/L	8.8	-1.9	8.6	-0.1	-1.8** (-2.1; -1.4)
Systolic blood pressure, mmHg	128.9	-3.0	129.2	-0.4	-2.6* (-4.6; -0.6)
Diastolic blood pressure, mmHg	79.0	-1.0	79.3	-0.6	-0.4 (-1.7; 1.0)
Waist circumference, cm	118.1	-6.0	117.3	-2.8	-3.2** (-4.2; -2.2)

Full Analysis Set. For body weight, HbA_{1c}, FPG, blood pressure and waist circumference, baseline values are means, changes from baseline at week 56 are estimated means (least-squares) and treatment contrasts at week 56 are estimated treatment differences. For the proportions of patients losing ≥ 5/> 10% body weight, estimated odds ratios are presented. Missing post-baseline values were imputed using the last observation carried forward. * p< 0.05. ** p< 0.0001. CI=confidence interval. FPG=fasting plasma glucose. SD=standard deviation.

Table 8 Trial 3: Changes from baseline in body weight and Apnoea-Hypopnoea Index at week 32

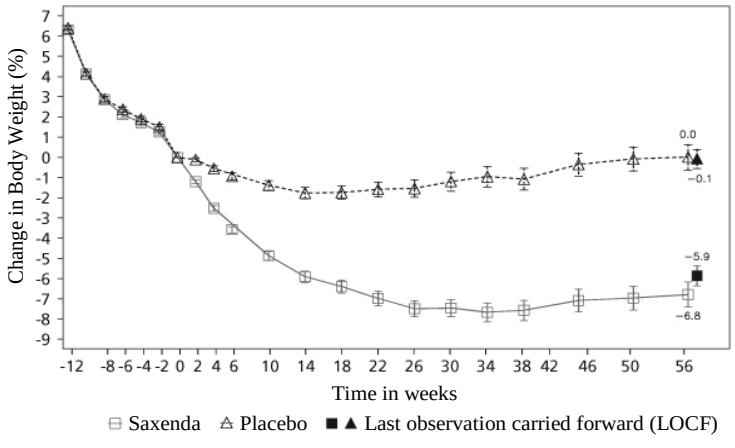
	Saxenda (N=180)		Placebo (N=179)		Saxenda vs. placebo
Body weight					
Baseline, kg (SD)	116.5 (23.0)		118.7 (25.4)		-
Mean change at week 32, % (95% CI)	-5.7		-1.6		-4.2** (-5.2; -3.1)
Mean change at week 32, kg (95% CI)	-6.8		-1.8		-4.9** (-6.2; -3.7)
Proportion of patients losing ≥ 5% body weight at week 32, % (95% CI)	46.4		18.1		3.9** (2.4; 6.4)
Proportion of patients losing > 10% body weight at week 32 % (95% CI)	22.4		1.5		19.0** (5.7; 63.1)
	Baseline	Change	Baseline	Change	
Apnoea-Hypopnoea Index, events/hour	49.0	-12.2	49.3	-6.1	-6.1* (-11.0; -1.2)

Full Analysis Set. Baseline values are means, changes from baseline at week 32 are estimated means (least-squares) and treatment contrasts at week 32 are estimated treatment differences (95% CI). For the proportions of patients losing ≥ 5/> 10% body weight, estimated odds ratios are presented. Missing post-baseline values were imputed using the last observation carried forward. * p< 0.05. ** p< 0.0001. CI=confidence interval. SD=standard deviation.

Table 9 Trial 4: Changes from baseline in body weight at week 56

	Saxenda (N=207)	Placebo (N=206)	Saxenda vs. placebo
Baseline, kg (SD)	100.7 (20.8)	98.9 (21.2)	-
Mean change at week 56, % (95% CI)	-6.3	-0.2	-6.1** (-7.5; -4.6)
Mean change at week 56, kg (95% CI)	-6.0	-0.2	-5.9** (-7.3; -4.4)
Proportion of patients losing ≥ 5% body weight at week 56, % (95% CI)	50.7	21.3	3.8** (2.4; 6.0)
Proportion of patients losing > 10% body weight at week 56, % (95% CI)	27.4	6.8	5.1** (2.7; 9.7)

Full Analysis Set. Baseline values are means, changes from baseline at week 56 are estimated means (least-squares) and treatment contrasts at week 56 are estimated treatment differences. For the proportions of patients losing ≥ 5/> 10% body weight, estimated odds ratios are presented. Missing post-baseline values were imputed using the last observation carried forward. ** p< 0.0001. CI=confidence interval. SD=standard deviation.



Observed values for patients completing each scheduled visit

Figure 3 Change from randomisation (week 0) in body weight (%) by time in trial 4

Before week 0 patients were only treated with low-calorie diet and exercise. At week 0 patients were randomised to receive either Saxenda or placebo.

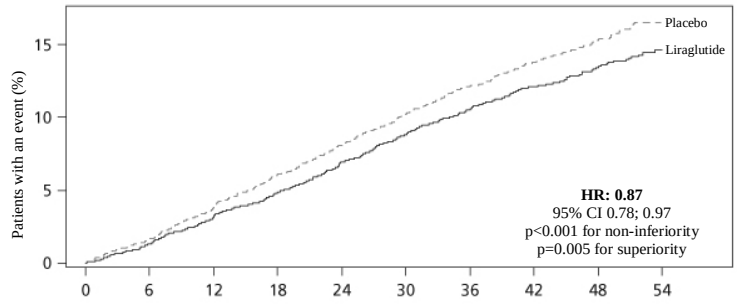
Immunogenicity
Consistent with the potentially immunogenic properties of protein and peptide pharmaceuticals, patients may develop anti-liraglutide antibodies following treatment with liraglutide. In clinical trials, 2.5% of patients treated with liraglutide developed anti-liraglutide antibodies. Antibody formation has not been associated with reduced efficacy of liraglutide.

Cardiovascular evaluation
Major adverse cardiovascular events (MACE) were adjudicated by an external independent group of experts and defined as non-fatal myocardial infarction, non-fatal stroke and cardiovascular death. In all the long-term clinical trials with Saxenda, there were 6 MACE for patients treated with liraglutide and 10 MACE for placebo-treated patients. The hazard ratio and 95% CI is 0.33 [0.12; 0.90] for liraglutide versus placebo. A mean increase in heart rate from baseline of 2.5 beats per minute (ranging across trials from 1.6 to 3.6 beats per minute) has been observed with liraglutide in clinical phase 3 trials. The heart rate peaked after approximately 6 weeks. The long-term clinical impact of this mean increase in heart rate has not been established. The change in heart rate was reversible upon discontinuation of liraglutide (see section 4.4).

The Liraglutide Effect and Action in Diabetes Evaluation of Cardiovascular Outcomes Results (LEADER) trial included 9 340 patients with insufficiently controlled type 2 diabetes. The vast majority of these had established cardiovascular disease. Patients were randomly allocated to either liraglutide on a daily dose of up to 1.8 mg (4 668) or placebo (4 672), both on a background of standard of care.

The duration of exposure was between 3.5 and 5 years. The mean age was 64 years and the mean BMI was 32.5 kg/m². Mean baseline HbA_{1c} was 8.7 and had improved after 3 years by 1.2 % in patients assigned to liraglutide and by 0.8 % in patients assigned to placebo. The primary endpoint was the time from randomisation to first occurrence of any major adverse cardiovascular events (MACE): cardiovascular death, non-fatal myocardial infarction or non-fatal stroke.

Liraglutide significantly reduced the rate of major adverse cardiovascular events (primary endpoint events, MACE) vs. placebo (3.41 vs. 3.90 per 100 patient years of observation in the liraglutide and placebo groups, respectively) with a risk reduction of 13%, HR 0.87, [0.78, 0.97] [95% CI]) (p=0.005) (see figure 4).



Patients at risk

Placebo	4672	4587	4473	4352	4237	4123	4010	3914	1543	407
Liraglutide	4668	4593	4496	4400	4280	4172	4072	3982	1562	424

FAS: full analysis set.

Figure 4 Kaplan Meier plot of time to first MACE – FAS population

Paediatric population

In a double-blind trial comparing the efficacy and safety of Saxenda versus placebo on weight loss in adolescent patients aged 12 years and above with obesity, Saxenda was superior to placebo in weight reduction (evaluated as BMI Standard Deviation Score) after 56 weeks of treatment (table 10).
A greater proportion of the patients achieved ≥ 5% and ≥ 10% reductions in BMI with liraglutide than with placebo, as well as greater reductions in mean BMI and body weight (table 10). After 26 weeks of off-trial product follow-up period, weight regain was observed with liraglutide vs placebo (table 10).

Table 10 Trial 4180: Changes from baseline in body weight and BMI at week 56 and change in BMI SDS from week 56 to week 82

	Saxenda (N=125)	**Placebo (N=126)**	**Saxenda vs. placebo**
BMI SDS			
Baseline, BMI SDS (SD)	3.14 (0.65)	3.20 (0.77)	
Mean change at week 56 (95% CI)	-0.23	0.00	-0.22* (-0.37; -0.08)
Week 56, BMI SDS (SD)	2.88 (0.94)	3.14 (0.98)	
Mean change from week 56 to week 82, BMI SDS (95% CI)	0.22	0.07	0.15** (0.07; 0.23)
Body weight			
Baseline, kg (SD)	99.3 (19.7)	102.2 (21.6)	-
Mean change at week 56, % (95% CI)	-2.65	2.37	-5.01** (-7.63; -2.39)
Mean change at week 56, kg (95% CI)	-2.26	2.25	-4.50** (-7.17; -1.84)
BMI			
Baseline, kg/m^2 (SD)	35.3 (5.1)	35.8 (5.7)	-
Mean change at week 56, kg/m^2 (95% CI)	-1.39	0.19	-1.58** (-2.47; -0.69)
Proportion of patients with ≥ 5% reduction in baseline BMI at week 56, % (95% CI)	43.25	18.73	3.31** (1.78; 6.16)
Proportion of patients with ≥ 10% reduction in baseline BMI at week 56, % (95% CI)	26.08	8.11	4.00** (1.81; 8.83)

Full Analysis Set. For BMI SDS, body weight and BMI, baseline values are means, changes from baseline at week 56 are estimated means (least-squares) and treatment contrasts at week 56 are estimated treatment differences. For BMI SDS, value at week 56 are means, changes from week 56 to week 82 are estimated means (least-squares) and treatment contrasts at week 82 are estimated treatment differences. For the proportions of patients losing ≥ 5%/≥ 10% baseline BMI, estimated odds ratios are presented. Missing observations were imputed from the placebo arm based on a jump to reference multiple (x100) imputation approach.
*p< 0.01, **p< 0.001. CI=confidence interval. SD=standard deviation.

Based on tolerability, 103 patients (82.4%) escalated and remained on dose of 3.0 mg, 11 patients (8.8%) escalated and remained on dose of 2.4 mg, 4 patients (3.2%) escalated and remained on dose of 1.8 mg, 4 patients (3.2%) escalated and remained on dose of 1.2 mg and 3 patients (2.4%) remained on dose of 0.6 mg.
No effects on growth or pubertal development were found after 56 weeks of treatment.

A 16-week double-blind, 36 week open-label study was conducted to evaluate the efficacy and safety of Saxenda in paediatric patients with Prader-Willi Syndrome and obesity. The study included 32 patients between 12 to < 18 years of age (part A) and 24 patients between 6 to < 12 years of age (part B). Patients were randomized 2:1 to receive Saxenda or placebo. Patients with a body weight less than 45 kg started dose escalation at a lower dose; 0.3 mg instead of 0.6 mg and were escalated to a maximum dose of 2.4 mg.

The estimated treatment difference in mean BMI SDS at 16 weeks (part A: -0.20 vs -0.13, part B: -0.50 vs -0.44) and 52 weeks (part A: -0.31 vs -0.17, part B: -0.73 vs -0.67) were similar with Saxenda and placebo.
No additional safety concerns were seen in the trial.

A 56-week double-blinded trial 82 children, aged 6 to <12 years, with obesity were randomised 2:1 to receive liraglutide 3.0 mg or placebo once daily. All patients received counselling in healthy nutrition and physical activity throughout the trial.

At end of treatment (week 56), the improvement in BMI with liraglutide was superior and clinically meaningful compared with placebo (see Table 11). Furthermore, a higher proportion of patients achieved ≥5% BMI reduction with Liraglutide compared with placebo (see Table 11).

Table 11 SCALE KIDS 4392: Results at week 56

	SAXENDA (N=56)	**Placebo (N=26)**	**SAXENDA vs Placebo**
BMI			
Baseline mean BMI, kg/m^2 (SD)	30.9 (4.7)	31.3 (7.0)	
Mean Change from Baseline, % (95% CI)	-5.80	1.60	-7.40 (-11.56, -3.24)
Proportion of patients with ≥ to 5% reduction in baseline BMI at week 56, OR (95% CI)	46.2%	8.7%	6.27 (1.36, 28.79)
Body Weight			
Baseline mean body weight, kg (SD)	69.8 (17.7)	71.0 (23.2)	
Mean Change from Baseline, % (95% CI)	1.59	9.96	-8.37 (-13.39, -3.34)

BMI: Body mass index, SD: Standard deviation, CI: Confidence interval.
For BMI and body weight, baseline values are means, changes from baseline at week 56 are estimated means (least-squares) and treatment contrasts at week 56 are estimated treatment differences. For the proportions of patients losing ≥5% baseline BMI, estimated odds ratios are presented.
ANCOVA: Week 56 responses were analyzed using an analysis of covariance model with randomised treatment, stratification groups (gender and Tanner stage at baseline) and the interaction between stratification groups as factors and baseline of respective endpoint as covariate. RD-MI: Missing observations were multiple (x1000) imputed from retrieved participants regardless of randomised treatment arm.

5.2 Pharmacokinetic properties

Absorption

The absorption of liraglutide following subcutaneous administration was slow, reaching maximum concentration approximately 11 hours post dosing. The average liraglutide steady state concentration ($AUC_{\tau/24}$) reached approximately 31 nmol/L in obese (BMI 30-40 kg/m^2) patients following administration of 3 mg liraglutide. Liraglutide exposure increased proportionally with dose. Absolute bioavailability of liraglutide following subcutaneous administration is approximately 55%.

Distribution

The mean apparent volume of distribution after subcutaneous administration is 20-25 L (for a person weighing approximately 100 kg). Liraglutide is extensively bound to plasma protein (> 98%).

Biotransformation

During 24 hours following administration of a single [^{3}H]-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).

Elimination

Liraglutide is endogenously metabolised in a similar manner to large proteins without a specific organ as major route of elimination. Following a [^{3}H]-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 subcutaneous administration of liraglutide is approximately 0.9-1.4 L/h with an elimination half-life of approximately 13 hours.

Special populations

Elderly
Age had no clinically relevant effect on the pharmacokinetics of liraglutide based on the results from a population pharmacokinetic analysis of data from overweight and obese patients (18 to 82 years). No dosage adjustment is required based on age.

Gender
Based on the results of population pharmacokinetic analysis, females have 24% lower weight adjusted clearance of liraglutide compared to males. Based on the exposure response data, no dose adjustment is necessary based on gender.

Ethnic origin
Ethnic origin had no clinically relevant effect on the pharmacokinetics of liraglutide based on the results of population pharmacokinetic analysis which included overweight and obese patients of White, Black, Asian and Hispanic/non-Hispanic groups.

Body weight
The exposure of liraglutide decreases with an increase in baseline body weight. The 3.0 mg daily dose of liraglutide provided adequate systemic exposures over the body weight range of 60-234 kg evaluated for exposure response in the clinical trials. Liraglutide exposure was not studied in patients with body weight > 234 kg.

Hepatic impairment
The pharmacokinetics of liraglutide was evaluated in patients with varying degree of hepatic impairment in a single-dose trial (0.75 mg). Liraglutide exposure was decreased by 13-23% in patients with mild to moderate hepatic impairment compared to healthy subjects. Exposure was significantly lower (44%) in patients with severe hepatic impairment (Child Pugh score > 9).

Renal impairment
Liraglutide exposure was reduced in patients with renal impairment compared to individuals with normal renal function in a single-dose trial (0.75 mg). Liraglutide exposure was lowered by 33%, 14%, 27% and 26%, respectively, in patients with mild (creatinine clearance, CrCl 50-80 ml/min), moderate (CrCl 30-50 ml/min) and severe (CrCl < 30 ml/min) renal impairment and in end-stage renal disease requiring dialysis.

Paediatric population
Pharmacokinetic properties for liraglutide 3.0 mg were assessed in clinical studies for adolescent patients with obesity aged 12 to less than 18 years (134 patients, body weight 62-178 kg). The liraglutide exposure in adolescents (age 12 to less than 18 years) was similar to that in adults with obesity.

Pharmacokinetic properties for liraglutide 3.0 mg were also assessed in clinical studies in children with obesity aged 6 to less than 12 years (59 patients, body weight 35-114 kg). The liraglutide exposure in children (aged 6 to less than 12 years) was higher than that in adults and adolescents. After correction for body weight the exposure was similar to that in adults and adolescents.

5.3 Preclinical safety data

Non-clinical data reveal no special hazard for humans based on conventional studies of safety pharmacology, repeat-dose toxicity or genotoxicity.

Non-lethal thyroid C-cell tumours were seen in two-year carcinogenicity studies in rats and mice. In rats, a no observed adverse effect level (NOAEL) was not observed. These tumours were not seen in monkeys treated for 20 months. These findings in rodents are caused by a non-genotoxic, specific GLP-1 receptor-mediated mechanism to which rodents are particularly sensitive. The relevance for humans is likely to be low but cannot be completely excluded. No other treatment-related tumours have been found.

Animal studies did not indicate direct harmful effects with respect to fertility but slightly increased early embryonic deaths at the highest dose. Dosing with liraglutide during mid-gestation caused a reduction in maternal weight and foetal growth with equivocal effects on ribs in rats and skeletal variation in the rabbit. Neonatal growth was reduced in rats while exposed to liraglutide and persisted in the post-weaning period in the high dose group. It is unknown whether the reduced pup growth is caused by reduced pup milk intake due to a direct GLP-1 effect or reduced maternal milk production due to decreased caloric intake.

In juvenile rats, liraglutide caused delayed sexual maturation in both males and females at clinical relevant exposures. These delays had no impact upon fertility and reproductive capacity of either sex, or on the ability of the females to maintain pregnancy.

6. PHARMACEUTICAL PARTICULARS

6.1 List of excipients

Disodium phosphate dihydrate
Propylene glycol
Phenol
Hydrochloric acid (for pH adjustment)
Sodium hydroxide (for pH adjustment)
Water for injections

6.2 Incompatibilities

Substances added to Saxenda may cause degradation of liraglutide. In the absence of compatibility studies, this medicinal product must not be mixed with other medicinal products.

6.3 Shelf life

30 months

After first use: 1 month

6.4 Special precautions for storage

Store in a refrigerator (2 °C - 8 °C).
Do not freeze.
Store away from the freezer compartment.

After first use: Store below 30°C or store in a refrigerator (2 °C - 8 °C).
Keep the cap on the pen in order to protect from light.

6.5 Nature and contents of container

Cartridge (type 1 glass) with a plunger (bromobutyl) and a laminate rubber sheet (bromobutyl/polyisoprene) contained in a pre-filled multidose disposable pen made of polypropylene, polyacetal, polycarbonate and acrylonitrile butadiene styrene.

Each pen contains 3 ml solution and is able to deliver doses of 0.6 mg, 1.2 mg, 1.8 mg, 2.4 mg and 3.0 mg.

Pack sizes of 1, 3 or 5 pre-filled pens.

Not all pack sizes may be marketed.

6.6 Special precautions for disposal and other handling

The solution should not be used if it does not appear clear and colourless or almost colourless.

Saxenda should not be used if it has been frozen.

The pen is designed to be used with NovoFine or NovoTwist disposable needles up to a length of 8 mm and as thin as 32G.

Needles are not included.

The patient should be advised to discard the injection needle after each injection and store the pen without an injection needle attached. This prevents contamination, infection and leakage. It also ensures that the dosing is accurate.

Any unused medicinal product or waste material should be disposed in accordance with local requirements.

7. MARKETING AUTHORISATION HOLDER

Novo Nordisk A/S
Novo Alle 1
DK-2880 Bagsværd
Denmark

8. MARKETING AUTHORISATION NUMBERS

EU/1/15/992/001-003

9. DATE OF FIRST AUTHORISATION/RENEWAL OF THE AUTHORISATION

Date of first authorisation: 23 March 2015
Date of latest renewal: 09 December 2019

10. DATE OF REVISION OF THE TEXT

Detailed information on this medicinal product is available on the website of the European Medicines Agency http://www.ema.europa.eu.

ANNEX II

A. MANUFACTURERS OF THE BIOLOGICAL ACTIVE SUBSTANCE AND MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

A. MANUFACTURERS OF THE BIOLOGICAL ACTIVE SUBSTANCE AND MANUFACTURER RESPONSIBLE FOR BATCH RELEASE

Name and address of the manufacturers of the biological active substance

Novo Nordisk A/S
Hallas Alle 1
4400 Kalundborg
Denmark

Novo Nordisk A/S
Novo Alle 1
2880 Bagsværd
Denmark

Name and address of the manufacturer responsible for batch release

Novo Nordisk A/S
Novo Alle 1
2880 Bagsværd
Denmark

Novo Nordisk Production SAS
45 Avenue D Orleans
28000 Chartres
France

B. CONDITIONS OR RESTRICTIONS REGARDING SUPPLY AND USE

Medicinal product subject to medical prescription.

C. OTHER CONDITIONS AND REQUIREMENTS OF THE MARKETING AUTHORISATION

- **Periodic safety update reports (PSURs)**

The requirements for submission of PSURs for this medicinal product are set out in the list of Union reference dates (EURD list) provided for under Article 107c(7) of Directive 2001/83/EC and any subsequent updates published on the European medicines web-portal.

D. CONDITIONS OR RESTRICTIONS WITH REGARD TO THE SAFE AND EFFECTIVE USE OF THE MEDICINAL PRODUCT

- **Risk management plan (RMP)**

The marketing authorisation holder (MAH) shall perform the required pharmacovigilance activities and interventions detailed in the agreed RMP presented in Module 1.8.2 of the marketing authorisation and any agreed subsequent updates of the RMP.

An updated RMP should be submitted:

- At the request of the European Medicines Agency;
- Whenever the risk management system is modified, especially as the result of new information being received that may lead to a significant change to the benefit/risk profile or as the result of an important (pharmacovigilance or risk minimisation) milestone being reached.

ANNEX III

LABELLING AND PACKAGE LEAFLET

A. LABELLING

PARTICULARS TO APPEAR ON THE OUTER PACKAGING

CARTON

1. NAME OF THE MEDICINAL PRODUCT

Saxenda 6 mg/ml solution for injection in pre-filled pen
liraglutide

2. STATEMENT OF ACTIVE SUBSTANCE

1 ml contains 6 mg of liraglutide. One pre-filled pen contains 18 mg liraglutide

3. LIST OF EXCIPIENTS

Excipients: disodium phosphate dihydrate, propylene glycol, phenol, hydrochloric acid/sodium hydroxide (for pH adjustment), water for injections

4. PHARMACEUTICAL FORM AND CONTENTS

Solution for injection

1 pen
3 pens
5 pens

Each pen contains 3 ml solution and is able to deliver doses of 0.6 mg, 1.2 mg, 1.8 mg, 2.4 mg and 3.0 mg

5. METHOD AND ROUTE OF ADMINISTRATION

The pen is designed to be used with NovoFine or NovoTwist disposable needles
Needles are not included
Read the package leaflet before use
Subcutaneous use

6. SPECIAL WARNING THAT THE MEDICINAL PRODUCT MUST BE STORED OUT OF THE SIGHT AND REACH OF CHILDREN

Keep out of the sight and reach of children

7. OTHER SPECIAL WARNINGS, IF NECESSARY

Do not store the pen with a needle attached
For use by one person only

8. EXPIRY DATE

EXP/

Discard pen 1 month after first use

9. SPECIAL STORAGE CONDITIONS

Store in a refrigerator
Do not freeze
After first use of the pen, store below 30 °C or in a refrigerator
Keep the pen cap on in order to protect from light

10. SPECIAL PRECAUTIONS FOR DISPOSAL OF UNUSED MEDICINAL PRODUCTS OR WASTE MATERIALS DERIVED FROM SUCH MEDICINAL PRODUCTS, IF APPROPRIATE

11. NAME AND ADDRESS OF THE MARKETING AUTHORISATION HOLDER

Novo Nordisk A/S
Novo Alle 1
DK-2880 Bagsværd
Denmark

12. MARKETING AUTHORISATION NUMBER

EU/1/15/992/001 1x3 ml
EU/1/15/992/002 3x3 ml
EU/1/15/992/003 5x3 ml

13. BATCH NUMBER

Batch:

14. GENERAL CLASSIFICATION FOR SUPPLY

15. INSTRUCTIONS ON USE

16. INFORMATION IN BRAILLE

Saxenda

17. UNIQUE IDENTIFIER – 2D BARCODE

2D barcode carrying the unique identifier included.

18. UNIQUE IDENTIFIER – HUMAN READABLE DATA

PC
SN
NN

MINIMUM PARTICULARS TO APPEAR ON SMALL IMMEDIATE PACKAGING UNITS

PRE-FILLED PEN LABEL

1. NAME OF THE MEDICINAL PRODUCT AND ROUTE OF ADMINISTRATION

Saxenda 6 mg/ml injection
liraglutide
SC use

2. METHOD OF ADMINISTRATION

3. EXPIRY DATE

EXP/s

4. BATCH NUMBER

Batch:

5. CONTENTS BY WEIGHT, BY VOLUME OR BY UNIT

3 ml

6. OTHER

Novo Nordisk A/S

B. PACKAGE LEAFLET

Package leaflet: Information for the patient

Saxenda 6 mg/ml solution for injection in pre-filled pen
liraglutide

Read all of this leaflet carefully before you start using this medicine because it contains important information for you.
– Keep this leaflet. You may need to read it again.
– If you have any further questions, ask your doctor, pharmacist or nurse.
– This medicine has been prescribed for you only. Do not pass it on to others. It may harm them, even if their signs of illness are the same as yours.
– If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. See section 4.

What is in this leaflet

1. What Saxenda is and what it is used for
2. What you need to know before you use Saxenda
3. How to use Saxenda
4. Possible side effects
5. How to store Saxenda
6. Contents of the pack and other information

1. What Saxenda is and what it is used for

What Saxenda is
Saxenda is a weight loss medicine that contains the active substance liraglutide. It is similar to a natural occurring hormone called glucagon-like peptide-1 (GLP-1) that is released from the intestine after a meal. Saxenda works by acting on receptors in the brain that control your appetite, causing you to feel fuller and less hungry. This may help you eat less food and reduce your body weight.

What Saxenda is used for
Saxenda is used for weight loss in addition to diet and exercise in adults aged 18 and above who have
- a BMI of 30 kg/m² or greater (obesity) or
- a BMI of 27 kg/m² and less than 30 kg/m² (overweight) and weight-related health problems (such as diabetes, high blood pressure, abnormal levels of fats in the blood or breathing problems during sleep called ‘obstructive sleep apnoea’).

BMI (Body Mass Index) is a measure of your weight in relation to your height.

You should only continue using Saxenda if you have lost at least 5% of your initial body weight after 12 weeks on the 3.0 mg/day dose (see section 3). Consult your doctor before you continue.

Saxenda can be used as an adjunct to a healthy nutrition and increased physical activity for weight management in adolescents from the age of 12 years and above who have:

- obesity (diagnosed by your doctor)
- body weight above 60 kg

You should only continue using Saxenda if you have lost at least 4% of your BMI after 12 weeks on the 3.0 mg/day dose or maximum tolerated dose (see section 3). Consult your doctor before you continue.

Saxenda is indicated as an adjunct to healthy nutrition and increased physical activity for weight management in children from the age of 6 to <12 years with
- obesity (diagnosed by your doctor)
- body weight ≥45 kg

You should only continue using Saxenda if you have lost at least 4% of your BMI after 12 weeks on the 3.0 mg/day dose or maximum tolerated dose (see section 3). Consult your doctor before you continue.

Diet and exercise
Your doctor will start you on a diet and exercise programme. Stay on this programme while you are using Saxenda.

2. What you need to know before you use Saxenda

Do not use Saxenda
– if you are allergic to liraglutide or any of the other ingredients of this medicine (listed in section 6).

Warnings and precautions
Talk to your doctor, pharmacist or nurse before using Saxenda.

The use of Saxenda is not recommended if you have severe heart failure.

There is little experience with this medicine in patients of 75 years and older. It is not recommended if you are 75 years or older.

There is little experience with this medicine in patients with kidney problems. If you have kidney disease or are on dialysis, consult your doctor.

There is little experience with this medicine in patients with liver problems. If you have liver problems, consult your doctor.

This medicine is not recommended if you have a severe stomach or gut problem which results in delayed stomach emptying (called gastroparesis), or if you have an inflammatory bowel disease.

If you know that you are due to have surgery where you will be under anesthesia (sleeping), please tell your doctor that you are taking Saxenda.

<u>People with diabetes</u>

If you have diabetes, do not use Saxenda as a replacement for insulin.

<u>Inflammation of the pancreas</u>

Talk to your doctor if you have or have had a disease of the pancreas.

<u>Inflamed gall bladder and gallstones</u>

If you lose substantial weight, you are at a risk of gallstones and thereby inflamed gall bladder. Stop taking Saxenda and contact a doctor immediately if you experience severe pain in your upper abdomen, usually worst on the right side under the ribs. The pain may be felt through to your back or right shoulder. See section 4.

<u>Thyroid disease</u>

If you have thyroid disease, including thyroid nodules and enlargement of the thyroid gland, consult your doctor.

Heart rate

Talk to your doctor if you have palpitations (you feel aware of your heartbeat) or if you have feelings of a racing heartbeat while at rest during Saxenda treatment.

Loss of fluid and dehydration

When starting treatment with Saxenda, you may lose body fluid or become dehydrated. This may be due to feeling sick (nausea), being sick (vomiting) and diarrhoea. It is important to avoid dehydration by drinking plenty of fluids. Talk to your doctor, pharmacist or nurse if you have any questions or concerns. See section 4.

Children
The safety and efficacy of Saxenda in children below 6 years of age has not been studied.

Other medicines and Saxenda
Tell your doctor, pharmacist or nurse if you are taking, have recently taken or might take any other medicines.

In particular, tell your doctor, pharmacist or nurse if:
- you are taking medicines for diabetes called 'sulfonylurea' (such as glimepiride or glibenclamide) or if you are taking insulin – you may get low blood sugar (hypoglycaemia) when you use these medicines with Saxenda. Your doctor may adjust the dose of your diabetes medicine to prevent you from getting low blood sugar. See section 4 for the warning signs of low blood sugar. If you adjust your insulin dose your doctor may recommend you to monitor your blood sugar more frequently.
- you are taking warfarin or other medicines by mouth that reduce your blood clotting (anticoagulants). More frequent blood testing to determine the ability of your blood to clot may be required.

Pregnancy and breast-feeding
Do not use Saxenda if you are pregnant, think that you might be pregnant or are planning to have a baby. This is because it is not known if Saxenda may affect the baby.

Do not breast-feed if you are using Saxenda. This is because it is not known if Saxenda passes into breast milk.

Driving and using machines
Saxenda is unlikely to affect your ability to drive and use machines.
Some patients may feel dizziness when taking Saxenda mainly during the first 3 months of treatment (see section **'Possible side effects'**). If you feel dizziness be extra careful while driving or using machines. If you need any further information, talk to your doctor.

Important information about some of the ingredients of Saxenda
This medicine contains less than 1 mmol sodium (23 mg) per dose, i.e., essentially 'sodium-free'.

3. How to use Saxenda

Always use this medicine exactly as your doctor has told you. Check with your doctor, pharmacist or nurse if you are not sure.

Your doctor will start you on a diet and exercise programme. Stay on this programme while you are using Saxenda.

How much to inject

Adults
Your treatment will start at a low dose which will be gradually increased over the first five weeks of treatment.

- When you first start using Saxenda, the starting dose is 0.6 mg once a day, for at least one week.
- You doctor will instruct you to gradually increase your dose by 0.6 mg usually each week until you reach the recommended dose of 3.0 mg once a day.

Your doctor will tell you how much Saxenda to use each week. Usually, you will be told to follow the table below.

Week	**Dose injected**
Week 1	0.6 mg once a day
Week 2	1.2 mg once a day
Week 3	1.8 mg once a day
Week 4	2.4 mg once a day
Week 5 onwards	3.0 mg once a day

Once you reach the recommended dose of 3.0 mg in week 5 of treatment, keep using this dose until your treatment period ends. Do not increase your dose further.

Your doctor will assess your treatment on a regular basis.

Children and adolescents (6 to 18 years)
For children and adolescents from the age of 6 to below 18 years old a similar dose escalation schedule as for adults should be applied (see above table for adults). The dose should be increased until 3.0 mg (maintenance dose) or maximum tolerated dose has been reached. Daily doses higher than 3.0 mg are not recommended.

How and when to use Saxenda

- Before you use the pen for the first time, your doctor or nurse will show you how to use the pen.
- You can use Saxenda at any time of the day, with or without food and drink.
- Use Saxenda at about the same time each day – choose a time of the day that works best for you.

Where to inject
Saxenda is given as an injection under the skin (subcutaneous injection).

- The best places to inject are the front of your waist (abdomen), the front of your thighs or your upper arm.
- Change the place where you inject each day to reduce the risk of developing lumps.
- Do not inject into a vein or muscle.

Detailed instructions for use are provided on the other side of this leaflet.

People with diabetes
Tell your doctor if you have diabetes. Your doctor may adjust the dose of your diabetes medicines to prevent you from getting low blood sugar.

- Do not mix Saxenda up with other medicines that you inject (e.g. insulins).
- Do not use Saxenda in combination with other medicines that contain GLP-1 receptor agonists (such as exenatide or lixisenatide).

If you use more Saxenda than you should
If you use more Saxenda than you should, talk to a doctor or go to a hospital straight away. Take the medicine pack with you. You may need medical treatment. The following effects may happen:
- feeling sick (nausea)
- being sick (vomiting)
- low blood sugar (hypoglycaemia). Please refer to 'Common side effects' for warning signs of low blood sugar.

If you forget to use Saxenda
- If you forget a dose and remember it within 12 hours from when you usually use the dose, inject it as soon as you remember.
- However, if more than 12 hours have passed since you should have used Saxenda, skip the missed dose and inject your next dose the following day at the usual time.
- Do not use a double dose or increase the dose on the following day to make up for the missed dose.

If you stop using Saxenda
Do not stop using Saxenda without talking to your doctor.

If you have any further questions on the use of this medicine, ask your doctor, pharmacist or nurse.

4. Possible side effects

Like all medicines, this medicine can cause side effects, although not everybody gets them.

Serious side effects

Some severe allergic reactions (anaphylaxis) have been reported rarely in patients using Saxenda. You should see your doctor straight away if you get symptoms such as breathing problems, swelling of face and throat and a fast heartbeat.

Cases of inflammation of the pancreas (pancreatitis) have been reported uncommonly in patients using Saxenda. Pancreatitis is a serious, potentially life-threatening medical condition.
Stop taking Saxenda and contact a doctor immediately if you notice any of the following serious side effects:
- Severe and persistent pain in the abdomen (stomach area) which might reach through to your back, as well as nausea and vomiting, as it could be a sign of an inflamed pancreas (pancreatitis).

Other side effects

Very common: may affect more than 1 in 10 people
- Feeling sick (nausea), being sick (vomiting), diarrhoea, constipation, headache – these usually go away after a few days or weeks.

Common: may affect up to 1 in 10 people
- Problems affecting the stomach and intestines, such as indigestion (dyspepsia), inflammation in the lining of the stomach (gastritis), stomach discomfort, upper stomach pain, heartburn, feeling bloated, wind (flatulence), belching and dry mouth
- Feeling weak or tired
- Changed sense of taste
- Dizziness
- Difficulty sleeping (insomnia). This usually occurs during the first 3 months of treatment
- Gallstones

- Rash
- Injection site reactions (such as bruising, pain, irritation, itching and rash)
- Low blood sugar (hypoglycaemia). The warning signs of low blood sugar may come on suddenly and can include: cold sweat, cool pale skin, headache, fast heartbeat, feeling sick, feeling very hungry, changes in vision, feeling sleepy, feeling weak, being nervous, being anxious, confusion, difficulty concentrating and shaking (tremor). Your doctor will tell you how to treat low blood sugar and what to do if you notice these warning signs
- increase of pancreatic enzymes, such as lipase and amylase.

Uncommon: may affect up to 1 in 100 people
- Loss of fluids (dehydration). This is more likely to occur at the start of treatment and may be due to being sick (vomiting), feeling sick (nausea) and diarrhoea
- Delay in the emptying of the stomach
- Inflamed gall bladder
- Allergic reactions including skin rash
- Feeling generally unwell
- Faster pulse.

Rare: may affect up to 1 in 1 000 people
- Reduced kidney function
- Acute kidney failure. Signs may include reduction in urine volume, metallic taste in mouth and easily bruising.

Not Known: frequency cannot be estimated from the available data
- Bowel obstruction. A severe form of constipation with additional symptoms such as stomach ache, bloating, vomiting etc.
- Lumps under the skin may be caused by build-up of a protein called amyloid (cutaneous amyloidosis; how often this occurs is not known).

Reporting of side effects
If you get any side effects, talk to your doctor, pharmacist or nurse. This includes any possible side effects not listed in this leaflet. You can also report side effects directly via the national reporting system listed in Appendix V. By reporting side effects, you can help provide more information on the safety of this medicine.

5. How to store Saxenda

Keep this medicine out of the sight and reach of children.

Do not use Saxenda after the expiry date which is stated on the pen label and carton after 'EXP'. The expiry date refers to the last day of that month.

Before first use:

Store in a refrigerator (2 °C - 8 °C). Do not freeze. Keep away from the freezer compartment.

Once you start using the pen:

You can keep the pen for 1 month when stored at a temperature below 30 °C or in a refrigerator (2 °C - 8 °C). Do not freeze. Keep away from the freezer compartment.

When you are not using the pen, keep the pen cap on in order to protect it from light.

Do not use this medicine if the solution is not clear and colourless or almost colourless.

Do not throw away any medicines via wastewater or household waste. Ask your pharmacist how to throw away medicines you no longer use. These measures will help protect the environment.

6. Contents of the pack and other information

What Saxenda contains
- The active substance is liraglutide. 1 ml solution for injection contains 6 mg liraglutide. One pre-filled pen contains 18 mg liraglutide.
- The other ingredients are disodium phosphate dihydrate, propylene glycol, phenol, hydrochloric acid and sodium hydroxide (for pH adjustment) and water for injections.

What Saxenda looks like and contents of the pack
Saxenda is supplied as a clear and colourless or almost colourless solution for injection in a pre-filled pen. Each pen contains 3 ml solution and is able to deliver doses of 0.6 mg, 1.2 mg, 1.8 mg, 2.4 mg and 3.0 mg.

Saxenda is available in pack sizes containing 1, 3 or 5 pens. Not all pack sizes may be marketed.

Needles are not included.

Marketing Authorisation Holder
Novo Nordisk A/S
Novo Alle 1
DK-2880 Bagsværd
Denmark

Manufacturer
Novo Nordisk A/S
Novo Alle 1
DK-2880 Bagsværd
Denmark

Novo Nordisk Production SAS
45 Avenue D Orleans
28000 Chartres
France

This leaflet was last revised in

Other sources of information

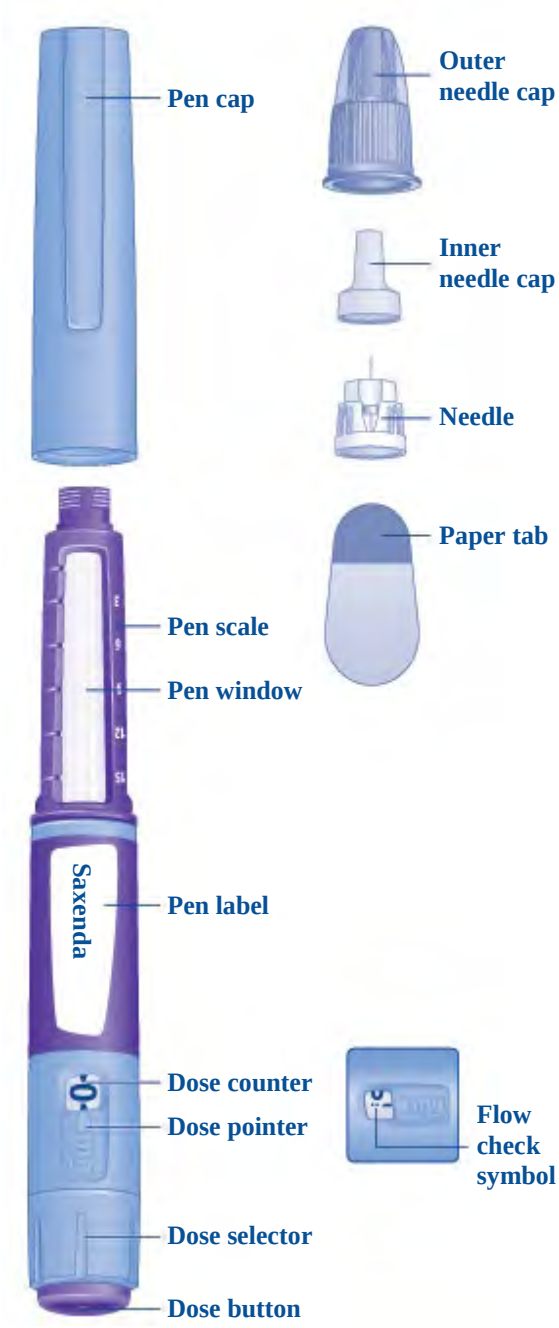
Detailed information on this medicine is available on the European Medicines Agency website: http://www.ema.europa.eu.

Instructions on how to use Saxenda 6 mg/ml solution for injection in pre-filled pen

Please read these instructions carefully before using your Saxenda pre-filled pen.
Do not use the pen without proper training from your doctor or nurse.
Start by checking your pen to **make sure that it contains Saxenda 6 mg/ml,** then look at the illustrations below to get to know the different parts of your pen and needle.
If you are blind or have poor eyesight and cannot read the dose counter on the pen, do not use this pen without help. Get help from a person with good eyesight who is trained to use the Saxenda pre-filled pen.
Your pen is a pre-filled dial-a-dose pen. It contains 18 mg of liraglutide and delivers doses of 0.6 mg, 1.2 mg, 1.8 mg, 2.4 mg and 3.0 mg. Your pen is designed to be used with NovoFine or NovoTwist disposable needles up to a length of 8 mm and as thin as 32 G.
Needles are not included in the pack.

⚠ **Important information**
Pay special attention to these notes as they are important for safe use of the pen.

Saxenda pre-filled pen and needle (example)



1 Prepare your pen with a new needle

- **Check the name and coloured label** of your pen, to make sure that it contains Saxenda. This is especially important if you take more than one type of injectable medicine. Using the wrong medicine could be harmful to your health.
- **Pull off the pen cap.**



- **Check that the solution in your pen is clear** and colourless. Look through the pen window. If the solution looks cloudy, do not use the pen.



- **Take a new needle** and tear off the paper tab.



Make sure to attach the needle correctly.

- **Push the needle straight onto the pen.**
- **Turn until it is on tight.**



The needle is covered by two caps. You must remove both caps. If you forget to remove both caps, you will **not** inject any solution.

- **Pull off the outer needle cap and keep it for later.** You will need it after the injection, to safely remove the needle from the pen.



- **Pull off the inner needle cap and throw it away.** If you try to put it back on, you may accidentally stick yourself with the needle.
  A drop of solution may appear at the needle tip. This is normal, but you must still check the flow if you use a new pen for the first time.
  Do not attach a new needle to your pen until you are ready to take your injection.

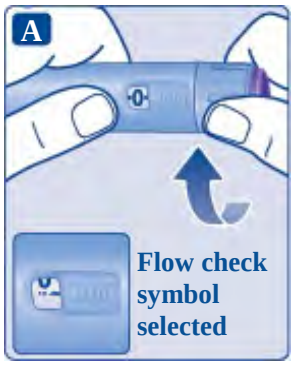
⚠ **Always use a new needle for each injection.**
This may prevent blocked needles, contamination, infection and inaccurate dosing.

⚠ **Never use a bent or damaged needle.**



2 Check the flow with each new pen

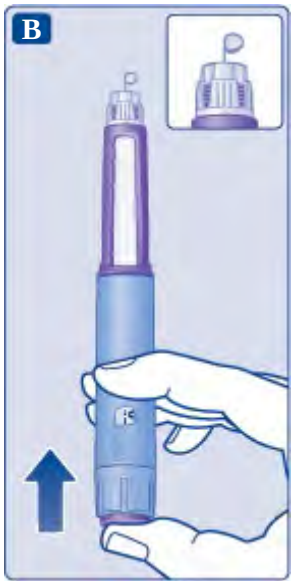
- If your pen is already in use, go to step 3 ‘Select your dose’. Only check the flow before your **first injection with each new pen.**
- Turn the dose selector to **the flow check symbol** (▪▪▬) right past 0. Make sure the flow check symbol lines up with the pointer.



- Hold the pen with the needle pointing up.
  Press and hold in the dose button until the dose counter returns to 0. The 0 must line up with the dose pointer.
  A drop of solution should appear at the needle tip.

  A small drop may remain at the needle tip, but it will not be injected.
  If no drop appears, repeat step 2 ‘Check the flow with each new pen’ up to 6 times. If there is still no drop, change the needle and repeat step 2 ‘Check the flow with each new pen’ once more.
  If a drop still does not appear, dispose of the pen and use a new one.

⚠ **Always make sure that a drop appears** at the needle tip before you use a new pen for the first time. This makes sure that the solution flows.
If no drop appears, you will **not** inject any medicine, even though the dose counter may move.
This may indicate a blocked or damaged needle.
If you do not check the flow before your first injection with each new pen, you may not get the prescribed dose and the intended effect of Saxenda.

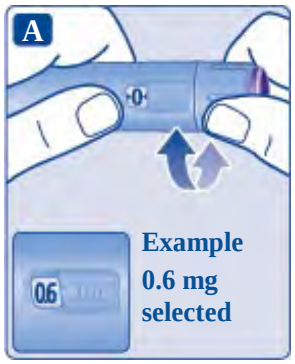


3 Select your dose

- **Turn the dose selector until the dose counter shows your dose (0.6 mg, 1.2 mg, 1.8 mg, 2.4 mg or 3.0 mg).**
  If you select the wrong dose, you can turn the dose selector forward or backwards to the correct dose.
  The pen can dial up to a maximum of 3.0 mg.

  The dose selector changes the dose. Only the dose counter and dose pointer will show how many mg you select per dose.
  You can select up to 3.0 mg per dose. When your pen contains less than 3.0 mg the dose counter stops before 3.0 is shown.
  The dose selector clicks differently when turned forward, backwards or past the number of mg left. Do not count the pen clicks.

⚠ **Always use the dose counter and the dose pointer to see how many mg you have selected before injecting this medicine.**
Do not count the pen clicks.
Do not use the pen scale. It only shows approximately how much solution is left in your pen.
Only doses of 0.6 mg, 1.2 mg, 1.8 mg, 2.4 mg or 3.0 mg must be selected with the dose selector. The selected dose must line up precisely with the dose pointer to ensure that you get a correct dose.



How much solution is left?

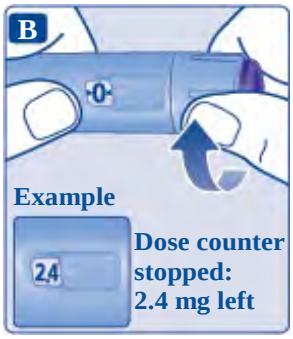
- The **pen scale** shows you **approximately** how much solution is left in your pen.



- **To see precisely how much solution is left,** use the dose counter:
  Turn the dose selector until the **dose counter stops.**
  If it shows 3.0, **at least 3.0 mg** are left in your pen. If the **dose counter stops before 3.0 mg,** there is not enough solution left for a full dose of 3.0 mg.

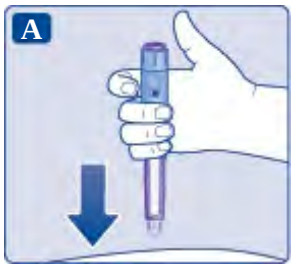
If you need more medicine than what is left in your pen
Only if trained or advised by your doctor or nurse, you may split your dose between your current pen and a new pen. Use a calculator to plan the doses as instructed by your doctor or nurse.

⚠ **Be very careful to calculate correctly.**
If you are not sure how to split your dose using two pens, then select and inject the dose you need with a new pen.

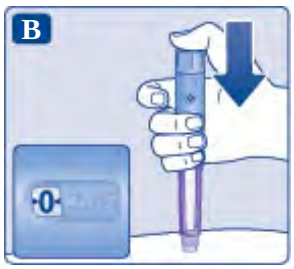


4 Inject your dose

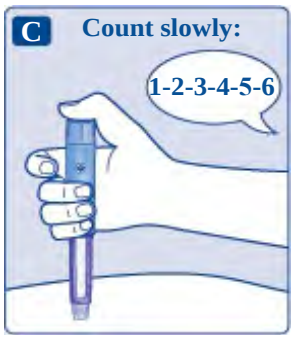
- **Insert the needle into your skin** as your doctor or nurse has shown you.
- **Make sure you can see the dose counter.** Do not cover it with your fingers. This could interrupt the injection.



- **Press and hold down the dose button. Watch as the dose counter returns to 0.** The 0 must line up with the dose pointer. You may then hear or feel a click.
- **Continue pressing the dose button while keeping the needle in your skin.**



- **Count slowly to 6 while keeping the dose button pressed.**
- If the needle is removed earlier, you may see a stream of solution coming from the needle tip. If so, the full dose will not be delivered.



- **Remove the needle from your skin.** You can then release the dose button.

  If blood appears at the injection site, press lightly.

  You may see a drop of solution at the needle tip after injecting. This is normal and does not affect your dose.

⚠ **Always watch the dose counter to know how many mg you inject.** Hold the dose button down until the dose counter shows 0.

How to identify a blocked or damaged needle?

- If 0 does not appear in the dose counter after continuously pressing the dose button, you may have used a blocked or damaged needle.
- In this case – you have **not** received **any** medicine - even though the dose counter has moved from the original dose that you have set.

How to handle a blocked needle?

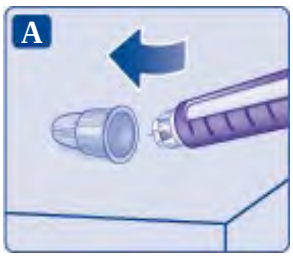
Change the needle as described in step 5 ‘After your injection’ and repeat all steps starting with step 1 ‘Prepare your pen with a new needle’. Make sure you select the full dose you need.

Never touch the dose counter when you inject. This can interrupt the injection.

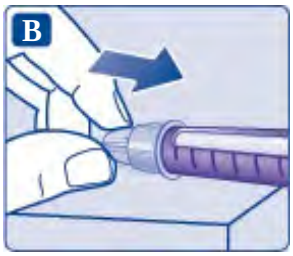


5 After your injection

- **Always dispose of the needle after each injection to ensure convenient** injection and prevent blocked needles. If the needle is blocked, you will **not** inject any medicine.
- **Lead the needle tip into the outer needle cap** on a flat surface without touching the needle or the outer needle cap.



- Once the needle is covered, **carefully push the outer needle cap completely on.**
- **Unscrew the needle** and dispose of it carefully, as instructed by your doctor, nurse, pharmacist or local authorities.

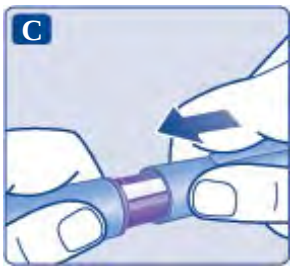


- **Put the pen cap on** your pen after each use to protect the solution from light.

  When the pen is empty, throw it away **without** a needle on as instructed by your doctor, nurse, pharmacist or local authorities.

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

⚠ **Always remove the needle from your pen after each injection.**
This may prevent blocked needles, contamination, infection, leakage of solution and inaccurate dosing.



⚠ **Further important information**

- Always keep your pen and needles **out of sight and reach of others,** especially children.
- **Never share** your pen or your needles with other people.
- Caregivers must **be very careful when handling used needles** - to prevent needle injury and cross-infection.
- Change the place where you inject each day to reduce the risk of developing lumps.

Caring for your pen

- **Do not leave the pen in a car** or other place where it can get too hot or too cold.
- **Do not inject Saxenda which has been frozen.** If you do that, you may not get the intended effect of this medicine.
- **Do not expose your pen to dust, dirt or liquid.**
- **Do not wash, soak or lubricate your pen. It may be cleaned** with a mild detergent on a moistened cloth.
- **Do not drop your pen** or knock it against hard surfaces. If you drop it or suspect a problem, attach a new needle and check the flow before you inject.
- **Do not try to refill your pen.** Once empty, it must be disposed of.
- **Do not try to repair your pen** or pull it apart.