Practical use of Suliqua®▼ (insulin glargine 100 units/mL and lixisenatide), a fixed ratio combination product for treatment of type 2 diabetes in adults

Despite current guideline recommendations for people with type 2 diabetes, treatment often remains suboptimal, with many patients failing to achieve glycaemic targets over time. Treatment intensification is often required, which increases a patient's medication burden and may have an adverse impact on adherence. The use of combination products for these patients will simplify treatment regimens and potentially aid compliance. The fixed-ratio combination product Suliqua (insulin glargine 100 units/mL and lixisenatide), has recently become available and is indicated for the treatment of adults with insufficiently controlled type 2 diabetes to improve glycaemic control as an adjunct to diet and exercise in addition to metformin, with or without a sodium-glucose co-transporter-2 (SGLT2) inhibitor.

This advertorial aims to outline key aspects of the efficacy and safety profile of Suliqua from the Phase III clinical trial data as well as providing practical advice on its initiation and titration. Finally, Dr Amar Ali*, GP with a special interest in diabetes, will share his own personal experience of using Suliqua in patients treated in primary care, along with hints and tips for its use in this context.

Although current guideline recommendations for people with type 2 diabetes provide advice on achieving and maintaining glycaemic targets (NICE, 2015; Buse et al, 2020), treatment often remains suboptimal, with many patients failing to achieve targets over time. Reasons for this may include lack of patient adherence, clinical inertia and difficulties accessing medication (Davies et al, 2018). As treatment for type 2 diabetes intensifies, a patient's medication burden inevitably increases. The use of combination products in this situation will simplify a patient's treatment regimen which may, in turn, aid compliance.

It is well established that glycaemic control is influenced by daily fluctuations in fasting and postprandial glucose (Monnier et al, 2007). Use of multiple medications to treat type 2 diabetes which have complementary effects (*Figure 1*) may be ideal candidates for development into a fixed-ratio combination product (Balena et al, 2013; Rosenstock et al, 2016a). The long-acting basal insulin glargine targets fasting plasma glucose levels by mimicking physiologic insulin secretion, providing peakless insulin levels over a 24-hour period (Skolnik et al, 2017). In contrast, the once-daily GLP-1 receptor agonist lixisenatide increases insulin secretion and decreases glucagon secretion. It also slows gastric emptying, reducing the rate at which post meal glucose enters the circulation, thereby diminishing postprandial glucose excursions (Davies et al, 2018). These two products are available as the fixed-ratio combination product Suliqua (insulin glargine 100 units/mL and lixisenatide), which is indicated for the treatment of adults with insufficiently controlled type 2 diabetes to improve glycaemic control as an adjunct to diet and exercise in addition to metformin with or without a sodium-glucose co-transporter-2 (SGLT2) inhibitor (Suliqua SmPC). This advertorial will outline key aspects of the efficacy and safety of Suliqua from the Phase III clinical trial data as well as

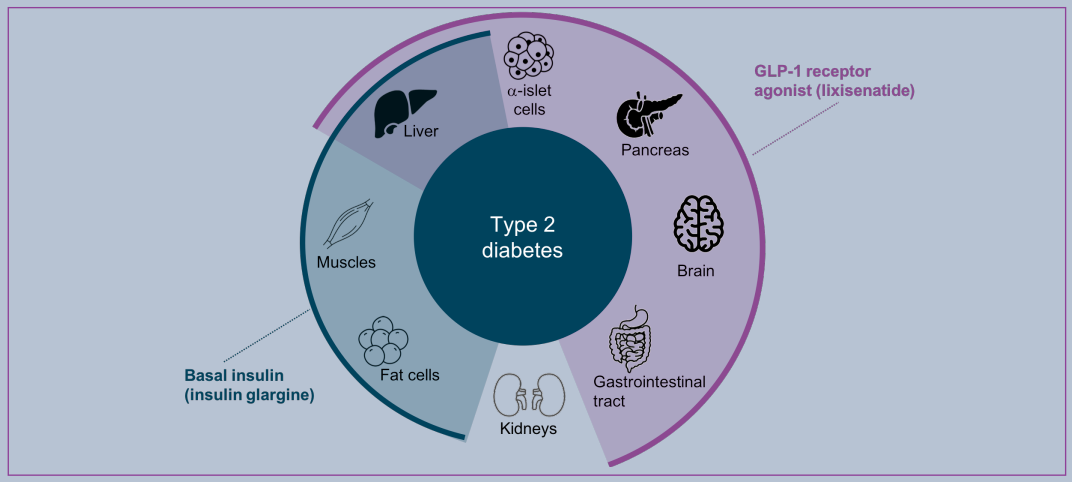

Figure 1. Complementary effects of basal insulin and GLP-1 receptor agonists (adapted from De Fronzo et al, 2013).

Prescribing information for Suliqua can be found on the back page of this advertorial.

*Amar Ali is a GP with a special interest in diabetes in Blackburn and East Lancashire and the CCG lead for diabetes. He is also Clinical Lead for the Lancashire and South Cumbria NHS Diabetes Prevention Programme.

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Page points

1. Suliqua is a fixed-ratio combination product consisting of insulin glargine 100 units/mL and the GLP-1 receptor agonist lixisenatide.
2. Phase III trials demonstrate superior efficacy of Suliqua with greater reductions in HbA_{1c} and more patients achieving glycaemic targets versus comparator. Suliqua is also generally well tolerated with manageable side effects.

providing practical advice and personal experience of initiating and titrating the product in people with type 2 diabetes.

The Suliqua clinical trials: Overview

The efficacy and safety profile of Suliqua in people with type 2 diabetes was evaluated in the following three open-label, randomised, parallel-group Phase III clinical trials:

- LixiLan-L compared Suliqua with insulin glargine U100 alone in patients already using basal insulin at screening with or without one or two oral antidiabetic agents (OADs) who were not meeting glycaemic goals (Aroda et al, 2016).
- LixiLan-O compared Suliqua with insulin glargine U100 or lixisenatide alone for treatment of insulin-naive patients on metformin (Rosenstock et al, 2016b; Davies et al, 2019).
- LixiLan-G compared switching patients to Suliqua versus continuing treatment with prior maximum tolerated doses of daily or weekly GLP-1 receptor agonist therapy with metformin with or without pioglitazone, with or without an SGLT2 inhibitor (Blonde et al, 2019).

The primary efficacy endpoint was change in HbA_{1c} from baseline to week 30 for the LixiLan-L and LixiLan-O trials (Aroda et al, 2016; Rosenstock et al, 2016b) and change in HbA_{1c} from baseline to week 26 for the LixiLan-G trial (Blonde et al, 2019).

Suliqua clinical trials: Efficacy and safety profile

As *Table 1* illustrates, Suliqua demonstrated superior efficacy with greater reductions in HbA_{1c} (≥1%) compared with insulin glargine U100 or lixisenatide alone. In addition, more patients achieved a target HbA_{1c} of <53 mmol/mol (<7%) compared with insulin glargine or lixisenatide alone (Rosenstock et al, 2016b; Aroda et al, 2016; Davies et al, 2019; Blonde et al, 2019). No weight gain was observed with Suliqua compared with insulin glargine U100 due to lixisenatide mitigating insulin-associated increases in weight. (Rosenstock et al, 2016b; Aroda et al, 2016).

Suliqua was generally well tolerated with manageable side effects (Rosenstock et al, 2016b; Aroda et al, 2016; Suliqua SmPC). The most frequently reported adverse reactions during treatment with Suliqua were hypoglycaemia and gastrointestinal (GI) effects (Suliqua SmPC). In patients treated with Suliqua, the incidence of related nausea, diarrhoea and vomiting was 8.4%, 2.2% and 2.2%, respectively. GI adverse reactions were mostly mild and transient in nature (Suliqua SmPC). Documented hypoglycaemia (defined as a self-measured plasma glucose ≤3.9 mmol/L) was comparable between groups on the LixiLan-O trial (Aroda et al, 2016). In the LixiLan-L trial, documented hypoglycaemia was similar with Suliqua and insulin glarine (1.4 and 1.2 events/patient-year) and lower with lixisenatide (0.3 events/patient-year) (Rosenstock et al, 2016b). In the LixiLan-G trial, numbers of documented hypoglycaemia events per patient-year were greater with Suliqua versus continued GLP-1 receptor agonist therapy (1.54 and 0.08 events/patient-year respectively) (Blonde et al, 2019).

The LixiLan trials were not powered to specifically assess cardiovascular (CV) outcomes. Therefore, CV safety of Suliqua is based on the ELIXA (Evaluation of Lixisenatide in Acute Coronary Syndrome) and ORIGIN (Outcome Reduction With Initial Glargine Intervention) studies for lixisenatide and insulin glargine U100 respectively (Pfeffer et al, 2015; ORIGIN trial investigators, 2012). These demonstrated that lixisenatide and insulin glargine U100 have a neutral effect on CV outcomes. In the LixiLan studies, the incidence of CV events in patients treated with Suliqua was low and comparable to those observed in patients taking insulin glargine U100 and lixisenatide (Rosenstock et al, 2016b; Aroda et al, 2016).

Initiation and titration of Suliqua

Suliqua is supplied in a prefilled SoloStar® pen device available in two different strengths of lixisenatide (33 mcg/mL or 50 mcg/mL), and different dose ranges

Table 1. Suliqua Phase III clinical trials: Summary of key efficacy data (Aroda et al, 2016; Rosenstock et al, 2016b; Blonde et al, 2019).

	LixiLan-L (Suliqua [n=366]; insulin glargine [n=365])	LixiLan-O (Suliqua [n=468]; insulin glargine [n=466]; lixisenatide [n=233]	LixiLan G (Suliqua [n=257]; GLP-1 RA [n=257])
Change in HbA_{1c} from baseline, mmol/mol (%)	Suliqua: –12.0 (–1.1) Insulin glargine: –6.6 (–0.6) *P*<0.0001	Suliqua: –17.5 (–1.6) Insulin glargine: –14.2 (–1.3) Lixisenatide:–9.8 (–0.9)% *P*<0.0001 for all comparisons	Suliqua: –10.9 (–1.0) GLP-1 RA: –4.4 (–0.4) *P*<0.0001
Number of patients achieving target HbA_{1c} (53 mmol/mol [7%])	Suliqua: 55% Insulin glargine: 30%	Suliqua: 74% Insulin glargine: 59% Lixisenatide:33% *P*<0.0001 for all comparisons	Suliqua: 62% GLP-1 RA: 26% *P*<0.0001
Change in bodyweight from baseline*	Suliqua: –0.7 kg Insulin glargine: +0.7 kg *P*<0.0001	Suliqua: –0.3 kg Insulin glargine: +1.1 kg Lixisenatide: –2.3 kg *P*<0.0001 Suliqua vs insulin glargine	Suliqua: +1.9 kg GLP-1 RA: –1.1 kg

*Suliqua is not licensed for weight reduction

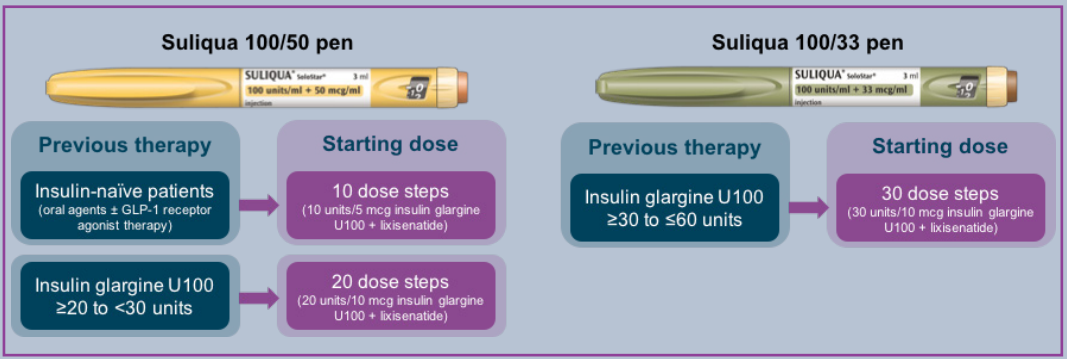

Figure 2. Initiation of Suliqua (Adapted from Suliqua SmPC).

of insulin glargine U100 (Suliqua SmPC; *Figure 2*). It is administered subcutaneously once daily, within 1 hour before a meal, preferably before the same meal every day. The starting dose of Suliqua is based on previous antidiabetic treatment, and should not exceed the recommended lixisenatide starting dose of 10 mcg. Once initiated, the dose of Suliqua is titrated in accordance with the individual's need for insulin (*Table 2*; Suliqua SmPC).

Table 2. Suliqua dose titration (Aroda et al, 2016; Rosenstock et al, 2016b; Blonde et al, 2019).

Fasting plasma glucose	Dose adjustment
>7.8 mmol/L	+4 dose steps
>5.6–<7.8 mmol/L	+2 dose steps
≥4.4–<5.6 mmol/L	No change
<4.4 mmol/L	Adjusted according to practitioner discretion

The above table is based on the titration algorithm used in the pivotal trials for Suliqua. This is intended as a guide only and is no substitute for clinical judgment by a qualified practitioner.

At initiation and post-initiation, patients on metformin plus an SGLT2 inhibitor may continue taking their medications in combination with Suliqua. Patients on metformin with any other OAD prior to initiation must stop taking the other OAD. This is reflective of the clinical trials for Suliqua in which up to 60% of patients were on a second oral agent (Suliqua SmPC).

Which types of patient could benefit from Suliqua?

Suliqua delivers both insulin glargine U100 and lixisenatide which have complementary mechanisms of action in a single, once-daily injection with a simple, convenient dosing schedule using the well-known SoloStar pen. The clinical trial data demonstrates that the product is associated with no increased risk of hypoglycaemia over the use of basal insulin alone and weight neutrality (Skolnik et al, 2017).

Bearing this in mind, a number of patient groups not achieving target HbA_{1c} on their current treatment regimens could be suitable candidates for initiation of Suliqua:

- Patients on OADs (e.g. metformin alone or metformin plus another OAD [including an SGLT2 inhibitor]) for whom the addition of basal insulin alone is unlikely to result in achievement of glycaemic targets.
- Patients on a once or twice daily basal insulin regimen plus metformin with or without another OAD who require treatment intensification using a simple once-daily injection.
- Patients on metformin and an SGLT2 inhibitor (with or without pioglitazone) plus a GLP-1 receptor agonist, who require treatment intensification using a simple once-daily injection.

Experience of using Suliqua in clinical practice (Dr Amar Ali)

Suliqua has been available to prescribe in the UK since May 2019. Based on personal experience of working across primary, intermediate and secondary care, there is a place for this treatment within clinical practice.

Data shows that people with type 2 diabetes on two OADs currently have their treatment optimised when their average HbA_{1c} is 76 mmol/mol (9.1%) (Khunti et al, 2013). When choosing an appropriate treatment for patients requiring intensification, one should consider whether a single agent alone will enable the individual to achieve glycaemic targets. Clinical trials and personal experience demonstrate potential for a greater proportion of individuals to meet their targets with Suliqua compared to intensification with insulin glargine or lixisenatide alone (Aroda et al, 2016; Rosenstock et al, 2016b; Blonde et al, 2019). Furthermore, traditionally strong held concerns regarding risk of weight gain with insulin therapy are mitigated by the GLP-1 component of Suliqua, as well as addressing fasting and postprandial hyperglycaemia within a single device (Aroda et al, 2016).

In my own practice there is a cohort of patients who have previously tried GLP-1 receptor agonists and subsequently discontinued treatment (moving onto insulin) due to adverse effects. However, in my experience the reintroduction of the GLP-1 receptor agonist component with Suliqua has been favourable, possibly due to a lower dose of lixisenatide at initiation and a slower uptitration. Thus, in my practice, these patients have reaped the benefit of using a GLP-1

Page points

1. Suliqua is supplied in a prefilled SoloStar pen device and is available in two different strengths of lixisenatide (33 mcg/mL or 50 mcg/mL), and different dose ranges of insulin glargine U100.
2. Suliqua is administered within 1 hour before a meal and titrated in accordance with the individual's need for insulin.
3. The starting dose of Suliqua is based on previous antidiabetic treatment, and should not exceed the recommended lixisenatide starting dose of 10 mcg.

Page points

1. Use of Suliqua as an add-on to basal insulin maintains treatment simplicity with a single device.
2. Discussion of potential side effects (particularly gastrointestinal effects) at initiation improves patient awareness and provides reassurance that they are usually transient.

receptor agonist whilst experiencing fewer side effects and no discontinuations. Additionally, the insulin dose in Suliqua has been lower than the dose these patients were previously taking.

In my opinion, use of Suliqua as an add-on to basal insulin is a natural option, maintaining treatment simplicity with a single device and adding a postprandial agent once fasting glucose levels are controlled (Aroda et al, 2016). GLP-1 receptor agonists are widely used, but with the natural progression of diabetes, patients will require additional therapy over time. Separate use of insulin and a GLP-1 receptor agonist is an option but adds a further daily or weekly injection. In these instances, our practice has adopted Suliqua with the aim of aiding compliance. Furthermore, the glycaemic benefits of switching to Suliqua compared to continuing with previous GLP-1 receptor agonist therapy were observed irrespective of daily or weekly GLP-1 receptor agonist administration (Rosenstock et al, 2019).

Suliqua has also been successfully used in our Black and Minority Ethnic (BME) population. In our experience these patients often have a high HbA_{1c} and insulin treatment is initiated to reduce glycaemic burden. However, culturally there are negative perceptions around insulin treatment and an acceptance of higher blood glucose levels. Food intake and meal patterns also vary significantly in this group with two main meals often being taken with a very large interval between them. Anecdotal experience suggests that beyond a point, acceptance of insulin dose titration falters (Russell-Jones et al, 2018). In patients with a high HbA_{1c} (>75 mmol/mol [>9%]), taking basal insulin with existing oral therapy with or without a GLP-1 receptor agonist, we have used Suliqua to combine the basal insulin and GLP-1 receptor agonist components into a single daily injection prior to the largest meal of the day.

Practical tips for initiating and maintaining patients on Suliqua

Even though meal timings in our BME population are generally later than other populations, we have found that advising patients to administer Suliqua 1 hour prior to a meal, preferably before the same meal every day (Suliqua SmPC) has been a particularly successful approach. We have also found that it is important to reiterate the timing of the injections to patients at follow up appointments. This is because in our experience habits change, particularly when "life" gets in the way.

It should be noted that for those on insulin glargine U100 treatment prior to initiation, Suliqua is not an option if the dose is >60 units (Suliqua SmPC). For those taking ≥20 to <30 units of insulin glargine U100 the starting dose is 20 units and for those taking ≥30 to ≤60 units the starting dose is 30 units (Suliqua SmPC).Titration should be according to the patients' tolerability and need, usually every 7 days (Suliqua SmPC).

Our practice has found that discussion of potential side effects (particularly GI effects) at initiation improves patient awareness and provides reassurance that they are usually transient. As a remedy to troublesome or persistent GI effects, I have found patients respond well to the suggestion to eat half the usual portion size of a meal.

Finally, a clarification regarding licensed indications for Suliqua: in our practice it is used as an add-on to metformin alone or to metformin plus another oral agent (including an SGLT2 inhibitor). Suliqua has been prescribed in patients previously taking once or twice daily basal insulin and metformin with or without another oral agent who are not achieving glycaemic targets. Finally, it is suitable for use in patients currently on metformin plus an SGLT2 inhibitor and any GLP-1 receptor agonist or metformin plus an SGLT2 inhibitor and pioglitazone with any GLP-1 receptor agonist (Suliqua SmPC). Therapy with basal insulin or GLP-1 receptor agonist or oral glucose lowering medicinal product other than metformin and SGLT2 inhibitors should be discontinued prior to initiation of Suliqua (Suliqua SmPC).

Summary

In insulin-naive and insulin-experienced adults with inadequately controlled type 2 diabetes, the fixed-ratio combination Suliqua provides a simple, convenient treatment intensification strategy in a once-daily subcutaneous injection. Offering the potential to improve glycaemic control without increases in body weight, Suliqua is generally well tolerated with no increased risk of hypoglycaemia compared with basal insulin alone and provides a useful addition to the currently existing treatment armamentarium for the condition. ■

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Suliqua®▼ (insulin glargine 100 units/ml and lixisenatide)

Please refer to the Summary of Product Characteristics (SmPC) before prescribing.

Presentations: ***Suliqua 100 units/ml + 50 microgram/ml solution for injection in a pre filled pen***: Each containing 300 units of insulin glargine and 150µg lixisenatide in 3 ml solution. Suliqua 100 units/ml + 33 microgram/ml solution for injection in a pre filled pen: Each containing 300 units of insulin glargine and 100µg lixisenatide in 3 ml solution.
Indication: Suliqua is indicated for the treatment of adults with insufficiently controlled type 2 diabetes mellitus, to improve glycaemic control as an adjunct to diet and exercise in addition to metformin with or without SGLT-2 inhibitors.
Dosage and administration: Suliqua is to be injected subcutaneously in the abdomen, deltoid, or thigh. The injection sites should be rotated within the same region from one injection to the next to reduce the risk of lipodystrophy and cutaneous amyloidosis. Patients should be instructed to always use a new needle. Suliqua must not be drawn from the cartridge of the pre filled pen into a syringe to avoid dosing errors and potential overdose. Therapy with basal insulin or glucagon-like peptide-1 (GLP-1) receptor agonist or oral glucose lowering medicinal product other than metformin and SGLT-2 inhibitors should be discontinued prior to initiation of Suliqua. ***Suliqua 100 units/ml+50 µg/ml solution for injection in a pre filled pen (10-40 pen):*** delivers dose steps from 10-40 units of insulin glargine in combination with 5-20µg lixisenatide. ***Suliqua 100 units/ml+ 33 µg/ml solution for injection in a pre filled pen (30-60 pen):*** delivers dose steps from 30-60 units of insulin glargine in combination with 10-20µg lixisenatide. ***Starting dose:*** The starting dose of Suliqua is based on previous anti-diabetic treatment, and in order not to exceed the recommended lixisenatide starting dose of 10µg. ***Oral anti-diabetic treatment GLP-1 receptor agonist (insulin-naïve) patients:*** 10 dose steps (Suliqua 10-40 pen). ***Patients who have previously received ≥20<30 units insulin glargine (100 units/ml):*** 20 dose steps (Suliqua 10-40 pen). ***Patients who have previously received ≥30≤60 units insulin glargine (100 units/ml):*** 30 dose steps (Suliqua 30-60 pen). ***Patients who previously received twice daily basal insulin or insulin glargine (300 units/ml):*** total daily dose previously used should be reduced by 20% to choose the Suliqua starting dose. Suliqua is to be dosed in accordance with the individual patient's need for insulin. It is recommended to optimise glycaemic control via dose adjustment based on fasting plasma glucose. Close glucose monitoring is recommended during the transfer and in the following weeks. Max. daily dose 60 units insulin glargine and 20µg lixisenatide corresponding to 60 dose steps. Suliqua should be injected once a day within 1 hour prior to a meal. It is preferable that the prandial injection is performed before the same meal every day. Patients adjusting the amount or timing of dosing should only do so under medical supervision with appropriate glucose monitoring. ***Elderly (≥65 years old):*** Dose should be adjusted on an individual basis, based on glucose monitoring. No dose adjustment is required for lixisenatide. Data is limited in patients ≥75 years of age. ***Severe renal impairment (creatinine clearance less than 30 ml/min) and end-stage renal disease: Suliqua is not recommended. Mild to moderate renal impairment; Hepatic impairment:*** No dose adjustment is required for lixisenatide. Insulin requirements may be diminished due to reduced insulin metabolism. Frequent glucose monitoring and dose adjustment may be necessary. ***Paediatric population:*** No data available.
Contraindications: Hypersensitivity to the active substances or to any of the excipients.
Warnings and precautions: ***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. Suliqua should not be used in patients with type 1 diabetes mellitus or for the treatment of diabetic ketoacidosis. Patients must be instructed to perform continuous rotation of the injection site to reduce the risk of developing lipodystrophy and cutaneous amyloidosis. There is a potential risk of delayed insulin absorption and worsened glycaemic control following insulin injections at sites with these reactions. A sudden change in the injection site to an unaffected area has been reported to result in hypoglycaemia. Blood glucose monitoring is recommended after the change in the injection site, and dose adjustment of antidiabetic medications may be considered. ***Hypoglycaemia:*** Hypoglycaemia was the most frequently reported observed adverse reaction during treatment with Suliqua. Hypoglycaemia may occur if the dose of Suliqua is higher than required. A number of factors may increase susceptibility to hypoglycaemia. These would require particularly close monitoring and may necessitate dose adjustment. ***Acute pancreatitis:*** Use of glucagon-like peptide-1 (GLP-1) receptor agonists has been associated with a risk of developing acute pancreatitis. There have been few reported events of acute pancreatitis with lixisenatide although a causal relationship has not been established. Patients should be informed of the characteristic symptoms of acute pancreatitis: persistent, severe abdominal pain. If pancreatitis is suspected, Suliqua should be discontinued; if acute pancreatitis is confirmed, lixisenatide should not be restarted. Caution should be exercised in patients with a history of pancreatitis. ***Severe gastrointestinal disease:*** Use of GLP-1 receptor agonists may be associated with gastrointestinal adverse reactions. Suliqua has not been studied in patients with severe gastrointestinal disease, including severe gastroparesis and therefore, the use of Suliqua is not recommended in these patients. ***Concomitant medicinal products:*** The delay of gastric emptying with lixisenatide may reduce the rate of absorption of orally administered medicinal products. Suliqua should be used with caution in patients receiving oral medicinal products that require rapid gastrointestinal absorption, require careful clinical monitoring or have a narrow therapeutic ratio. ***Dehydration:*** Patients treated with Suliqua should be advised of the potential risk of dehydration in relation to gastrointestinal adverse reactions and take precautions to avoid fluid depletion. ***Antibody formation:*** Administration of Suliqua may cause formation of antibodies against insulin glargine and/or lixisenatide. In rare cases, the presence of such antibodies may necessitate adjustment of the Suliqua dose in order to correct a tendency for hyperglycaemia or hypoglycaemia. ***Avoidance of medication errors:*** Patients must be instructed to always check the pen label before each injection to avoid accidental mix-ups between the two different strengths of Suliqua and mix-ups with other injectable diabetes medicinal products. ***Excipients:*** This medicinal product contains <1 mmol (23 mg) sodium per dose, thus is essentially 'sodium-free'. It also contains metacresol, which may cause allergic reactions.
Interactions: Patients receiving medicinal products of either a narrow therapeutic ratio or medicinal products that require careful clinical monitoring should be followed closely, especially at the time of initiation of lixisenatide treatment. These medicinal products should be taken in a standardised way in relation to lixisenatide. If such medicinal products are to be administered with food, patients should be advised to, if possible, take them with a meal when lixisenatide is not administered. For oral medicinal products that are particularly dependent on threshold concentrations for efficacy, such as antibiotics, and gastro-resistant formulations containing substances sensitive to stomach degradation, patients should be advised to take those medicinal products at least 1 hour before or 4 hours after lixisenatide injection. ***Fertility, pregnancy and lactation:*** Suliqua is not recommended in women of childbearing potential not using contraception. No clinical data on exposed pregnancies from controlled clinical studies. Although >1000 pregnancy outcomes with insulin glargine indicate no specific adverse effects on pregnancy, there are no adequate data from the use of lixisenatide in pregnant women. Studies with lixisenatide in animals have shown reproductive toxicity. Suliqua should not be used during pregnancy. If a patient wishes to become pregnant, or pregnancy occurs, treatment with Suliqua should be discontinued. It is unknown whether insulin glargine or lixisenatide is excreted in human milk, thus should not be used during breastfeeding. Animal studies with lixisenatide or insulin glargine do not indicate direct harmful effects with respect to fertility.
Adverse reactions: ***Very common:*** Hypoglycaemia. ***Common:*** Dizziness, Nausea, Diarrhoea, Vomiting, Injection Site Reactions. ***Not known:*** Cutaneous amyloidosis, lipodystrophy.
Legal classification: POM. **List price:** Suliqua 100 units/ml + 50µg/ml solution for injection in a pre filled pen (10 40 pen) x3 pack: £67.50; Suliqua 100 units/ml + 33µg/ml solution for injection in a pre filled pen (30 60 pen) x3 pack: £48.60. **Marketing authorisation holder:** Sanofi-aventis groupe, 54, rue La Boétie, 75008 Paris, France. **Marketing authorisation numbers:** EU/1/16/1157/001-006. **For more information please contact:** Medical Information, Sanofi, 410 Thames Valley Park Drive, Reading, Berkshire, RG6 1PT, UK. uk-medicalinformation@sanofi.com. **Date of preparation:** September 2020.

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Adverse events should also be reported to Sanofi Tel: 0800 0902314. Alternatively, send via email to UK-drugsafety@sanofi.com

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