Lixisenatide (Lyxumia®)

Prescribing Information Sheet – Updated November 2020

This document provides general prescribing information on the use of lixisenatide. For the most up to date information, consult the summary of product characteristics (SPC)

For information on place in therapy, prescribing and monitoring requirements and responsibilities, please see the 'Overarching Shared Care Guideline for the use of Glucagon-like peptide 1 (GLP 1) agonists.' Document.

Licensed Indication	Lixisenatide is indicated for the treatment of adults with type 2 diabetes mellitus to achieve glycaemic control in combination with oral glucose-lowering medicinal products and/or basal insulin when these, together with diet and exercise, do not provide adequate glycaemic control. (See SPC for further details on which combinations have data to support use – Decision to prescribe is left to the discretion of the clinician).
Drug dose	**ADULT** over 18 years, initially 10 micrograms once daily within 1 hour before the first meal of the day or the evening meal for 14 days, increased to 20 micrograms once daily thereafter. It is preferable that the prandial injection of lixisenatide is performed before the same meal every day, when the most convenient meal has been chosen. If a dose of lixisenatide is missed, it should be injected within the hour prior to the next meal. **Counselling** If a dose is missed, inject within 1 hour before the next meal—do not administer **after** a meal. Some oral medications should be taken at least 1 hour before or 4 hours after lixisenatide injection—consult product literature for details. **Added to other hypoglycaemic agents** When lixisenatide is added to existing metformin therapy, the current metformin dose can be continued unchanged. When lixisenatide is added to existing therapy of a sulphonylurea or a basal insulin, a reduction in the dose of the sulphonylurea or the basal insulin may be considered to reduce the risk of hypoglycaemia. Lixisenatide should not be given in combination with basal insulin and a sulphonylurea due to increased risk of hypoglycaemia. The use of Lyxumia does not require specific blood glucose monitoring. However, when used in combination with a sulphonylurea or a basal insulin, blood glucose monitoring or blood glucose self-monitoring may become necessary to adjust the doses of the sulphonylurea or the basal insulin.
Drug modifications in Special Populations	**Elderly** • No dose adjustment is needed based on age. **Renal impairment**

	• Use with caution if eGFR 30–50 mL/minute/1.73 m^2; avoid if eGFR less than 30 mL/minute/1.73 m^2—no information available. • Do not use in patients with end stage renal disease. • No dose adjustment is required for patients with mild or moderate renal impairment. **Hepatic impairment** • No dose adjustment is needed in patients with hepatic impairment.
Administration details	• Lixisenatide should be injected subcutaneously into the thigh, abdomen or upper arm. • Lixisenatide should not be administered intravenously or intramuscularly. • Injection site should be rotated.
Formulations	Injection, 50 micrograms/mL, 10 micrograms/dose prefilled pen (14 doses); 100 micrograms/mL, 20 micrograms/dose prefilled pen (14 doses) × 2; treatment initiation pack, 10 micrograms/dose prefilled pen and 20 micrograms/dose prefilled pen.
Contra-indications / Cautions	**Contraindications –** Ketoacidosis, severe gastro-intestinal disease. **Cautions** discontinue if symptoms of acute pancreatitis (persistent, severe abdominal pain). 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, lixisenatide should be discontinued ; if acute pancreatitis is confirmed, lixisenatide should not be restarted. Caution should be exercised in patients with a history of pancreatitis. Patients treated with lixisenatide should be advised of the potential risk of dehydration in relation to gastrointestinal adverse reactions and take precautions to avoid fluid depletion. There is no therapeutic experience with lixisenatide in patients with type 1 diabetes mellitus and it should not be used in these patients. Lixisenatide should not be used for treatment of diabetic ketoacidosis. Clinicians should refer to the current electronic BNF or Summary of Product Characteristics (SPC's) for full details.
Side effects	Clinicians should refer to the Summary of Product Characteristics (SPC) and current electronic BNF for full details **Very Common Side Effects** • Hypoglycaemia (in combination with a sulphonylurea and / or a basal insulin) • Headache • Nausea and Vomiting • Diarrhoea Further Information: Discontinue if symptoms of acute pancreatitis (persistent, severe abdominal pain).

	MHRA warning (June 2019) – GLP-1 receptor agonists: reports of diabetic ketoacidosis when concomitant insulin was rapidly reduced or discontinued. Lixisenatide was not subject to the EU review. At the time of publication of the MHRA warning, no UK reports of diabetic ketoacidosis in association with lixisenatide has been received. However, the theoretical risk of ketoacidosis when changes are made to insulin dose cannot be excluded. Report all suspected reactions to established drugs that are serious, medically significant, or result in harm to the MHRA using the yellow card scheme. http://yellowcard.mhra.gov.uk/
Drug Interactions	Clinicians should check the Summary of Product Characteristics (SPC) and the current electronic BNF for a full list of potential drug interactions before starting any new medication or when stopping any existing medication. The delay of gastric emptying with lixisenatide may reduce the rate of absorption of orally administered medicinal products. 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, patients should be advised to take those medicinal products at least 1 hour before or 4 hours after lixisenatide injection. Gastro-resistant formulations containing substances sensitive to stomach degradation, should be administered 1 hour before or 4 hours after lixisenatide injection.
Pregnancy and Breastfeeding	Pregnancy There are no adequate data from the use of lixisenatide in pregnant women. Studies in animals have shown reproductive toxicity. The potential risk for humans is unknown. Lixisenatide should not be used during pregnancy. The use of insulin is recommended instead. If a patient wishes to become pregnant, or pregnancy occurs, treatment with lixisenatide should be discontinued. Breast-feeding It is unknown if lixisenatide is excreted in human milk. Lixisenatide should not be used during breast-feeding.
Effects on ability to drive and use machines	Lixisenatide has no or negligible influence on the ability to drive or use machines. When used in combination with a sulphonylurea or a basal insulin, patients should be advised to take precautions to avoid hypoglycaemia while driving and using machines.
Storage Conditions	Lixisenatide should be stored in a refrigerator (2°C - 8°C). After its first use, lixisenatide should be stored below 30°C and has a shelf-life of 14 days.

	Lixisenatide should not be frozen under any circumstances. In addition, the pen on the cap should be kept on when the device is not in use, in order to protect the active ingredient from light.

References:-

1. Summary of Product Characteristics for Lixumia® (Lxisenatide), accessed 30/10/20
2. eBNF, accessed 30/10/20
3. Drug Safety Update, MHRA, June 2019