Breastfeeding and Medication

Semaglutide and Breastfeeding

There are no studies into the passage of semaglutide into breastmilk. However, the limited oral bioavailability and high plasma protein binding makes it unlikely that it would be absorbed from breastmilk. This is supported by all expert sources as listed below (accessed March 2023) but not proven by studies.

Semaglutide binds to, and activates, the GLP-1 (glucagon-like peptide-1) receptor to increase insulin secretion, suppress glucagon secretion, and slow gastric emptying.

Semaglutide is used to treat Type 2 diabetes mellitus as monotherapy (if metformin inappropriate), or in combination with other antidiabetic drugs (including insulin) if existing treatment fails to achieve adequate glycaemic control. In March 2023 it was recommended for the treatment of obesity in specific circumstances.

Use in obesity.

Semaglutide (Wegovy™) was recommended by the National Institute for Health and Care Excellence (NICE) to treat thousands of people with obesity in England (March 2023). Semaglutide will be allowed to be prescribed to help people lose weight as part of their treatment in an NHS specialist weight management service. The drug works by suppressing appetite by mimicking the hormone glucagon-like peptide-1 (GLP-1), which is released after eating. It is injected once a week by patients. NICE first recommended the drug in draft guidance 2022, after a clinical trial of just under 2000 volunteers found that people lost on average 12% more weight with semaglutide alongside supervised weight loss coaching (BMJ 2023;380:556).

Guidelines for use in obesity

Semaglutide is recommended as an option for weight management, including weight loss and weight maintenance, alongside a reduced-calorie diet and increased physical activity in adults, only if:

 The information on this sheet is based upon my professional experience as a pharmacist with a specialised interest in the safety of drugs in breastmilk, supported by evidence from expert sources. However, I cannot take responsibility for the prescription of medication which remains with the healthcare professionals involved. I am happy to discuss the evidence by email wendy@breastfeeding-and-medication.co.uk

- it is used for a maximum of 2 years, and within a specialist weight management service providing multidisciplinary management of overweight or obesity (including but not limited to tiers 3 and 4), **and**
- they have at least 1 weight-related comorbidity **and**:
- a body mass index (BMI) of at least 35.0 kg/m2, or a BMI of 30.0 kg/m2 to 34.9 kg/m2 and meet the criteria for referral to specialist weight management services in NICE's guideline on obesity: identification, assessment and management.

Consideration should be made to stop semaglutide if less than 5% of the initial weight has been lost after 6 months of treatment. (https://www.nice.org.uk/guidance/TA875/chapter/1-Recommendations)

Currently Wegovy is not commercially available. Ozempic is available but is not licensed for weight management but only treatment of diabetes.

Dose

By subcutaneous injection(Ozempic™): Initially 0.25 mg once weekly for 4 weeks, then increased to 0.5 mg once weekly for at least 4 weeks, then increased if necessary to 1 mg once weekly.

By mouth (Rybelsus™): Initially 3 mg once daily for 1 month, then increased to 7 mg once daily for at least 1 month, then increased if necessary to 14 mg once daily, dose to be taken on an empty stomach, one 14 mg tablet should be used to achieve a 14 mg dose; use of two 7 mg tablets to achieve a 14 mg dose has not been studied and is therefore not recommended; maximum 14 mg per day.

By subcutaneous injection (Wegovy™): initially 0.25 mg once a week and increased every 4 weeks until the full dose of 2.4 mg is reached.

Compatibility with breastfeeding

- It is currently not known if semaglutide is excreted in human milk. The molecular weight of this medication means that it would have great difficulty entering breast milk. It is described as having oral bioavailability < 1% although an oral preparation exists. In consequence very little of this medication would be absorbed by the infant orally even if found in breast milk. The risk of this in a breastfed infant would be expected to be very low (Hale and Krutsch).
- Manufacturer advises avoid stating that it is present in milk in animal studies. so its use in a lactating mother would be outside of the product licence (BNF)
- No information is available on the clinical use of semaglutide during breastfeeding. Because semaglutide is a peptide molecule with a molecular weight of 4113 daltons and is over 99% protein bound, the amount in milk is likely to be very low. Absorption by the infant is unlikely because the drug is probably destroyed in the infant's gastrointestinal tract. Until more data become available, semaglutide should be used with caution during breastfeeding,

especially while nursing a new-born or preterm infant. (https://www.ncbi.nlm.nih.gov/books/NBK500980/)

- Elactancia cites semaglutide as of very low risk in lactation (https://www.e-lactancia.org/breastfeeding/semaglutide/product/). Its high molecular weight and high fixation to plasma proteins make it very unlikely to pass into mothers' milk in a clinically significant quantity. (Serrano 2015). In addition, due to its protein nature it is inactivated in the gastrointestinal tract, not being absorbed (practically null oral bioavailability), which hinders or prevents the passage into plasma of the infant from ingested breast milk (Serrano 2015), except in premature infants and during the immediate neonatal period, in which there may be greater intestinal permeability.

Common or very common side effects

Appetite decreased; burping; cholelithiasis; constipation; diarrhoea; dizziness; fatigue; gastrointestinal discomfort; gastrointestinal disorders; hypoglycaemia (in combination with insulin or sulfonylurea); nausea; vomiting; weight decreased (BNF).

Monitoring of nursling for side effects

Although adverse effects have not been noted the baby should be monitored for decreased appetite, abdominal distension, GERD, constipation, diarrhoea. (Hale and Krutsch)

Can my GP prescribe Wegovy™ in the UK for weight loss?

Semaglutide can only be prescribed as part of a specialist (tertiary) weight management service with multidisciplinary input and for a maximum of two years.
https://www.nice.org.uk/guidance/ta875/chapter/1-Recommendations

Conception and contraception

Manufacturer advises women of childbearing potential should use effective contraception during and for at least two months after stopping treatment.

References

Drugs and Lactation Database (LactMed) https://www.ncbi.nlm.nih.gov/books/NBK501922/

Hale TW and Krutsch K Hale's Medications & Mothers' Milk™ 2023: A Manual of Lactational Pharmacology (online access HalesMeds.com January 2023)

Joint Formulary Committee (2022) British National Formulary. [Online]. London: British Medical Association and Royal Pharmaceutical Society of Great Britain. Available at: Medicines Complete Database, [Accessed January 2023].

Elactancia Is it compatible with breastfeeding? https://www.e-lactancia.org/

Serrano Aguayo P, García de Quirós Muñoz JM, Bretón Lesmes I, Cózar León MV. Tratamiento de enfermedades endocrinológicas durante la lactancia. [Endocrinologic diseases management during breastfeeding.] Med Clin (Barc). 2015 Jan 20;144(2):73-9.