

BACKGROUND

Obesity is a growing health concern associated with comorbidities such as type 2 diabetes mellitus and cardiovascular disease. Global prevalence has more than doubled since 1990, with 16% of adults classified as obese in 2022¹.

The emergence of pharmacotherapy for weight loss has expanded management options for obesity. These medications are increasingly accessible via prescription and online platforms, with varying levels of clinical oversight.

As use rises, dental professionals are likely to encounter an increasing number of patients taking these medications. However, evidence regarding their oral health implications remains limited, highlighting the need for further research and underpinning the rationale for this project.

METHODOLOGY

A literature search was conducted across the Cochrane Library, PubMed, and Embase databases to identify studies published up to December 2025 that met the following inclusion criteria:

- Observational studies, case reports, clinical trials and systematic reviews reporting dental outcomes associated with weight-loss medications approved for use in the UK
- Weight loss pharmacotherapy investigated comprised semaglutide, liraglutide, tirzepatide, orlistat, and naltrexon/bupropion combination therapy
- English-language publications

In vitro, in vivo, commentaries and letters to editors were excluded.

A total of 108 papers were identified following abstract screening, with 31 included after full-text review and bibliography screening.

RESULTS

GLP-1 receptor agonists	Orlistat	Bupropion/naltrexone
Xerostomia	Gingivitis	Xerostomia
Dysgeusia	Aphthous ulceration	Dysgeusia
Ageusia		
Oral hypoaesthesia Oral Paraesthesia		
↓ Peri-implant bone loss at 1 year		
Dental caries		
Breath odour		
Improved taste perception		
Facial oedema		
Vesiculobullous disease		

Figure 1. Summary of dental outcomes associated with weight loss medications.

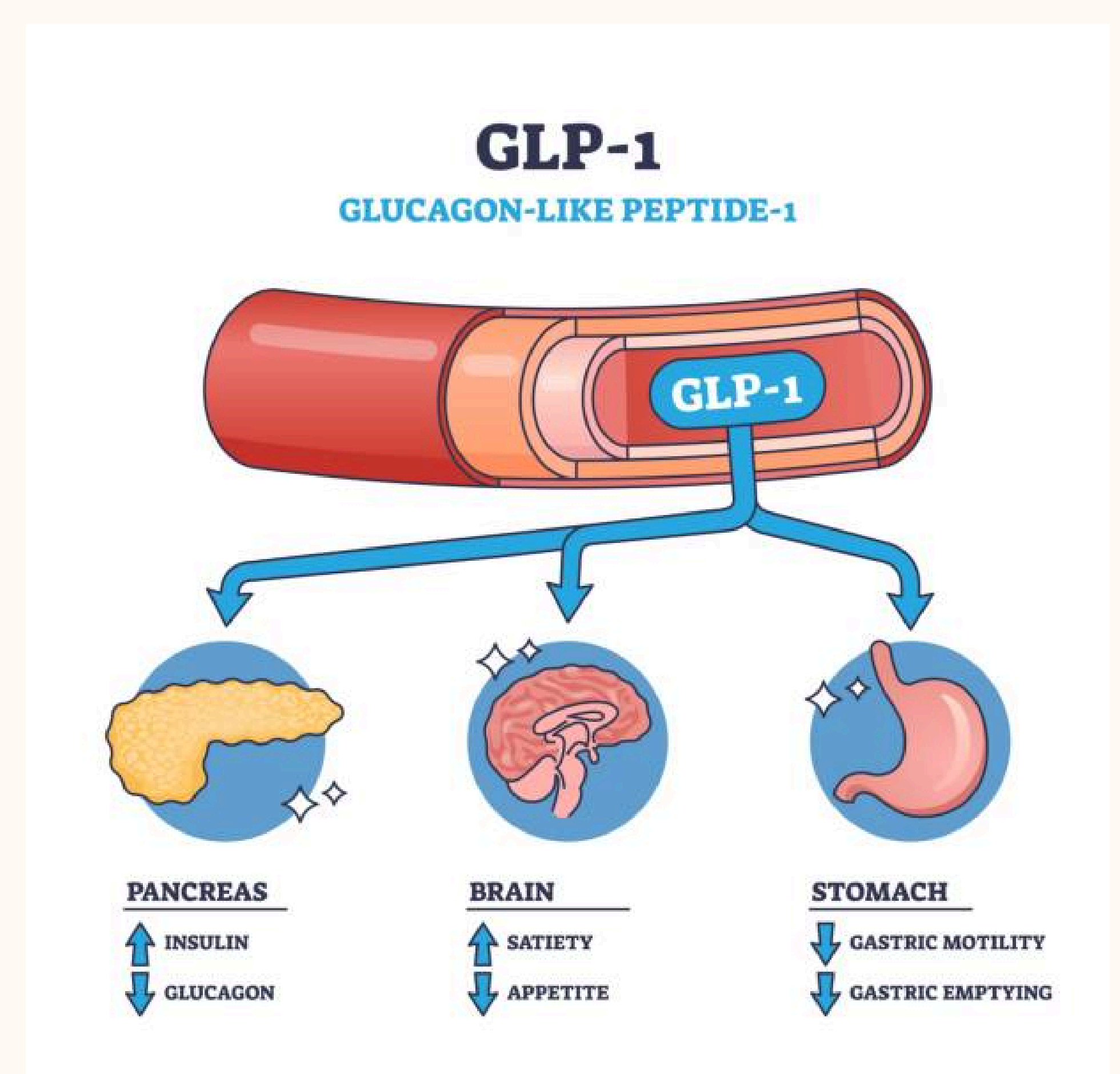


Figure 2. Mechanism of action of GLP-1 receptor agonists.²

CONCLUSION

- The dental effects of weight loss pharmacotherapy are limited and less frequently reported than extra-oral effects.
- The quantity and quality of evidence with a specific dental focus is limited, making it unclear whether oral manifestations are truly less common, or whether they are under-recognised and under-reported in the literature. Further research is required to assess the prevalence and clinical significance of these effects.
- Pre-clinical studies suggest potential periodontal benefits, including reduced pro-inflammatory, cytotoxic, antioxidant, and matrix metalloproteinase activity, as well as suppression of osteoclast activity³.
- Common gastrointestinal side effects associated with GLP-1 receptor agonists, such as vomiting and gastro-oesophageal reflux, may contribute to tooth wear and taste disturbances.
- In addition, delayed gastric emptying may increase the risk of pulmonary aspiration during general anaesthesia and intravenous sedation, and may necessitate modification of fasting instructions or medication regimens⁴.

REFERENCES

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