The craze with semaglutide

Submission: 07-04-2024 Revision: 22-04-2024 Publication: 01-06-2024

Semaglutide (Ozempic acid) belongs to a class of drugs called glucagon-like peptide-1 (GLP-1) receptor agonists.[1] These medications mimic the action of a hormone called GLP-1, which helps regulate blood glucose and promotes weight loss.[2] One role of GLP-1 is to prompt the body to produce more insulin, which reduces blood sugar (glucose). Because of this, doctors have been treating type 2 diabetes with semaglutide for more than 15 years. Higher doses of GLP-1, however, also cause anoxia by interacting with the brain regions responsible for appetite suppression.[3] When combined with diet and exercise, it can help people who are obese or overweight lose a significant amount of weight and lower their risk of developing diabetes, heart disease, and cancer. This effect of Semaglutide made it an appropriate candidate for weight loss.[4] At present, semaglutide is only approved for weight loss under the brand name Wegovy.[5] Public demand and craze for weight loss have prompted the usage and misusage of semaglutide. As interest and obsession with weight loss programs continue to grow, health-care professionals are forced to improvise their strategy to manage the demand. One way to meet needs is to prescribe other brands of semaglutide, such as Ozempic and Rybelsus (using a Food and Drug Administration [FDA]-approved drug for a different reason).[6] The FDA recommends Wegovy for weight loss if you meet one of the following criteria:

The FDA guidelines for semaglutide usage only if body mass index (BMI) is 27 kg/m^2 or greater along with other co-morbidities such as high blood pressure, type 2 diabetes, or high cholesterol or a BMI >30 kg/m^2. This has become so rampant that genuine users of semaglutide who need it for managing their blood sugar are finding it missing from the shelf. Overuse or improper use often comes with adverse consequences, such as hypoglycemia, confusion, dizziness, seizures, headache, and even loss of consciousness. The craze for semaglutide needs to be cautiously weighed before consumption.[7-10]

Ruby Dhar[1], Arun Kumar[2], Subhradip Karmakar[3]

[1]Scientist, [3]Additional Professor, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi, [2]Professor, Department of Biochemistry, Narayan Medical College, Gopal Narayan Singh University, Sasaram, Bihar, India

Access this article online

Website: http://nepjol.info/index.php/AJMS

DOI: 10.3126/ajms.v15i6.64582

E-ISSN: 2091-0576

P-ISSN: 2467-9100

Address for Correspondence:
Dr. Subhradip Karmakar, Additional Professor, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi, India. **Mobile:** +91-9999612564. **E-mail:** subhradipaiims@gmail.com
Dr. Arun Kumar, Professor, Department of Biochemistry, Narayan Medical College, Gopal Narayan Singh University, Sasaram, Bihar, India. **Mobile:** +91-7584089886. **E-mail:** profdrarunk@gnsu.ac.in

REFERENCES

1. Yin YH, Sang LX and Chang B. Potential therapeutic targets for nonalcoholic fatty liver disease: Glucagon-like peptide 1. World J Gastroenterol. 2023;29(48):6235-6238. https://doi.org/10.3748/wjg.v29.i48.6235
2. Nassar M, Chaudhuri A, Ghanim H and Dandona P. Glucagon-like peptide-1 receptor agonists as a possible intervention to delay the onset of type 1 diabetes: A new horizon. World J Diabetes. 2024;15(2):133-136. https://doi.org/10.4239/wjd.v15.i2.133
3. Christoffersen BØ, Sanchez-Delgado G, John LM, Ryan DH, Raun K and Ravussin E. Beyond appetite regulation: Targeting energy expenditure, fat oxidation, and lean mass preservation for sustainable weight loss. Obesity (Silver Spring). 2022;30(4):841-857. https://doi.org/10.1002/oby.23374
4. Cigrovski Berkovic M and Strollo F. Semaglutide-eye-catching results. World J Diabetes. 2023;14(4):424-434. https://doi.org/10.4239/wjd.v14.i4.424
5. FDA Approves New Drug Treatment for Chronic Weight Management, First Since 2014. Available from: https://www.fda.gov/news-events/press-announcements/fda-approves-new-drug-treatment-chronic-weight-management-first-2014 [Last accessed on 2024 Apr 06].
6. Karásek D. Oral semaglutide-Rybelsus®, the first GLP-1

receptor agonist for oral use in clinical practice. Vnitr Lek. 2022;68(2):89-95.

7. Wright EE Jr. and Aroda VR. Clinical review of the efficacy and safety of oral semaglutide in patients with type 2 diabetes considered for injectable GLP-1 receptor agonist therapy or currently on insulin therapy. Postgrad Med. 2020;132(sup2):26-36. https://doi.org/10.1080/00325481.2020.1798127
8. Lenharo M. Anti-obesity drugs' side effects: What we know so far. Nature. 2023;622(7984):682. https://doi.org/10.1038/d41586-023-03183-3
9. Peter R and Bain SC. Safety of injectable semaglutide for type 2 diabetes. Expert Opin Drug Saf. 2020;19(7):785-798. https://doi.org/10.1080/14740338.2020.1772230
10. Masson W, Lobo M, Barbagelata L, Lavalle-Cobo A and Nogueira JP. Acute pancreatitis due to different semaglutide regimens: An updated meta-analysis. Endocrinol Diabetes Nutr (Engl Ed). 2024;71(3):124-132. https://doi.org/10.1016/j.endien.2024.03.012

Authors Contribution:
RD, AK and SK- Contributed equally toward scripting of this editorial.

Work attributed to:
Department of Biochemistry, All India Institute of Medical Sciences, New Delhi, India and Department of Biochemistry, Narayan Medical College, Gopal Narayan Singh University, Sasaram, Bihar, India.

Orcid ID:
Dr. Ruby Dhar - https://orcid.org/0000-0003-3600-6554
Dr. Arun Kumar - https://orcid.org/0000-0002-8800-0296
Dr. Subhradip Karmakar - https://orcid.org/0000-0002-4757-8729

Source of Support: Nil, **Conflicts of Interest:** None declared.