

# Natural Weight Loss or "Ozempic Face": Demystifying A Social Media Phenomenon

Alexa Carboni BS,<sup>a</sup> Sabrina Woessner BS,<sup>a</sup> Olnita Martini MS,<sup>a</sup>  
Nathaniel A. Marroquin BS,<sup>a</sup> Jacquelyn Waller PharmD BCPS<sup>b</sup>

<sup>a</sup>College of Osteopathic Medicine, Rocky Vista University, Parker, CO

<sup>b</sup>Montana College of Osteopathic Medicine, Rocky Vista University, Billings, MT

## ABSTRACT

New patients turning to semaglutide (Ozempic<sup>®</sup> and Wegovy<sup>®</sup>), a glucagon-like-peptide 1 (GLP-1) agonist, for weight loss, have captivated social media platforms. Wegovy<sup>®</sup> carries a United States (US) Food and Drug Administration (FDA) approval for chronic weight management in patients who have a body mass index (BMI)  $\geq 27$  kg/m<sup>2</sup> and at least one weight-related condition (eg, hypertension, type 2 diabetes, cholesterol) or in patients with a  $\geq 30$  kg/m<sup>2</sup> BMI. Although other semaglutide formulations are not FDA approved for weight loss, the term "Ozempic face" has consumed the media with the medication's rising popularity. This term is a new purported side effect, used to describe the rapid facial weight loss leaving a distorted facial appearance. This challenges the healthcare team to discern whether a new adverse effect is a novel or a natural consequence of rapid weight loss. Dermatologists are well positioned to counsel patients receiving or discontinuing GLP-1 agonists and recommend appropriate countermeasures, as appropriate.

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## INTRODUCTION

As diabetes mellitus medications with weight loss benefits become increasingly popular, non-diabetic patients turn to medications like Ozempic<sup>®</sup> and Wegovy<sup>®</sup> (generic semaglutide) for a similar intervention. Only Wegovy<sup>®</sup> has been approved by the United States (US) Food and Drug Administration (FDA) for chronic weight management in patients who have a body mass index (BMI)  $\geq 27$  kg/m<sup>2</sup> and at least one weight-related condition (eg, hypertension, type 2 diabetes, cholesterol) or in patients with a  $\geq 30$  kg/m<sup>2</sup> BMI.<sup>1</sup>

Increasing use of these medications has generated the emergence of the term "Ozempic face" across social media platforms as diabetic and non-diabetic patients experience adverse effects. The term describes the extreme weight loss in the face leaving distorted contours of facial anatomy and skin sagging.<sup>2</sup> Semaglutide, a glucagon-like-peptide 1 (GLP-1) agonist, is indicated for type 2 diabetes mellitus and may be preferred in patients with comorbidities such as atherosclerotic cardiovascular disease (Ozempic<sup>®</sup>).<sup>3</sup> Side effects of GLP-1 agonists include nausea, gastrointestinal upset, pancreatitis, and weight loss.<sup>4</sup> Although known to cause weight loss, the relationship between the GLP-1 agonist mechanism of action and facial weight loss is not characterized and may be unrelated. Our review of normal physiological responses to weight loss aims to demystify the "Ozempic face."

### Known GLP-1 Agonists and Weight Loss

GLP-1 agonists increase glucose-dependent insulin release, decrease glucagon secretion, and reduce gastric emptying, promoting an increase in patients' satiety.<sup>5</sup> Evidence of GLP-1

agonists favoring adipose catabolism of the face, as opposed to other body regions, is lacking.<sup>3,5,6</sup> In addition to lifestyle modification, GLP-1 agonist use for the treatment of type 2 diabetes mellitus may yield an average of 17.6% weight loss versus 2% weight loss with lifestyle modification alone for 68 weeks.<sup>3</sup>

### Adipose and Facial Contour

Elastin, a main component of the dermal skin layer, allows skin to stretch and recoil.<sup>2</sup> Over time, elastin turnover decreases and can be damaged by various factors including ultraviolet (UV) radiation.<sup>2,6</sup> When patients receive a GLP-1 agonist known to increase weight loss, concurrently with a natural decline in elastin turnover, the lack of recoil and loss of subcutaneous fat can produce wrinkling and sagging; this effect may have gone undetected until the addition of GLP-1 agonist. There is no evidence that subcutaneous adipose tissue is more likely to be catabolized compared to other adipose stores.

### A Dermatologist's Role

Dermatologists must ask about concomitant medication use when consulting patients requesting facial fillers. Given the ongoing social media phenomenon, physicians must consider recent weight loss with GLP-1 agonists as patients attempt to combat the wrinkling and sagging effects caused by rapid weight loss. According to the American Academy of Dermatology, facial fillers provide immediate results to replace and combat skin elasticity and can last between two months to indefinitely.<sup>7</sup> Dermatologists must anticipate an emerging patient population seeking fillers after GLP-1 agonist use and explain realistic expectations with medication use, weight loss,

and fillers. This includes hypothetically dissolving fillers after GLP-1 agonist cessation as they regain natural adipose tissue around the face to prevent compounded fullness of facial features. This is an important consideration for patients electing for a more permanent facial filler. Dermatologists should take a comprehensive patient history to ensure patients taking GLP-1 agonists (both on- and off-label) are aware that cessation will lead to weight regain<sup>8</sup> and to counsel patients appropriately.

## DISCUSSION

Physicians must counsel patients about expected medication outcomes. Dermatologists are instrumental in discussing the potential side effects of facial fillers with concurrent GLP-1 agonist intake. Increasing focus across social media platforms demonstrates GLP-1 agonist popularity among non-diabetic patients seeking rapid weight loss. Despite this phenomenon, this adverse effect is explained by any variation of rapid weight loss in combination with slow elastin turnover and is not solely medication derived.

## CONCLUSION

Available evidence confirms the effectiveness of GLP-1 agonist weight loss in patients with and without type 2 diabetes mellitus. As consumers turn to social media as a source of medical information, misinformation occurs. Currently, there is no evidence to suggest GLP-1 agonists directly catabolize adipocytes within the face. As the usage of semaglutide increases, it is critical that a dermatologist obtains an accurate history from a patient and counsels them on the compounded effect of facial filler and GLP-1 agonist cessation.

## DISCLOSURES

The authors have no conflicts of interest to declare.

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## AUTHOR CORRESPONDENCE

**Jacquelyn Waller PharmD BCPS**

E-mail:..... jwaller@rvu.edu