

The Weight Loss Drug Goldrush

M Saleemuddin

THE World Obesity Atlas 2023, published by the World Obesity Federation, suggests that over 39% of the current global population (3.12 billion) is either overweight or obese. The numbers are likely to reach 50% (4.0 billion) by the year 2035. While obesity and overweight plague developed countries severely, the rise of obesity amongst low-income countries is also alarming. The health consequences of overweight and obesity, including heart disease and diabetes, are a huge drag. It is therefore not surprising that there exists a high demand for anti-obesity drugs, and according to Barclays analysts led by Emil Field, “the growth in the market for obesity drugs is set to be worth a staggering \$100 billion by 2030.”

Several pharmaceutical companies have been striving to develop weight-loss drugs. Some drugs have come to the market, but these met with limited success because of their poor efficacy and serious side effects. Two pharmaceutical giants, the Danish Novo Nordisk and American Eli Lilly, recently received US Food and Drug Administration (FDA) approval (and similar clearance in a few other countries) for drugs that cause remarkable weight loss in the obese. The drugs that mimic the gut hormone Glucagon Like Peptide-1 (GLP-1), were originally developed to treat Type 2 Diabetes (T2D). The drugs proved not only highly effective in T2D treatment but also caused weight loss in the subjects during clinical trials. To lead to optimum weight loss, the manufacturers made changes in dosage and other modifications.

The drugs became so popular soon after their approval and marketing that the companies are finding it hard to meet their global demand; although the majority of the users are ineligible for reimbursement from their insurance, they are using their own resources to buy the drugs. Many are using the new weight loss drugs, and the prestigious American Journal *Science* has named GLP-1 drugs the Breakthrough of the Year 2023, while the mainstream media called the development of weight loss drugs “medical sensation of the decade.”

Obesity is a Complex Disease

A person is considered overweight when his Body Mass Index (BMI) (body weight in kilograms divided by square of height in metres) exceeds twenty-five and obese when it is more

than thirty. Obesity is a complex disease resulting from the accumulation of excess fat in the body. More than a cosmetic concern, it is a serious medical problem that increases the risk of various other diseases, including diabetes, cardiovascular problems, stroke, high blood pressure, sleep apnea and cancers. Simply put, obesity results when one consumes more calories in the diet than one burns through daily activities and exercise, but genetic, behavioural, metabolic, and hormonal influences additionally contribute towards the development of obesity. People with obesity tend to consume more calories before feeling full, feel hungry sooner or eat more due to stress or anxiety.

In the evolutionary past, humans were often subject to famines, and it was advantageous for them to fatten up because those with more fat in their bodies were more likely to survive the famines. Our appetites may have, therefore, evolved to prod us to eat more than our bodies need when food is abundantly available. The human body has evolved a remarkable capacity to store fat compared to the primates from whom we have evolved. A healthy body fat for a human ranges between 14% and 31%, compared to the 9% body fat found in other primates.

Since a large section of the global population currently lives in a food-plenty environment, easy access to abundant food may have resulted in an obesity epidemic. Obesity continues to be seen by many as a lifestyle choice, something that people should manage by themselves. Scientific evidence, however, suggests that obesity is far more complicated, and mere eating less rarely addresses the issue. Obese bodies may respond to a calorie-deficit diet by increasing hunger and reducing the feeling of fullness, making weight loss highly challenging. According to Vijaya Surampudi of the University of California Los Angeles' Weight Management Programme, “Obesity is a heterogeneous, chronic, and complex disease. There is no cure for obesity; it requires lifelong treatment that is not one size fits all.”

The New Weight Loss Drugs are GLP-1 Agonists
The new weight loss drugs, as mentioned earlier, are the offshoot of the efforts directed towards developing anti-diabetic agents. Insulin-stimulating factors have long been of interest