



Authored by:
Arelis Agosto
Research Analyst

Date: December 29, 2023
Topic: **Charting Disruption**,
Thematic



GLOBAL X ETFs RESEARCH

GLP-1s Are Just Getting Started: Prospects Beyond Diabetes and Obesity

Almost overnight, FDA-approved diabetes drugs have become household names for their success in achieving weight loss. While we still envision a long runway for growth in these categories, the healthcare industry seeks to replicate success in other illnesses and expand the addressable market for these therapies even further.

This piece is part of a series that dives deeper into this year’s iteration of our flagship research piece, **Charting Disruption**.

GLP-1 MARKET: COMPETITIVE LANDSCAPE

Sources: Evaluate Pharma. (n.d.). Glucagon-like Peptide 1 (GLP1) Receptor Agonist. Accessed December 13, 2023.

Asset	Sponsor	Approved Indications	Investigational Indications	Dosing	Revenue		Mechanism	Status
					2022	2028*		
Mounjaro	Eli Lilly	T2D	NASH, CHF, Sleep Apnea	Injection	\$0.48B	\$12.10B	GIP+GLP1	Commercialized
Zepbound	Eli Lilly	Obesity		Injection	-	\$10.56B	GIP+GLP1	Commercialized
Ozempic	Novo Nordisk	T2D	NASH, General Cardio, AD, CKD, AD, Heart Disease, Stroke	Injection	\$8.57B	\$21.92B	GLP1	Commercialized
Wegovy	Novo Nordisk	Obesity		Injection	\$0.89B	\$14.94B	GLP1	Commercialized
Rybelsus	Novo Nordisk	T2D, General Cardio	Obesity, AD	Oral	\$1.62B	\$5.82B	GLP1	Commercialized
Trulicity	Eli Lilly	T2D	-	Injection	\$7.44B	\$3.86B	GLP1	Loss of Exclusivity in 2027
Cagrisema	Novo Nordisk	-	Obesity, T2D	Injection	-	\$4.70B	Amylin+GLP1	Phase III
Orforglipron	Eli Lilly	-	T2D, Obesity, Renal Insufficiency	Oral	-	\$2.82B	GLP1	Phase III
Pemvidutide	Altimune	-	Obesity, NASH, T2D, NAFLD	Injection	-	\$0.65B	GCGR+GLP1	Phase II

* Forecast
T2D: Type 2 Diabetes; NASH: Nonalcoholic Steatohepatitis; CHF: Chronic Heart Failure; AD: Alzheimer’s Disease; CKD: Chronic Kidney Disease; NAFLD: Nonalcoholic Fatty Liver Disease



Key Takeaways

- Glucagon-like peptide 1 (GLP-1) agonists have revolutionized the treatment of type 2 diabetes and obesity, achieving \$23 billion in 2022 sales.^{1,2}
- The potential use for GLP-1s is being investigated in obesity-related illnesses like cardiovascular diseases and liver disorders.
- Obesity and the obesity-related illnesses that GLP-1s target represent a massive addressable market, and sales of the treatments are expected to surge past \$77 billion by 2028.^{3,4}

GLP-1s: The Backstory

GLP-1 stimulates the body to produce more insulin when a patient's blood sugar levels start to rise, helping manage diabetic symptoms. This treatment category has revolutionized the type 2 diabetes (T2D) space, achieving \$20 billion in 2022 T2D sales, led by the success of Novo Nordisk's Ozempic and Eli Lilly's Mounjaro.^{5,6}

GLP-1 treatments have also shown the ability to curb hunger, opening their potential use for obesity. Patients undergoing GLP-1 treatments have experienced weight loss of up to 22.5% of their body weight, rivaling weight loss from gastric bypass and sleeve gastrectomy surgeries.⁷

Following strong clinical trial results, higher-dose versions of Ozempic and Mounjaro, called Wegovy and Zepbound, respectively, have been approved for obesity by the FDA.^{8,9}

Spurred by recent approvals, the obesity market is expected to be worth over \$100 billion by the end of the decade, up from \$2.8 billion in 2022.^{10,11}

Looking Ahead: GLP-1s in Obesity-Related Disorders

Most recently, we've seen particular hope for GLP-1s in illnesses with a high correlation to obesity. Global obesity rates have nearly tripled since 1975, increasing prevalence rates for related disorders.¹²

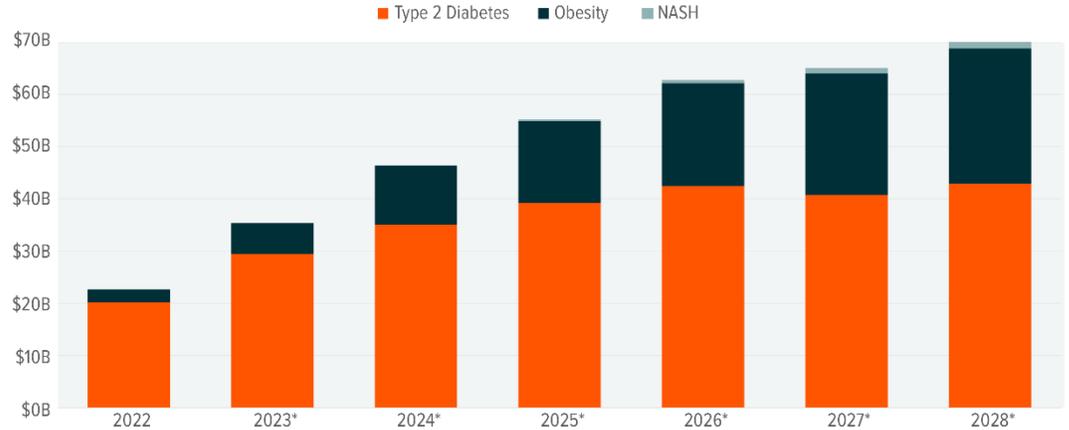
- Type 2 Diabetes (T2D):
 - Obesity accounts for 80–85% of the risk of developing T2D.¹³
 - T2D accounts for \$380 billion in associated costs in the U.S.¹⁴
- Cardiovascular Disease (CVD):
 - Obesity accounts for up to 78% of hypertension cases.¹⁵
 - Cardiovascular disease accounts for \$320 billion in associated costs in the U.S.¹⁶
- Liver Disorders:
 - Up to 90% of obese individuals have non-alcoholic fatty liver disease (NAFLD), a precursor to non-alcoholic steatohepatitis (NASH).¹⁷
 - NAFLD accounts for \$103 billion in associated costs in the U.S.¹⁸

There are currently 54 active clinical trials studying the expanded use of GLP-1s in other illnesses beyond diabetes and obesity, with the first such launch expected in 2025.¹⁹ Clinical data thus far has been encouraging. Novo Nordisk's Wegovy, for example, recently showed a 20% reduction to incidence of heart attack, stroke, or death from heart disease.²⁰



GLP-1 MARKET: GROWING MARKET UTILITY ACROSS MULTIPLE ILLNESSES

Sources: Evaluate Pharma. (n.d.). Glucagon-like peptide (GLP) 1 agonist: Worldwide | Sales by Indication. Accessed November 15, 2023. Evaluate Pharma. (n.d.). Glucagon-like peptide (GLP) 1 & gastric inhibitory polypeptide (GIP) dual agonist: Worldwide | Sales by Indication. Accessed November 15, 2023.

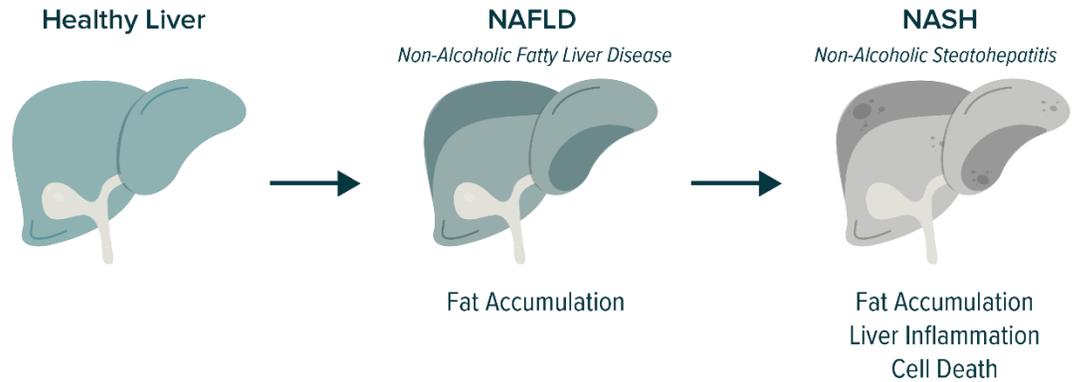


* Forecast

Case Study: Non-Alcoholic Liver Disease

The potential for GLP-1s in liver disease is of particular interest. NAFLD and NASH currently have no approved treatments though they impact 25% and 5% of U.S. adults, respectively.²¹ As cases continue to largely go untreated, NASH prevalence is projected to increase 63% between 2015 and 2030.²²

NAFLD AND NASH: GROWING MARKETS FOR DIABETES DRUG TREATMENTS



Note: NAFLD is also recently referred to as metabolic dysfunction-associated steatotic liver disease (MASLD). NASH is also recently referred to as metabolic dysfunction-associated steatohepatitis (MASH).

Given overlap in risk factors between diabetes and liver disease, diabetic treatment Ozempic is expected to be the second highest grossing treatment for NAFLD and NASH by 2028.^{23,24}



EXPECTED MARKET WINNERS FOR NAFLD AND NASH

Sources: Evaluate Pharma. (n.d.). Nonalcoholic Steatohepatitis (NASH): Indication Overview. Accessed November 15, 2023. Evaluate Pharma. (n.d.). Nonalcoholic Fatty Liver Disease (NAFLD): Indication Overview ISummary. Accessed November 15, 2023.



* Forecast

Conclusion

Demand for GLP-1s has been extremely strong and is likely to increase further as new indications are expected. To date, sales have been limited by supply, not demand. To meet demand, both Lilly and Novo look to expand supply capacity of their GLP-1 portfolios. Eli Lilly has invested \$11 billion over the last three years to scale its manufacturing capacity.²⁵ Novo Nordisk, for its part, announced a total of \$8.3 billion in investments just in November 2023.²⁶

Demand has also prompted other pharmaceutical firms to enter the GLP-1 market. Roche recently agreed to take over privately-held Carmot Therapeutics for \$2.7 billion, marking its entry into the growing obesity space.²⁷ This follows AstraZeneca deal worth up to \$2 billion to license a GLP-1 pill from China-based biotech firm Eccogene.²⁸

Overall, we see significant growth opportunities within the GLP-1 category, driven by the expansion of supply to meet the high demand and anticipated approvals for new disease categories.

Footnotes

1. Evaluate Pharma. (n.d.). Glucagon-like peptide (GLP) 1 agonist: Worldwide | Sales by Indication. Accessed November 15, 2023.
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8. Food and Drug Administration. (2021, June 4). FDA Approves New Drug Treatment for Chronic Weight Management, First Since 2014.
9. Food and Drug Administration. (2023, November 8). FDA Approves New Medication for Chronic Weight Management.
10. Barron's. (2023, September 7). Weight-Loss Drug Market Can Hit \$100 Billion, J.P. Morgan Says. That Makes Eli Lilly Stock a Big Winner.
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26. Fierce Pharma. (2023, November 27). Novo Nordisk keeps GLP-1 expansion spree rolling with \$2.3B manufacturing upgrade in France.
27. Reuters. (2023, December 4). Roche joins race for obesity drugs with \$2.7 billion Carmot deal.
28. AstraZeneca. (2023, November 9). AstraZeneca licenses novel agent for the treatment of cardiometabolic conditions and obesity.

Information provided by Global X Management Company LLC.

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