

## Optimizing Diabetes and Obesity Management:

### Integrating Continuous Glucose Monitoring and GLP-1 Agonists

Mary Catherine Platz, PharmD  
platzm@marshall.edu

1

## Statement of Disclosure

Mary Catherine Platz has nothing to disclose concerning possible financial relationships with ineligible companies that may have a direct or indirect interest in the subject matter of this presentation.

2

## Objectives

- Review GLP-1 agonists mechanisms of action
- Compare GLP-1 agonists to GLP-1/GIP receptor agonists
- Discuss common side effects seen with GLP-1 agonists
- Describe the benefits of GLP-1 agonists in the care of patients with diabetes or obesity
- Identify current types of continuous glucose monitoring devices available
- Describe the benefits of continuous glucose monitoring devices for patients with diabetes or obesity
- Explain the benefits of using continuous glucose monitoring devices in coordination with GLP-1 agonists

3

## Review Question #1:

Which of the following are benefits seen in GLP-1 Agonist medication? Select all that apply.

- Stimulation of insulin secretion
- Reduction in time of gastric emptying
- Stimulates glucagon releases during hypoglycemia
- Weight loss

4

## Review Question #2:

Which of the following have a FDA approved indicated for obesity?

- Dulaglutide
- Byetta®
- Liraglutide
- Ozempic®

5

## Review Question #3:

Patient JC has been regularly taking his Saxenda® injections and has been seeing great results. Unfortunately, JC missed his last 4 doses of medication. Which of the following is the correct recommendation for JC?

- Refer to the prescribing health care provider for directions on restarting the medication
- Tell the patient to resume taking the medication at the next scheduled dose
- Tell the patient to give two doses next time to make up for some of the missed doses
- Tell the patient that they need to be better at remembering their medication

6

### Review Question #4:

Which of the following patients would be eligible to receive semaglutide for weight loss?

- 47 yof with a BMI of 25 and a history hyperlipidemia
- 36 yom with a BMI of 28 and a history of anxiety
- 55 yom with a BMI of 31
- 17 yof with a BMI of 27 and a history of type 2 diabetes

7

### Review Question #5:

Which of the following continuous glucose monitors have the capability to share results with others? Select all that apply

- Dexcom G7 ®
- Freestyle Libre 3®
- Eversense E365®
- Dexcom Stelo®

8

### Glucagon-like Peptide 1 agonists (GLP-1) Mechanism of Action

- Contain a GLP-1 analog
- Attach to GLP-1 receptors
  - Increase insulin production
    - Increases beta cells (pancreatic cells that make insulin)
    - Regulation of ion channels (potassium, calcium)
  - Decreased glucagon secretion
    - Attach to alpha cells in the pancreas reducing production of glucagon
  - Slowed gastric emptying
  - Lowers appetite

Glucagon normally stimulates liver to release stored glucose into bloodstream

What is the MOA for GLP-1 drugs and how do they work? Drugs.com. February 10, 2025. Accessed April 21, 2025. <https://www.drugs.com/medical-advice/what-moa-gl-1-drugs-how-work-3579170/>

9

### Glucose-Dependent Insulinotropic Polypeptide (GIP) Mechanism of Action

- After nutrient ingestion → GIP secreted by enteroendocrine K cells
- Acts on the GIP receptor (largely located in beta cells of pancreatic islets) → binding increases intracellular cAMP levels
  - Increases calcium ion concentration and insulin exocytosis
- stimulation of insulin secretion
  - Plays a major role in postprandial insulin responses

Gupta K, Raja A. Physiology, Glucagon Inhibitory Peptide. [Updated 2022 Sep 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK566562/>

Fukuoka M. The Role of GIP Receptor in the CNS for the Pathogenesis of Obesity. Diabetes. 2021;70(9):1529-1537

10

### GLP-1 vs GIP How do they work?

#### GLP-1 Agonists

- Glucose-dependent stimulation of insulin secretion
- Reduction of gastric emptying
- Reduction of inappropriate glucagon secretion
  - Suppress glucagon during hyperglycemia
- Weight loss

#### Glucose-Dependent Insulinotropic Polypeptide (GIP)

- Glucose-dependent stimulation of insulin secretion
- Reduction of inappropriate glucagon secretion
  - Stimulates glucagon during hypoglycemia
- Weight loss

11

### GLP-1 Agonists

FDA Approval for use in Type 2 Diabetes:

- Dulaglutide
- Exenatide
- Exenatide – ER
- Liraglutide\*\*
- Lixisenatide
- Semaglutide Injectable\*\*
- Semaglutide oral tablets

**\*\* FDA Approval in obesity\*\***

professional CG medical. GLP-1 agonists. Cleveland Clinic. April 11, 2025. Accessed April 21, 2025. <https://my.clevelandclinic.org/health/treatments/11807/glp-1-agonists>

12

## GLP-1 Agonist Side Effects

- Loss of appetite
- Nausea
- Vomiting
- Diarrhea
- Dizziness
- Mild tachycardia
- Infection risk
- Headaches
- Indigestion
- Injection site reactions

Severe but Rare:

- Pancreatitis
- Medullary thyroid cancer
- Acute kidney injury
- Worsening diabetes-related retinopathy

professional CC medical. GLP-1 agonists. Cleveland Clinic. April 11, 2025. Accessed April 21, 2025. <https://my.clevelandclinic.org/health/treatments/12024/glp-1-agonists>

13

## GLP-1 Agonists Considerations

### Pregnancy

- Unsafe for use in pregnancy
- Animal studies show developmental abnormalities for the fetus
- Recommend using reliable birth control methods
- Referral to HCP if patient becomes pregnant while using

### Hypoglycemia

- Low risk of mild hypoglycemia
- Increased risk with other medications (sulfonylureas or insulin)
- What is hypoglycemia?
- **Signs and Symptoms to watch for:**
  - Shaking
  - Sweating/chills
  - Dizziness/light-headedness
  - Increased heart rate
  - Intense hunger
  - Difficulty thinking
  - Pale skin color
  - Nausea

professional CC medical. GLP-1 agonists. Cleveland Clinic. April 11, 2025. Accessed April 21, 2025. <https://my.clevelandclinic.org/health/treatments/12024/glp-1-agonists>

14

## GLP-1 Agonists

### Dulaglutide (Trulicity®)

- FDA Approval: Type 2 Diabetes
- Administration: inject subcutaneously (SQ) once weekly
  - Administration on the same day of the week each week is recommended
- Missed Doses: take missed dose as soon as remembered if within 3 days of scheduled dose
  - If greater than 3 days: skip the missed dose, and resume administration on next scheduled dose
- Storage:
  - Unopened Pens: refrigerator, Do NOT freeze medication
  - Room Temperature: stored at room temp for up to 14 days if needed
    - Avoid exposure to extreme heat



Trulicity (dulaglutide). Package insert. Eli Lilly and Company, 2020

15

## GLP-1 Agonists

### Exenatide (Byetta®)

- FDA Approval: Type 2 Diabetes
- Administration: inject subcutaneously (SQ) twice daily
- Missed Doses: take the missed dose as soon as remembered, if almost time for next dose. Skip missed dose. Do NOT take double or extra doses
- Storage:
  - Unopened Pens: refrigerator, Do NOT freeze medication
  - Opened Pens → Room Temperature: stored at room temp for up to 30 days
  - Do not store pen with needle attached



Byetta (exenatide). Package insert. Amylin Pharmaceuticals, LLC, 2014

16

## GLP-1 Agonists

### Exenatide (Bydureon®)

- FDA Approval: Type 2 Diabetes
- Administration: inject subcutaneously (SQ) once weekly
  - Administration on the same day of the week each week is recommended
- Missed Doses: take missed dose as soon as remembered, unless it is within 3 days of next scheduled dose
  - If next dose is within 3 days: skip the missed dose, and resume administration on next scheduled dose
- Storage:
  - Refrigerator, Do NOT freeze medication
  - Room Temperature: stored at room temp for up to 28 days
  - Store in original carton until it is time to administer. Remove dose from carton 15 minutes prior to administration. Use immediately after mixing.



Bydureon (exenatide extended-release). Package insert. Amylin Pharmaceuticals, LLC, 2012

17

## GLP-1 Agonists

### Liraglutide (Victoza®)

- FDA Approval: Type 2 Diabetes
- Administration: inject subcutaneously (SQ) once daily
- Missed Doses: take the missed dose as soon as remembered, if almost time for next dose. Skip missed dose. Do NOT take double or extra doses
- Storage:
  - Unopened Pens: Refrigerator, Do NOT freeze medication
  - Opened Pens: Room Temperature: stored at room temp for up to 30 days
  - Do not store with a needle attached
  - Protect from light and excessive heat



Victoza (liraglutide). Package insert. Novo Nordisk, 2017

18

**GLP-1 Agonists****Liraglutide (Saxenda®)**

- FDA Approval: Obesity
- Administration: inject subcutaneously (SQ) once daily
- Missed Doses: take the missed dose as soon as remembered, if almost time for next dose. Skip missed dose. Do NOT take double or extra doses
  - If you miss more than 3 doses, contact prescriber for how to restart medication
- Storage:
  - Unopened Pens: Refrigerator, Do NOT freeze medication
  - Opened Pens: Room Temperature: stored at room temp for up to 30 days
  - Do not store with a needle attached
  - Protect from light and excessive heat



19

**GLP-1 Agonists****Lixisenatide (Adlyxin®)**

- FDA Approval: Type 2 Diabetes
- Administration: inject subcutaneously (SQ) once daily within 1 hour before the first meal of the day (administer at the same time each day)
- Missed Doses: take the missed dose 1 hour prior to the next meal, if it is almost time for next dose, skip missed dose. Do NOT take double or extra doses
- Storage:
  - Unopened Pens: Refrigerator, Do NOT freeze medication
  - Opened Pens: Room Temperature: for up to 14 days
  - Do not store with a needle attached
  - Replace cap after each use to protect from light



20

**GLP-1 Agonists****Semaglutide, injection (Ozempic®)**

- FDA Approval: Type 2 Diabetes
- Administration: inject subcutaneously (SQ) once weekly
- Missed Doses: take the missed dose as soon as remembered if it is within 5 days of missed dose
  - Greater than 5 days from missed dose: Skip missed dose, and take next dose as scheduled. Do NOT take double or extra doses
- Storage:
  - Unopened Pens: Refrigerator, Do NOT freeze medication
  - Opened Pens: Room Temperature: stored at room temp for up to 56 days
  - Do not store with a needle attached
  - Protect from light and excessive heat



21

**GLP-1 Agonists****Semaglutide (Rybelsus®)**

- FDA Approval: Type 2 Diabetes
- Administration: oral administration, once daily
  - Take dose immediately after waking up, do not eat or drink anything before administration. Wait at least 30 minutes before eating, drinking, or taking any other medications/vitamins
  - Take with less than 4 oz of plain water
  - Do not crush or chew medication
- Missed Doses: skip missed dose, take next scheduled dose. Do not double next dose.
- Storage: room temperature in original container
  - Protect from moisture
  - Keep container tightly closed



22

**GLP-1 Agonists****Semaglutide, injection (Wegovy®)**

- FDA Approval: Obesity
- Administration: inject subcutaneously (SQ) once weekly
- Missed Doses: take the missed dose as soon as remembered if it is within 5 days of missed dose
  - Greater than 5 days from missed dose: Skip missed dose, and take next dose as scheduled. Do NOT take double or extra doses
  - If miss two weeks or more: contact HCP for guidance on how to restart medication
- Storage:
  - Refrigerator (preferred), Do NOT freeze medication
  - Room Temperature: stored at room temp for up to 28 days
  - Store with cap on



23

**Combination Product: GLP-1 and GIP  
Tirzepatide (Mounjaro®)**

- FDA Approval: Type 2 diabetes
- Administration: inject SQ once weekly
- Warnings: pancreatitis, acute kidney injury, gastrointestinal adverse reactions
- Side Effects: nausea, diarrhea, decreased appetite, vomiting, constipation, dyspepsia, abdominal pain
- Storage:
  - Refrigerator (preferred)
  - Room temperature: up to 21 days
  - Do NOT freeze
  - Store in original carton to protect from light



24

### Combination Product: GLP-1 and GIP Tirzepatide (Zepbound®)

- FDA Approval: Obesity, Moderate to Severe Obstructive Sleep Apnea
- Administration: inject SQ once weekly
  - Maintenance Dosing for Obesity: 5 mg, 10 mg, 15 mg once weekly
  - Maintenance Dosing for Sleep Apnea: 10 mg, 15 mg once weekly
- Warnings: pancreatitis, acute kidney injury, gastrointestinal adverse reactions
- Side Effects: nausea, diarrhea, decreased appetite, vomiting, constipation, dyspepsia, abdominal pain, injection site reactions, fatigue, hypersensitivity reactions, hair loss, GERD
- Storage:
  - Refrigerator (preferred)
  - Room temperature: up to 21 days
  - Do NOT freeze
  - Store in original carton to protect from light



**Where do we see  
these medications  
used?**

**Obesity  
Diabetes**

25

26

### Obesity

- Typically measured using BMI
  - BMI: 25.0 – 29.9 kg/m<sup>2</sup> = overweight
  - BMI: 30 or greater = obese
- Other methods of monitoring:
  - Waist Circumference
    - Men: 102 cm
    - Women: 88 cm
  - Hip Circumference
  - Body Adiposity Index (BAI) → uses height and Hip Circumference
  - Waist-to-Hip Ratio (WHR)
  - Wasit-to-Height Ratio (WHtR)

Liu X, He M, Li Y. Adult obesity diagnostic tool: A narrative review. *Medicine (Baltimore)*. 2024;103(17):e37546.

27

### Complications of Obesity

Risk of Stroke	Mental Health	Sleep Apnea	GERD
Kidney Failure	Infertility	Joint Pain	Muscle and Bone Weakness
Type 2 Diabetes	Gall-bladder Problems	Cancer	Liver Disease
	Skin Fold Rashes	Risk of Heart Attack	

Sharma, MS, Pabrar, S, Varma, GS, Shrivastava, K, Cavalli, G. Emerging Role of GLP-1 Agonists in Obesity: A Comprehensive Review of Recommended Guidelines. *BMJ Open* 2023;23(1):e008455. Published 2023 Jun 21.

28

### Obesity Indications

#### Semaglutide

- Approved: 2021
- Patients with BMI > 27 with one weight-related ailment, or a BMI > 30
- Approximately 15% mean weight loss at 2 years
  - Study focused on patients with at least one weight-related condition but excluded patients with diabetes

#### Liraglutide

- Approved: 2014 (adults); 2020 (pediatric patients over the age of 12)
- Patients with BMI > 27 with one weight-related ailment, or a BMI > 30
- Approximately 3% loss of initial body weight

29

### Obesity Indications

- Tirzepatide
  - Approved: 2023
  - Patients with BMI > 27 with one weight-related condition, or a BMI > 30
  - To be used in addition to reduced calorie diet and increased physical activity
  - Approximately 20% weight loss seen in SURMOUNT trials in tirzepatide group

- Tirzepatide (Zepbound®) also has Sleep Apnea Indication\*\*\*

Continuation 1) of the FDA approval new indication for chronic weight management, U.S. Food and Drug Administration, November 8, 2023. Accessed April 21, 2025. <https://www.fda.gov/news-events/press-announcements/fda-approves-new-indication-for-chronic-weight-management-with-tirzepatide-zepbound>

30

## Continuous Glucose Monitoring

31

### Continuous Glucose Monitors (CGMs)

- Wearable device that tracks glucose over time
- Measures interstitial fluid just under the skin
- Provides real time updates to how glucose levels are changing

32

### CGMs – Interstitial Fluid

- → fluid that fills the spaces around your cells
- How can we measure it here?
  - Glucose is in the blood stream, then leaks into the interstitial fluid
  - CGM sensor monitors this level and reports it
- Lag time
  - Glucose in blood stream will always be slightly ahead of interstitial fluid
  - Finger sticks will give a representation of blood glucose level

Baskin M, Farnsworth C. Continuous glucose monitoring: What is it, and how does it work? Medical News Today. April 5, 2024. Accessed April 21, 2025. <https://www.medicalnewstoday.com/articles/continuous-glucose-monitoring/definition>.

33

### 3 Components of CGM

1. Sensor – what measures your glucose levels
2. Transmitter – wirelessly transmits data from sensor to receiver
3. Receiver – smartphone app, receiver device, insulin pumps



34

### Types of CGMs

- Dexcom G6, G7®
- Freestyle Libre 2, Libre3®
- Eversense E3, E365®
- Medtronic Guardian Connect®
- Medtronic Simpler®
- Dexcom Stelo®
- Roche Accu-Chek SmartGuide®

Comparison of current continuous glucose monitors (CGMs). Diabetesnet.com Home of the Diabetes Mail. April 16, 2025. Accessed April 21, 2025. <https://www.diabetesnet.com/diabetes-technology/meters-monitors/compare-current-monitors/>.

35

### Dexcom G6, G7®

- Sensor: 10-day wear
- Pump Integration Compatible
- Data Sharing (up to 10 people)
- Optional separate receiver
- Real Time Alerts Available
- Warm-Up Time:
  - G6: 2 hours
  - G7: 30 minutes



Comparison of current continuous glucose monitors (CGMs). Diabetesnet.com Home of the Diabetes Mail. April 16, 2025. Accessed April 21, 2025. <https://www.diabetesnet.com/diabetes-technology/meters-monitors/compare-current-monitors/>.

36

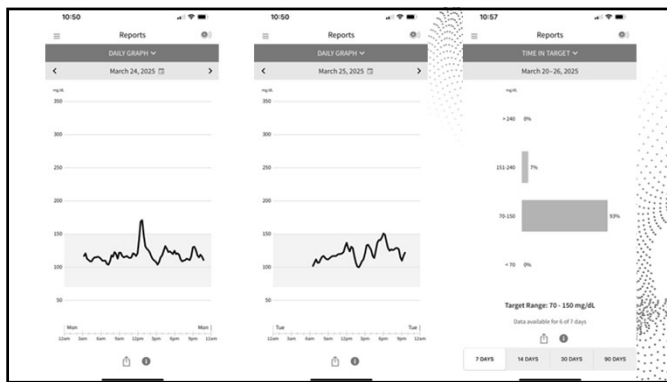


## Pharmacists Perspectives on Wearing a CGM

43

*Wearing a CGM has given me valuable firsthand insight into CGM use. I have personally experimented with eating certain foods - like gummy worms, cookies - to see what the data shows afterwards. A single cookie or serving of gummy worms causes a rapid increase in glucose, more than a typical meal. Protein rich meals cause a slower, steadier rise that never hit the peak that the junk food does. The ability to quickly check glucose after a meal has led me to try to remain within the target range by choosing healthier food. The setup is simple, takes about an hour to warm up, and once applied, I barely notice it. Setting a lower glucose target range has shown me how even mild elevations trigger alerts, reinforcing the CGM's role in real-time decision-making. I see CGMs as a way for pharmacists to get more involved in patient care, providing off-site monitoring of CGM results for patients to provide education and interventions.*

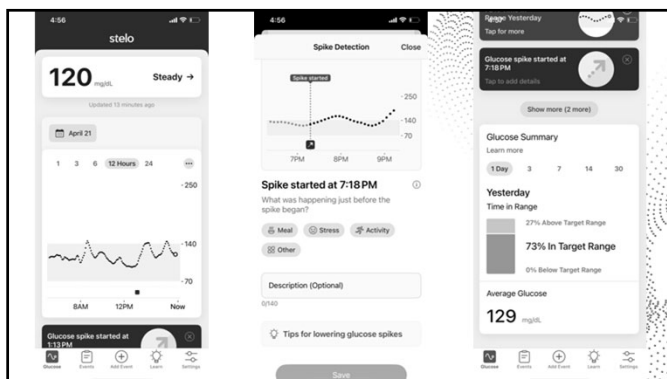
44



45

*After wearing a CGM I feel much more confident in my ability to talk to patients about the process of putting a device on, and walking them through the various reports that you may have access to. I am definitely more aware of how my body reacts to different foods and it has been interesting to see how those changes play out. I was concerned with showering, getting dressed, and sleeping with the CGM, but have not had negative experiences so far. Thinking about the stigma associated with some of these devices, I have found that close family and friends have hesitated to bring it up to me after I started wearing one.*

46



47





## Patients Perspective of a CGM

*I haven't used mine in nearly two months because of the issues I had picking it up and the pharmacy shortage. I got back in the habit of pricking my finger. For me, it was easier to just do a finger prick 1-hour after a meal. (patient with gestational diabetes) "I think if I were just managing glucose for everyday monitoring, it would have been more useful to me."*

48



### Using CGMs and GLP-1 Medications Together

-  Greater knowledge of real-time glucose levels in the body
-  Increased patient involvement in their medical care
-  Pharmacologic benefits that can help lower glucose levels and A1c in patients with diabetes
-  Pharmacologic benefits that will help patients with obesity

These illustrations show what a FreeStyle Libre System and GLP-1 medications can help together for people with type 2 diabetes. Adapted Medallion. Accessed April 21, 2025.

49

### Review Question #1:

Which of the following are benefits seen in GLP-1 Agonist medication? Select all that apply.

- a. Stimulation of insulin secretion
- b. Reduction in time of gastric emptying
- c. Stimulates glucagon releases during hypoglycemia
- d. Weight loss

50

### Review Question #2:

Which of the following have a FDA approved indicated for obesity?

- a. Dulaglutide
- b. Byetta®
- c. Liraglutide
- d. Ozempic®

51

### Review Question #3:

Patient JC has been regularly taking his Saxenda® injections and has been seeing great results. Unfortunately, JC missed his last 4 doses of medication. Which of the following is the correct recommendation for JC?

- a. Refer to the prescribing health care provider for directions on restarting the medication
- b. Tell the patient to resume taking the medication at the next scheduled dose
- c. Tell the patient to give two doses next time to make up for some of the missed doses
- d. Tell the patient that they need to be better at remembering their medication

52

### Review Question #4:

Which of the following patients would be eligible to receive semaglutide for weight loss?

- a. 47 yof with a BMI of 25 and a history hyperlipidemia
- b. 36 yom with a BMI of 28 and a history of anxiety
- c. 55 yom with a BMI of 31
- d. 17 yof with a BMI of 27 and a history of type 2 diabetes

53

### Review Question #5:

Which of the following continuous glucose monitors have the capability to share results with others? Select all that apply

- a. Dexcom G7®
- b. Freestyle Libre 3®
- c. Eversense E365®
- d. Dexcom Stelo®

54

## References

1. What is the MOA for GLP-1 drugs and how do they work? Drugs.com. February 10, 2025. Accessed April 21, 2025. <https://www.drugs.com/medical-answers/what-moa-glp-1-drugs-how-work-3579170/>.
2. Gupta K, Raja A. Physiology, Gastric Inhibitory Peptide. [Updated 2022 Sep 26]. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2025 Jan-. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK546653/>
3. Fukuda M. The Role of GIP Receptor in the CNS for the Pathogenesis of Obesity. *Diabetes*. 2021;70(9):1929-1937.
4. Dungan K, DeSantis AD M. Glucagon-like peptide 1-based therapies for the treatment of type 2 diabetes mellitus. UpToDate. December 4, 2024. Accessed April 21, 2025. <https://www.uptodate.com/contents/glucagon-like-peptide-1-based-therapies-for-the-treatment-of-type-2-diabetes-mellitus>.
5. Professional CC medical. GLP-1 agonists. Cleveland Clinic. April 11, 2025. Accessed April 21, 2025. <https://my.clevelandclinic.org/health/treatments/13901-glp-1-agonists>.
6. Trulicity (dulaglutide). Package Insert. Eli Lilly and Company; 2020
7. Tashko G. *Trulicity Pen*.; 2018. Accessed April 21, 2025. <https://geritashkomd.com/how-to-use-trulicity-pen-for-diabetes/>.
8. Byetta (exenatide). Package Insert. Amylin Pharmaceuticals, LLC; 2014
9. Bersenson A. Byetta Pen. 2006. Accessed April 21, 2025. <https://www.nytimes.com/2006/06/22/business/22diabetes.html>.
10. Bydureon (exenatide extended-release). Package Insert. Amylin Pharmaceuticals, LLC; 2012
11. Kwon J, Marathe P. Bydureon Pen. 2021. Accessed April 21, 2025. <https://diatribe.org/diabetes-medications/fda-approves-bydureon-bcise-new-autoinjector-launch-early-2018>.
12. Victoza (liraglutide). Package Insert. Novo Nordisk; 2017
13. Victoza Box and Pen. Novo Nordisk Accessed April 21, 2025. <https://www.novomedlink.com/diabetes/products/treatments/victoza.html>.
14. Saxenda (liraglutide). Package Insert. Novo Nordisk; 2018
15. Saxenda Pen. Accessed April 21, 2025. <https://mobileivmedics.com/product/saxenda/>.
16. Adlyxin (lixisenatide). Package Insert. sanofi-aventis U.S. LLC; 2016
17. Sheehy C. Adlyxin Pen. Accessed April 21, 2025. [https://pharmaserve.com/pharmacy\\_drugs/adlyxin/](https://pharmaserve.com/pharmacy_drugs/adlyxin/).
18. Ozempic (semaglutide). Package Insert. Novo Nordisk; 2017
19. Ozempic Pen. Accessed April 21, 2025. <https://www.vivnhealth.com/ozempic/>.
20. Rybelsus (semaglutide). Package Insert. Novo Nordisk; 2019

55

## References Continued

1. Rybelsus Bottles of Varying Strengths. Accessed April 21, 2025. <https://myrocky.ca/product/rybelsus/>.
2. Kansteinier F. Wegovy Pens of Varying Strengths.; 2024. Accessed April 21, 2025. <https://www.fiercepharma.com/pharma/wegovy-supplies-back-tap-novo-nordisk-doubles-us-prescriptions-start-year>.
3. Wegovy (semaglutide). Package Insert. Novo Nordisk; 2021
4. Mounjaro (tirzepatide). Package Insert. Eli Lilly and Company; 2022
5. Mounjaro Pens of Varying Strength. Accessed April 21, 2025.
6. Zepbound (tirzepatide). Package Insert. Eli Lilly and Company; 2024
7. Zepbound Pen. Accessed April 21, 2025. <https://bondmeds.com/weight-loss/zepbound/>.
8. Liu X, He M, Li Y. Adult obesity diagnostic tool: A narrative review. *Medicine (Baltimore)*. 2024;103(17):e37946.
9. Popoviciu MS, Piduraru L, Yahya G, Metwally K, Cavalu S. Emerging Role of GLP-1 Agonists in Obesity: A Comprehensive Review of Randomised Controlled Trials. *Int J Mol Sci*. 2023;24(13):10449. Published 2023 Jun 21.
10. Garvey WT, Batterham RL, Bhatta M, et al. Two-year effects of semaglutide in adults with overweight or obesity: the STEP 5 trial. *Nat Med*. 2022;28(10):2083-2091.
11. Center for Drug Evaluation and Research. FDA approves Weight Management Drug. U.S. Food and Drug Administration. December 4, 2020. Accessed April 21, 2025. <https://www.fda.gov/drugs/news-events-human-drugs/fda-approves-weight-management-drug-patients-aged-12-and-older>.
12. Commissioner O of the. FDA approves new medication for chronic weight management. U.S. Food and Drug Administration. November 8, 2023. Accessed April 21, 2025. <https://www.fda.gov/news-events/press-announcements/fda-approves-new-medication-chronic-weight-management>.
13. Basina M, Fernsworth C. Continuous glucose monitoring: What is it, and how does it work? *Medical News Today*. April 5, 2024. Accessed April 21, 2025. <https://www.medicalnewstoday.com/articles/continuous-glucose-monitoring#definition>.
14. Comparison of current continuous glucose monitors (CGMS). Diabetesnet.com Home of the Diabetes Mail. April 16, 2025. Accessed April 21, 2025. <https://www.diabetesnet.com/diabetes-technology/meters-monitors/compare-current-monitors/>.
15. Payne W. Dexcom CGM Products.; 2023. Accessed April 21, 2025. <https://glarios.com/blog/diabetes-101/how-to-get-a-dexcom-g7/>.
16. *Freestyle Libre Product*. Accessed April 21, 2025. <https://www.usmed.com/products/continuous-glucose-monitoring/freestyle-libre-3-system/>.
17. Boyle A. Eversense E365 Product.; 2024. <https://www.bioworld.com/articles/712248-fda-clears-senseonics-everSense-one-year-implantable-cgm?v=preview>.

56

## References Continued

1. Medtronic Guardian System. Accessed April 21, 2025. <https://hcp.medtronic-diabetes.com.au/>.
2. *Accu-Chek SmartGuide Product*. <https://www.diabetesnet.com/diabetes-technology/meters-monitors/continuous-monitors/accu-chek-smartguide/>.
3. *Stelo Products*. Accessed April 21, 2025. <https://spniahome.com/products/stelo-glucose-biosensor>.
4. Made by Abbott: Your body has the answers. Lingp. Accessed April 21, 2025. [https://www.hetolingo.com/products/tutm\\_content-brand&gclid=317e2f673aa1c6d3a828afc1384cc5b&gclidrc=3p.ds&mackid=a317e2f673aa1c6d3a828afc1384cc5b](https://www.hetolingo.com/products/tutm_content-brand&gclid=317e2f673aa1c6d3a828afc1384cc5b&gclidrc=3p.ds&mackid=a317e2f673aa1c6d3a828afc1384cc5b).
5. Real-World Data Show abbott's Freestyle Libre® Systems and GLP-1 medicines work better together for people with type 2 diabetes. Abbott MediaRoom. Accessed April 21, 2025. <https://abbott.mediaroom.com/2024-03-06-Real-World-Data-Show-Abbotts-FreeStyle-Libre-R-Systems-and-GLP-1-Medicines-Work-better-Together-for-People-with-Type-2-Diabetes>.

57

# Questions?

platzm@marshall.edu

58

## CE Evaluation Access Code

\*\*\*\*\*

Capital Letters, No spaces, complete by  
05/02/2025

Note: CE credit will be reported to NABP  
CPE Monitor within 4-6 weeks

59