

# **The New Weight Loss Landscape - GLP1 Training for RDs**

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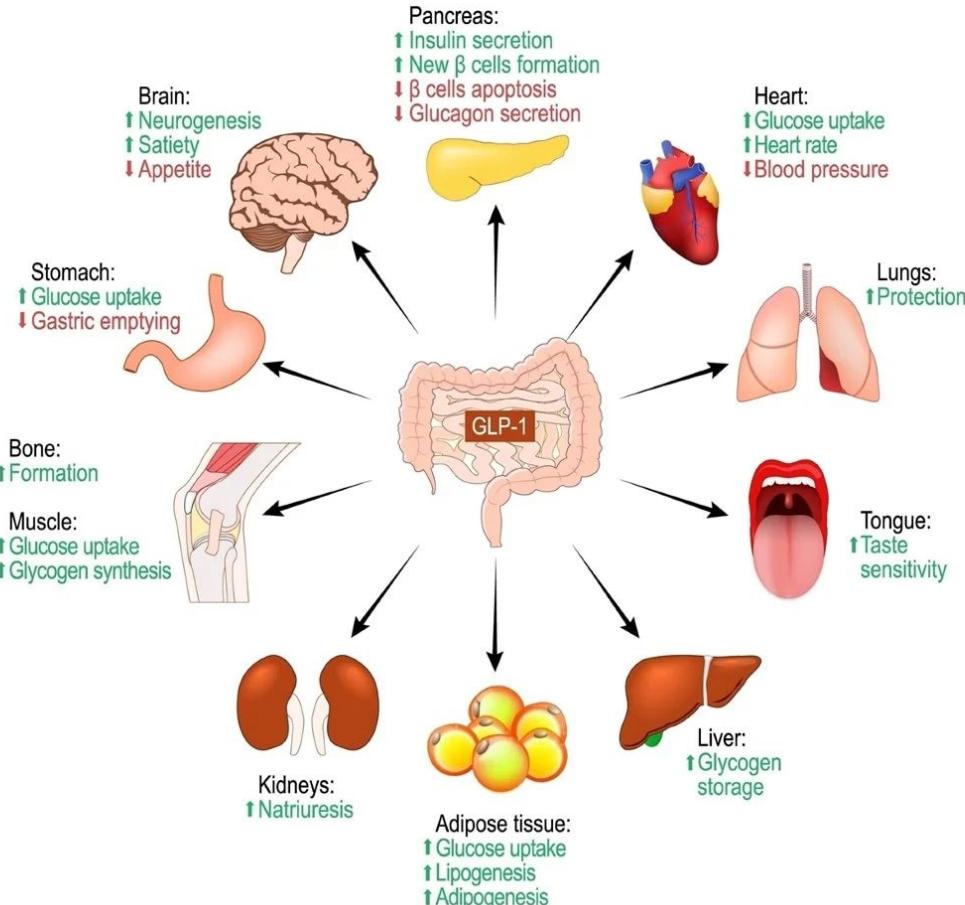
# Agenda

- 1...What is a Semaglutide?
- 2...“Desirable” and “less desirable” side effects
- 3...Side effect strategies
- 5...Optimizing weight loss
- 6...How RDs can help
- 7...When to alert your MD
- 8...References and Further Reading

# What is a Semaglutide?

- Definitions:
  - GLP1 - Glucagon-like peptide 1
  - GIP - Glucose-dependant insulinotropic polypeptide
- GLP1 agonists like Ozempic mimic our naturally occurring GLP1 hormone, a signal that helps us feel satiety/fullness in our brain and our gut.
- The semaglutides, also known as incretin mimetics or GLP1s, last much longer in the body. Therefore their effects last much longer than our own GLP1 hormone; the half-life of Ozempic is about 1 week.
- The newer drugs like Zepbound contain a GIP agonist (another type of fullness signal) in addition to GLP1. They layer on top of the GLP1 to provide more hunger/satiety signals

# Functions of Glucagon-like peptide-1



# “Desirable” Side Effects

- Taste changes
- Lower appetite and slower digestion
- Lower food noise
- Lower cardiovascular risk/lower blood pressure
- Possible lung protection
- Possible kidney protection
- Possible improvement in autoimmune inflammation
- Improved insulin sensitivity, better blood sugar/diabetes management

# “Less Desirable” Potential Effects

- Constipation
- Nausea and/or heartburn/reflux
- Resting heart rate Increase &/or blood pressure decrease
- Feeling lightheaded or dizzy
- Weight regain after ending GLP1 therapy
- Loss of hunger cues after ending GLP1

# “Less Desirable” Potential Effects cont.

- Loss of muscle mass
- Bone health (?)
- Severe gastrointestinal issues
- State of mind changes
- Risk of gastroparesis, pancreatitis, thyroid cancer
- “Ozempic Teeth”
- Thinning Hair
- Strange skin sensations

# Side Effect Strategies

Nausea	<ul style="list-style-type: none"><li>- Focus on cold foods as they give off less smell -&gt; lower nausea</li><li>- Small frequent meals are easier to digest than infrequent large meals</li><li>- Bland foods with very light seasoning may help</li><li>- Consider ginger, camomile or peppermint tea</li></ul>
Constipation	<ul style="list-style-type: none"><li>- Chewing gum for 10 mins every few hours may help encourage peristalsis in the lower intestine</li><li>- Consider Prune juice ¼-1/2c or 3 whole prunes daily</li><li>- Consider 400mg Magnesium oxide at bedtime</li><li>- Consider Smooth Move Tea</li><li>- Consider 1 scoop metamucil with 8oz water every night</li><li>- Focus on high-fiber foods - aim for 20-35g fiber per day</li><li>- Meet your hydration goals</li><li>- Talk to your doctor about Over-The-Counter medications like colace, miralax, milk of magnesia, etc</li></ul>

# Side Effect Strategies cont.

Dizziness/Weakness	<ul style="list-style-type: none"><li>- Make sure you are eating often enough - at least every ~3-5 hours.</li><li>- Focus on meal balance - a source of complex carbohydrates (containing fiber!) and a source of protein at every meal/snack</li><li>- Make sure you are appropriately hydrated across the entire day. For most people this is typically around 60-100oz of fluid, and possibly more if you are exercising in the heat or heavily sweating</li><li>- Maintain adequate carbohydrate, protein, fat and electrolyte intake</li><li>- Consider a well balanced daily multi-vitamin</li><li>- Consider working with a Registered Dietitian to create a customized meal pattern with ideas to keep you on track and well nourished</li></ul>
Resting HR increase	<ul style="list-style-type: none"><li>- A lower sodium intake around 1500-2500mg per day may be helpful</li><li>- Maintaining an adequate hydration level is also recommended (aim for approximately 25-35ml per kg body weight)</li></ul>

# Side Effect Strategies cont.

Weight regain after ceasing medication	<ul style="list-style-type: none"><li>- Likely related to the return of regular hunger hormones, thought patterns and behaviors after finishing the medication</li><li>- Additionally, insulin sensitivity will change when discontinuing the medication</li><li>- Metabolic habits (food timing, food macros, calories, protein, movement, sleep etc) must permanently change in order to maintain a lower weight. A support team including a Registered Dietitian and an Exercise Trainer may help with maintaining consistency.</li></ul>
Muscle and Bone Loss	<ul style="list-style-type: none"><li>- Muscle and bone loss appears to be more likely when weight loss is especially rapid and calorie and protein intake has been severely limited</li><li>- It is recommended to maintain calorie intake at or above Basal Metabolic Rate (BMR)</li><li>- Maintain Vitamin D and Calcium intake via food and supplements at RDA level for age and gender</li><li>- Consume at least 3-4 meals or snacks per day, rather than one large meal per day</li><li>- Maintain adequate protein intake, spread out in 20-30g increments across the day. Work with your Registered Dietitian to determine your specific needs.</li></ul>

# Side Effect Strategies cont.

State of Mind changes	<ul style="list-style-type: none"><li>- Actively develop new coping strategies outside food for self-soothing difficult emotions</li><li>- Work on developing habits that support happiness and mood, and dopamine and serotonin production</li><li>- Seek the support of a Therapist &amp;/or Registered Dietitian</li></ul>
“Ozempic Teeth”	<ul style="list-style-type: none"><li>- Drink water and non-caloric beverages across the whole day</li><li>- Consider taking a daily well balanced multi-vitamin to meet your basic micronutrient needs</li><li>- Stay hydrated - 33ml/kg actual body weight is suggested for most people</li></ul>
“Ozempic Babies”	<ul style="list-style-type: none"><li>- Altered digestion can reduce the effectiveness of oral contraceptives</li><li>- Consider a different kind of birth control while on a Semaglutide :)</li></ul>
Thinning Hair	<ul style="list-style-type: none"><li>- Consider taking a daily well balanced multi-vitamin</li><li>- Make sure you meet your basic protein needs even when in a calorie deficit. For most people this is about 20-30g protein per meal, 3-4 times per day</li><li>- Consider checking/monitoring your copper, zinc and iron levels</li></ul>

# Side Effect Strategies cont.

## Food Aversion/Avoidance

- Your appetite may become so suppressed at times that it becomes hard to remember to eat. It's important to meet your minimum nutrition needs to protect your lean body mass (muscle and bone).
- Consider listing 3-5 foods on an "emergency food" list that you have in the house at all times, and make a deal with yourself that even if you're not hungry, you can tolerate those items.
- Consider eating on a regular schedule (for example, 8am, 1pm, 6pm) and hold yourself accountable to getting at least 20g protein at each meal, even if it's just a protein shake
- It is normal when on the medication to feel some hunger at regular intervals across the day. If your appetite is very strongly suppressed, or if you feel a strong aversion to food, you are likely over-medicated. Consider reducing your dose.

# Optimizing GLP1 Weight Loss - A Model



# How Dietitians Can Help...

***Ongoing support for all the specifics on how to motivate behavior change for the long term!***

***Ask your patient the following....***

- Do you know what things contain lots of fiber and which ones you like?
- Do you struggle to get enough water?
- Is eating out a struggle?
- How is your self-talk, your mindset and your motivation level?
- Do you know how to cook lean proteins so they taste good?
- Does the thought of having a plan on what to eat every day feel overwhelming?
- Do you feel intense sugar cravings all the time?
- Are you worried you're getting either too much or too little food?
- Do you have food habits that are hard to break?

# When to alert the MD...

Review the warnings on the medication package and be alert for all the symptoms. Do not dismiss things as “normal” if you have a hunch something is wrong. The following are typically listed:

- Rapid heart rate
- Pancreatitis
- Blurred vision
- Hypoglycemia
- Bowel Obstruction
- Thyroid Cancer
- Hives/Itching
- Injection site reactions
- Nausea with Vomiting
- Severe Diarrhea
- Severe Constipation
- Dehydration

# More examples that require the MDs attention....

These are some examples I have seen in my own practice...

- Severe and persistent nausea and vomiting or retching
- Inability to hydrate adequately due to nausea - particularly if you experience wretching with plain water. Symptoms include excessively dry mouth, dry eyes, feeling of thirst, feeling dizzy, "tenting" skin on the back of your hands, etc
- Abdominal pain
- No bowel movements for more than 2-3 days or very hard and uncomfortable stools
- Total disinterest in food or food aversion (likely related to excessive medication dose)
- Loss of bone density seen in DEXA (DXA) or other commonly available body scans
- Severe esophageal reflux

# Further Reading and References

John P.H. Wilding, D.M., Rachel L. Batterham, M.B., B.S., Ph.D., Salvatore Calanna, Ph.D., Melanie Davies, M.D., Luc F. Van Gaal, M.D., Ph.D., Ildiko Lingvay, M.D., M.P.H., M.S.C.S., McGowan, B.M. Once-weekly semaglutide in adults with overweight or obesity NEJM 384(11) 989-1002

John P.H. Wilding, D.M., Rachel L. Batterham, M.B., B.S., Ph.D., Melanie Davies, M.D. et al Weight Regain and cardiometabolic effects after withdrawal of semaglutide: the STEP1 trial extension Diabetes Obes Metab. 2022; 24(8):1553-1564

Kosiborod MN, Bhatta M, Davies M, Deanfield JE, Garvey WT, Khalid U, Kushner R, Rubino DM, Zeuthen N, Verma S. [Semaglutide improves cardiometabolic risk factors in adults with overweight or obesity: STEP 1 and 4 exploratory analyses.](#) Diabetes Obes Metab. 2023 Feb;25(2):468-478. doi: 10.1111/dom.14890. Epub 2022 Oct 28.

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The Impact of GLP1 Agonists on Bone Metabolism: A Systemic Review <https://PMC8878541/>

The Role of Glucagon-like Peptide 1 agonists in Chronic Obstructive Pulmonary Disease <https://PMC9939668/>

Weight loss and bone mineral density <https://PMC4217506/>

GLP1 agonists linked to kidney failure protection: Study <https://www1.racgp.org.au/news/gp/clinical/glip-1-receptor-agonists-linked-to-kidney-failure-p>

Hari, Johann., Magic Pill - The extraordinary benefits and disturbing risks of the new weight loss drugs

# Further Reading and References cont.

Allodynia (skin tenderness) associated with semaglutide: A case series <https://pubmed.ncbi.nlm.nih.gov/39862389/>

"Weight Loss And..." Podcast by Dr James Hill and Dr Holly Wyatt [www.weightlossand.com](http://www.weightlossand.com)

"Sound Bites" Podcast - Episode 266 "Injectable Weight Loss Medications: Can They Help Keep Weight Off?"

SELECT Trial summary - <https://www.acc.org/Latest-in-Cardiology/Clinical-Trials/2023/11/09/15/04/select>

DiRECT study - <https://www.directclinicaltrial.org.uk/>

Changes in lean body mass with glucagon-like peptide-1 based therapies and mitigation strategies <https://pubmed.ncbi.nlm.nih.gov/38937282/>

Association between autoimmune diseases and GLP1 agonists: A real world evidence study <https://www.sciencedirect.com/science/article/pii/S0896841125000988>

Anti-inflammatory role of GLP1 agonists and its clinical implications <https://PMC10823863/>

On the role of self-compassion and self-kindness in weight regulation and health behavior change <https://PMC5311066/>

Impact of weight cycling on morbidity and mortality <https://PMC4205264/>

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"Weight Loss And..." Podcast by Dr James Hill and Dr Holly Wyatt [www.weightlossand.com](http://www.weightlossand.com)

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# Further Reading and References cont.

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Intuitive Eating Workbook by Tribole and Resch <https://a.co/d/964FvqY>

Body Neutral by Jessi Kneeland <https://a.co/d/964FvqY>

The Butterfly Foundation Body Positivity resources <https://butterfly.org.au/>

The Wellness Trap by Christy Harrison <https://a.co/d/dPMQZmT>

More Than A Body: Your Body is an Instrument not an Ornament by Lexie Kite and Lindsay Kite

Look Ahead Study <https://pmc.ncbi.nlm.nih.gov/articles/PMC2613279/>

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