

Refeeding Syndrome Background

- Adenosine Triphosphate (ATP) is how the body stores energy for later use and to build DNA/RNA for normal cell turnover.
- After the use of ATP, it becomes ADP, diphosphate.
- Glucose intake = insulin surge.
- With **ONE** molecule of glucose metabolism, **32** ATP are formed from ADP.
- This means, with carb consumption, you need a lot of **PHOSPHORUS**.
- Insulin surge = lower **Potassium** level in the blood.
- Phosphorus is vital for muscle contraction and red blood cells.
- Hypophosphatemia affects all the organs responsible for oxygen delivery: the Heart, Lungs, and Red Blood cells.

Refeeding Syndrome

- With severe malnourishment and depleted ATP stores, introduction of a high-carb diet causes severe:
 - Hypo**Ph**osphatemia
 - Hypo**K**alemia
 - Hypo**Mg**nesemia.
- Thus, carbs are the worst in terms of safety and protection of refeeding syndrome. Fat and protein are better, or at least, carbs with high phos/potassium supplementation.
- Thiamine and other vitamins are also important.

High phosphorus food items in Gaza

- Any seafood (especially the fish bones)
- Dairy products (any, it does not matter)
- Legumes (Beans, lentils, and chickpeas)
- Nuts and seeds: do not throw any seeds, dried watermelon seeds are very high in phosphorus.
- Bone broth if acidity was added (vinegar).
- Any preserved food items (canned food), as most preservatives are phosphorus-based.

During preparation of bread, crush any of the above in the bread mix, including fine bone powder if possible. Use milk or bone broth instead of plain water to increase phosphorus load with carbs in the bread.