

GI Hub

Elemental Diet

An elemental diet is a specialized, nutritionally complete diet where all nutrients are provided in their simplest, most easily digestible forms. This type of diet is often used to manage severe gastrointestinal (GI) disorders including Crohn's disease, small intestinal bacterial overgrowth (SIBO), severe irritable bowel syndrome (IBS), chronic pancreatitis and celiac disease. The goal is to reduce the workload on the digestive system while providing essential nutrients.

Components of an Elemental Diet:

Amino Acids (Proteins):

1. *Purpose:* Provides the essential building blocks for proteins.
2. *Source:* Free-form amino acids or hydrolyzed protein sources.
3. *Note:* Avoid whole proteins as they may be harder to digest.

Carbohydrates:

1. *Purpose:* Supplies energy.
2. *Source:* Simple carbohydrates like glucose, maltodextrin, or monosaccharides.
3. *Note:* These are easily absorbed without requiring complex digestion.

Fats:

1. *Purpose:* Provides essential fatty acids and energy.
2. *Source:* Medium-chain triglycerides (MCTs) or essential fatty acids like omega-3 and omega-6 in their most digestible forms.
3. *Note:* MCTs are easier to digest compared to long-chain fats.

Vitamins and Minerals:

1. *Purpose:* Ensure adequate micronutrient intake.
2. *Source:* Essential vitamins and minerals in a highly absorbable form.
3. *Note:* Avoid forms that require extensive digestion.

Electrolytes:

1. *Purpose:* Maintain fluid balance and support cellular function.
2. *Source:* Sodium, potassium, chloride, and magnesium.
3. *Note:* These are critical, especially in a liquid diet to prevent imbalances.

Water:

1. *Purpose:* Hydration.
2. *Source:* Adequate intake of water is necessary to ensure proper hydration and facilitate nutrient absorption.

Sample Elemental Diet Plan:

Morning:

1. Amino Acid Drink:

1. 15-20 grams of free-form amino acids mixed with water.
2. Add electrolytes (e.g., a pinch of salt, potassium chloride).

2. Carbohydrate Source:

30 grams of maltodextrin dissolved in water.

3. Fat Source:

1 tablespoon of MCT oil.

Mid-Morning:

Amino Acid Drink (same as above).

Lunch:

1. **Amino Acid Drink** (same as above).
2. **Carbohydrate Source** (same as above).
3. **Fat Source:**

1 tablespoon of MCT oil.

4. Vitamins and Minerals:

A liquid multivitamin/mineral supplement.

Afternoon:

Amino Acid Drink (same as above).

Dinner:

1. **Amino Acid Drink** (same as above).
2. **Carbohydrate Source** (same as above).
3. **Fat Source** (same as above).
4. **Vitamins and Minerals** (same as above).

Evening:

1. Electrolyte Drink:

Water mixed with electrolytes (sodium, potassium).

Important Considerations:

- **Duration:** Elemental diets are typically used short-term (2-4 weeks) under medical supervision.
- **Supervision:** Always consult a healthcare provider before starting an elemental diet, as individual needs may vary, and deficiencies or imbalances can occur.
- **Transition:** Gradually reintroduce whole foods after the elemental diet under guidance to avoid shocking the digestive system.

Pre-made Elemental Diets:

- Several commercial elemental diets are available and might be easier to manage. Examples include products like Vivonex or Tolerex. These products are designed to meet the complete nutritional needs while being gentle on the gut.

Although it is generally safe to try briefly to see if it helps your symptoms, this diet is highly restrictive and should only be followed under the care of a healthcare professional, especially since it can be challenging to meet all nutrient needs and ensure proper calorie intake. People with blood sugar conditions, such as diabetes, and people trying to lose weight are not good candidates for an elemental diet because of the high carbohydrate load.

On an elemental diet you don't eat any other foods. Healthcare providers recommend you blend the formulas with ice, "smoothie style," keeping it cold, drink it slowly and drink additional water between "meals."