



PWS Conference
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Dr. Seema Kanwal, ND



Overview

- Normal gut structure & function
- Muscle Tone
- Metabolic therapy

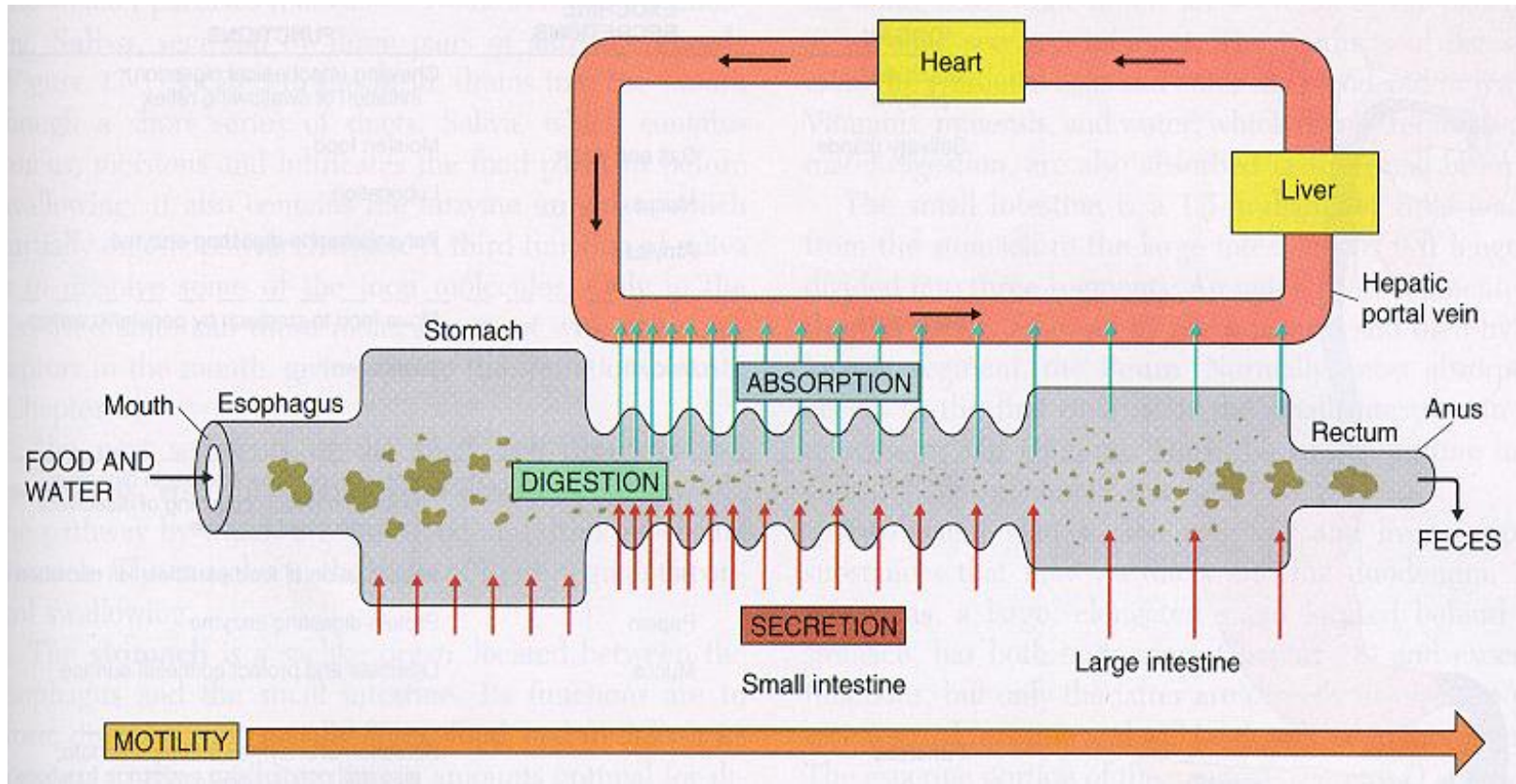
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- Over the course of a lifetime the average person consumes more than 25 tons of food, which must be processed by the GI tract.
 - This food may also contain damaging bacteria, viruses, parasites, yeast, toxins, food additives and antigens which may provoke allergy and inflammation in sensitive individuals

Why start with the GI tract?

- GUT is the immune system
- Everything your body must be processed and absorbed.
- Without proper GI function there can be no health

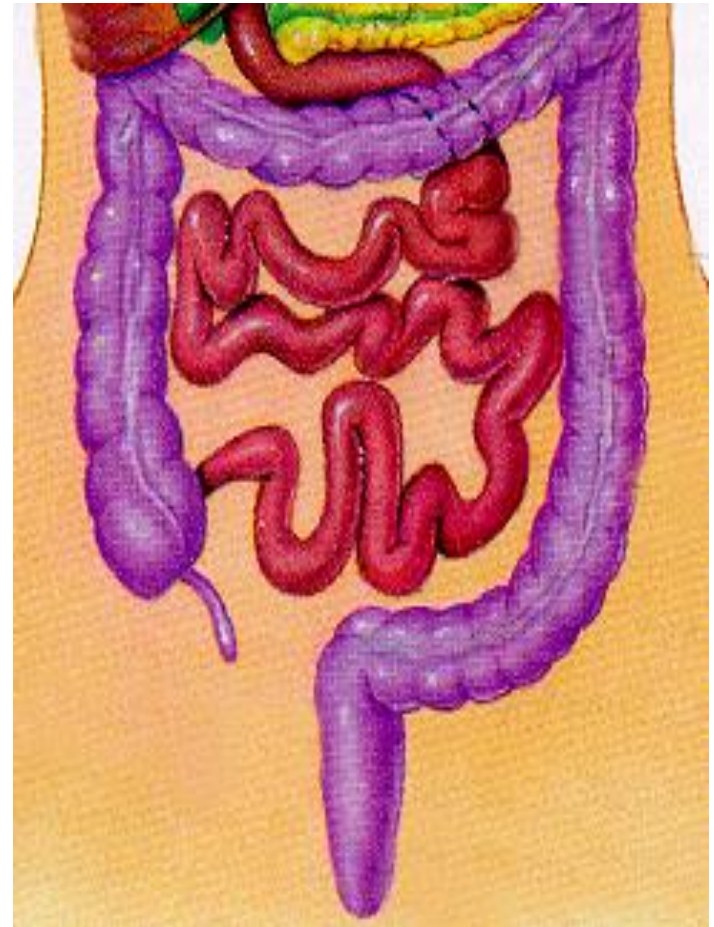
Normal Structure & Function

- The body is like an elongated donut.
- The donut hole is the GI tract
- Why? To prevent the contents of the gut from coming in contact with the interior of the body
- Acid, enzymes, microbes belong within the lumen of the gut not inside the body cavity.



Your health is a function not only of what you eat,
but what you are able to assimilate and use.

- ➔ 90% of digestion and absorption takes place in the duodenum and proximal jejunum, approximately the first half of the small intestine.

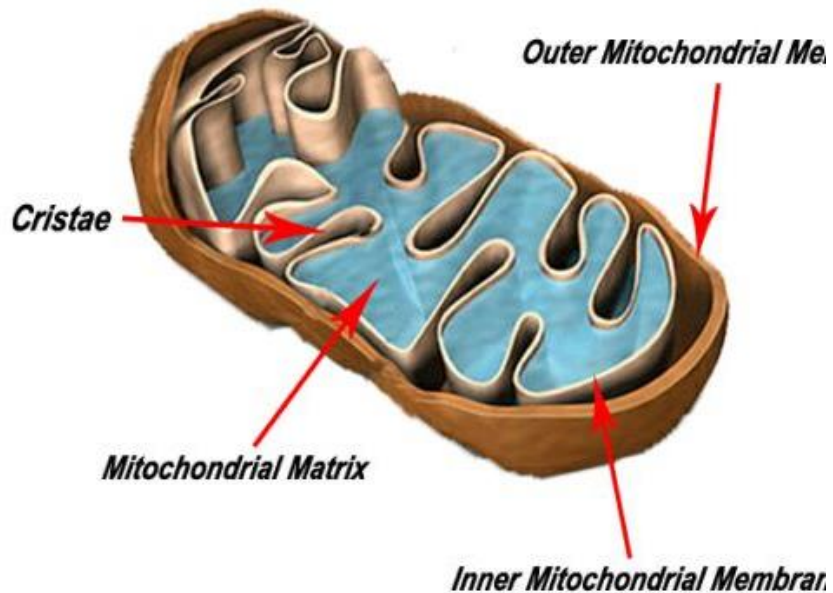


Metabolism

➔ *The biochemical changes in a living cell by which energy is provided for vital processes and activities*

Metabolic Therapy

The Mitochondrion



➔ *Administration of a substance found naturally in the body to support a metabolic reaction in the cell*

Mitochondria

- Powerhouse of cell
- ATP formed here
- 3500-5000 Mitochondria
- Mitochondrial DNA- no defense mechanism

ATP and PWS

- Every cell event requires directly OR indirectly
- HEART: maintain heart rate, pump blood and support increased work
- ANY intervention to slow rate of ATP degradation and speed up recovery to minimize heart damage and enhance cardiac function

Supplements Support Cardiac Tissue

- Coenzyme Q 10
- Carnitine
- D-Ribose




➤ **ATP QUANTITY**

➤ D-Ribose: synthesis of NEW
ATP

➤ **ATP TURNOVER**

➤ L-Carnitine

➤ CoQ10

- 
- Diastole requires more cellular energy VS systole
 - NEED more ATP to relax the heart and fill
 - Imbalance of diastole:

- INCrease Energy Demand
- DECrease energy production
- THUS ATP deficit

CoQ10

- Imp. Antioxidant for mitochondria and fatty acids
- Converts carbohydrates and fatty acids into Energy
- IN ALL Muscles this is a requirement

CoQ10 Dosing

- Children <5: about 50-100mg
- Children 5-10 about 100-150
- Children 12-18: 15-200
- Adults: 300mg per day in divided doses

L-Carnitine

➤ Found in Muscle

➤ Sheep

➤ Lamb

➤ Cattle

➤ Pig

➤ Low in grains, cereal, fruits, vegetables

➤ Sim to CoQ10: low in vegetarians

L-Carnitine

- 60% of heart energy metabolism
- Removes lactic acid and other metabolites
- Ammonia detoxification
- Increase energy, mental function, muscle mass
- Dosing: 500mg – 2000 mg: START SLOW: and increase yearly (50mg/kg of body weight)

CoQ10 + L-Carnitine

- CoQ10 = spark plug to ignite the energy process in the mitochondria to form ATP
- L-Carnitine = Crucial freight train to shuttle in and out crucial fatty acids that are burned as fuel

D-Ribose

- Used by cells to manage restoration
- Human heart: up to 100 days to restore ATP
- Thus enhances recovery of heart
- Enhances strength and endurance
- DOSING: 2.5 grams to 10grams (age dependent)

Growth Hormone

- First given in 2000
- Treatment shown to positively affect nitrogen balance
- Increase and preserve lean body mass
- reduce body fat
- effects have not been well documented

TRIAD

- Metabolic HEALTH:
- Coenzyme Q10, Carnitine, and Ribose

Thank you! 😊

- "Don't spend your precious time asking "Why isn't the world a better place?" It will only be time wasted. The question to ask is "How can I make it better?" To that there is an answer. "
- ~ Leo Buscaglia
- 604-569-0488
- info@balancemedical.ca