Smooth Digestion!

Thank you for the opportunity!

Timaree Hagenburger, MPH, RD, EP-C
Overview

✓ Gastrointestinal Tract basics
✓ Common conditions: from canker sores to constipation!
✓ Strategies for improving your GI health!
YOU are made up of trillions of cells!

- Each cell requires **energy** and **nutrients** to maintain its health and function
- Keep the cells healthy and YOU will be healthy!
- You ARE what you ATE!
Once you swallow food, it is now inside your body.

True or False?
The Digestive System

• Gastrointestinal (GI) Tract
  • Long tube (mouth → anus)
  • *Intimate contact with “outside world”*
  • Nutrients in foods must be broken down into small molecules
  • Absorption occurs through the wall of this tube into the blood

• Accessory organs
The Journey: Digestion and Absorption

Mouth

• Teeth and tongue (physical digestion)
  • **Chew** well to maximize available nutrients!
  • **Breathe**!!! \( \uparrow O_2 = \uparrow \) metabolic burning power
• Saliva
  • Moistens food for swallowing
  • Enzymes (chemical digestion)
• **Recurrent canker sores**? Eliminate... [**DAIRY**]?

• Epiglottis blocks food from entering the trachea and lungs during swallowing
  • If food enters the airway, it can be removed by coughing or the Heimlich maneuver (abdominal thrusts)
**Esophagus**

- Food just passes through, no digestion
- Lower esophageal sphincter (LES)
  - keeps stomach contents from **REFLUXING**
Which of the following have been shown to promote heartburn (GERD):

A.) spicy food

B.) orange juice

C.) tomatoes

D.) peppermint
Factors that may cause relaxation of LES (& may promote heartburn):

- Peppermint
- Chocolate
- Alcohol
- Coffee
- Nicotine
- Animal products
- Large fatty meals
- Obesity
- Tight-fitting clothes
- Lying down after eating
- Constipation?! ...

Symptoms and complications: burning/pain, bleeding, scar tissue, ulcers, hoarse voice, asthma, cancer!

What to do?
Stomach

- “Muscular Holding Tank” (~4 cups)
- Causes of Ulcers?

Small Intestines (~20 feet long!)
- Enzymes finish digestion
- Many nutrients ready for absorption into circulation – bloodstream
- Folded walls, villi, and microvilli expand absorptive surface
- ~3-10 hrs

Gallbladder and gallstones!

Celiac Disease and Gluten-free foods

http://www.youtube.com/watch?v=aD3Gs7meiHo http://nutritionfacts.org/video/prevention-is-better-than-cured-meat/
Large Intestine – a.k.a. __________?

• Digestion (no enzymes)
  • Bacteria ferments some fiber
  • Feed the “good” bacteria! (HUGE IMPACT)

• Absorption (no villi)
  • Water, some vits/mins, short chain FAs & phytonutrients!

• Elimination
  • Indigestible/undigested food stuff, putrefaction products(?)
    fiber, dead cells, GI secretions, bacteria, water...

• Does stool size matter?  yes!
  • Little poops = long transit time & health problems
  • Big poops = easy elimination & healthy bodies

http://nutritionfacts.org/video/stool-size-matters/
What is Diverticulosis and Diverticulitis?

- Sacs (caves/balloons) form in wall of large intestine
- Caused by: Inadequate amounts of waste....
  - Small poops take a lot of effort and pressure to be pushed through
  - High pressure “blows up” the diverticula (like a balloon)
  - Sacs can get infected – diverticulitis!
- The culprit: Eating a low fiber diet!
  - Which foods have **NO fiber**?
    - Animal products
  - Which foods are **low** in fiber?
    - Processed foods
- **High fiber foods?**
  **Whole PLANT Foods!!!**
Dehydration can lead to ____________, as the colon absorbs more water to meet the body’s fluid needs.

A.) diarrhea
B.) constipation
Constipation

Hard, dry, infrequent stools

• Why?
  • Ignoring normal urges, muscle spasm;
  • "nutrient" deficiency
  • Can lead to other problems:
    • Hemorrhoids! Varicose Veins! Hiatal hernias, and more... (including Breast Cancer!)

• Can you poop everyday and still be constipated?

• Irritable Bowel Disease improved by eating? ...
  Colorectal cancer – 3x risk with fish/chicken 1x/wk!
  Pancreatic cancer – 72% incr in risk with every 2 oz of chicken...
LOVE THE FOOD THAT LOVES YOU BACK! How...?

The Foodie Bar™ Way:
One meal. Lots of options. Everyone’s happy.
Smooth Digestion – From canker sores to...

1. Once you swallow food, it is now inside your body? TRUE or FALSE?
2. Our Gastrointestinal Tract from top to bottom: Mouth, __________, __________, __________, __________, __________, __________, anus!
3. Can you live without a LIVER? YES or NO?
4. Can you live without a GALLBLADDER? YES or NO?
5. Can you live without a PANCREAS? YES or NO?

6. ________ well to maximize available nutrients & minimize choking risk!
7. Eliminating ________________ can reduce/eliminate canker sores!
8. Which have been shown to promote heartburn?
   a. spicy food    b. orange juice    c. tomatoes    d. peppermint
9. Write down 5 contributors to heartburn: ___________________________________________

10. To reduce/eliminate heartburn: a. Eliminate ________ products
    b. Raise the head of the ___ with ___ inch blocks c. Only as needed – ___

11. What is the most common cause of ulcers?
    a. stress        b. spicy food        c. bacteria        d. acidic food
12. What else contributes to ulcers?

13. 90% of gallstones are made of ________ only found in ________ ________.
14. People with Celiac Disease need to avoid gluten, found in ____________, __________ and __________.
15. If a food is marked “gluten-free”, it is a healthful choice. TRUE or FALSE?

16. The large intestine is also known as the _________.
17. Bacteria in the large intestine produce very important ____ _____ FAs!
18. Dehydration can lead to ______________ as the colon absorbs more water to meet the body’s fluid needs.
19. If you poop everyday, you are NOT constipated. TRUE or FALSE?
20. Prevent constipation: 1. ____________ 2. ___________ 3.___________
21. ONLY __________________ FOODS have FIBER!
22. Diverticulosis caused by high pressure needed to move low-fiber small ____!

**Strategies for Getting More FIBER!**

1. Start your day with a cooked whole grain for breakfast and add, fruit, nuts, & spices.
2. Add beans to your greens! (soups, baked beans, grain salads, green salads…)
3. Eat the skins! (Don’t peel unless absolutely necessary!)
4. Make a legume and veggie soup!
5. Enjoy high fiber snacks! (crunchy carrots, mini bell peppers, jicama slices, cucumber rounds)
6. Boost your fiber when eating out! (Ask for what you want... you are paying for it - now and later!)

**Call your health care provider if you have any of the following symptoms:**

- Your heartburn persists and/or becomes more severe.
- You have the sensation of food caught in your chest or throat.
- You have unusual or persistent abdominal pain.
- Your discomfort interferes with your lifestyle or daily activities.
- You have difficulty swallowing or have pain when swallowing.
- Your heartburn is not relieved by medication or causes you to vomit.
- You vomit blood.
- You have bloody or black stools.
- You have lost a significant amount of weight.
- You have persistent hoarseness and/or sore throat.
- You have episodes of choking.
- You have persistent diarrhea.
- You have new or persistent constipation.