



DIGESTION BASICS

IT ALL BEGINS IN THE GUT

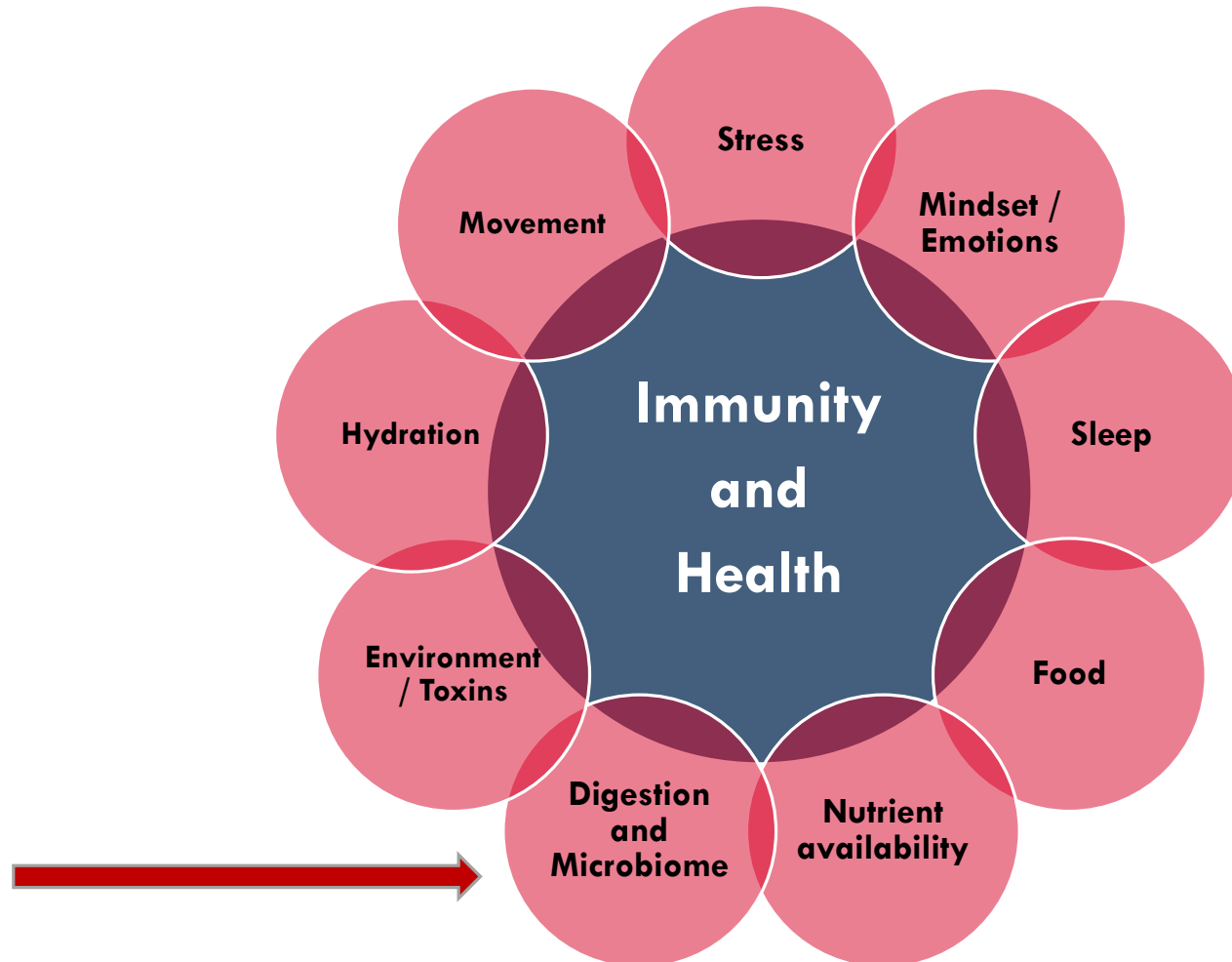
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AGENDA

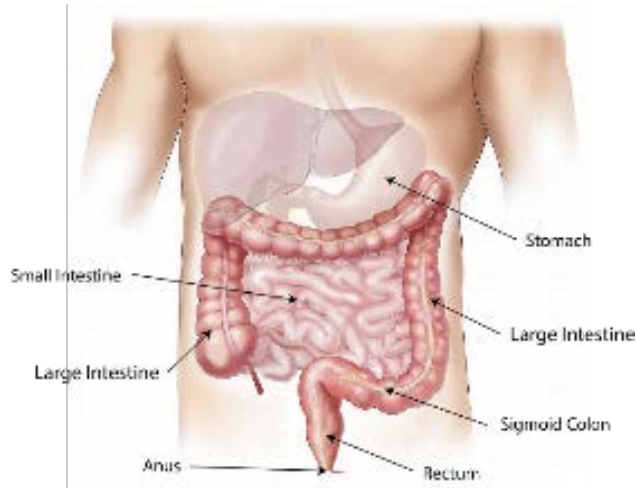


- **Anatomy of digestive tract**
- **Microbiome**
- **Probiotics / Prebiotics**
- **Fermented Foods**
- **GERD / Acid Reflux**
- **Eating Hygiene / Chewing**
- **Poop**
- **Q&A**

WHAT INFLUENCES IMMUNITY AND HEALTH



THE SEAT OF IMMUNITY



- **60-80%** of our immune system
- **Surveys what comes in - most outside inputs to our body are through our mouth – food and drinks**
- **Breaks down food to provide nutrients**

**If your gut is suboptimal,
you can not be healthy**

RECENT HEADLINES

New Study Strengthens Gut Bacteria-Autism Link

The Huffington Post | By Amanda L. Chen



Latest Headlines Health & Medicine Mind & Brain Space & Time Matter & Energy Computers

Featured Research

GI tract bacteria may protect against autoimmune disease

Date: January 17, 2013

Source: Helmholtz Centre For Environmental Research - UFZ

Summary: Early life exposure to normal bacteria of the GI tract (gut microbes) protects against autoimmune disease in mice, according to new research. The study may also have uncovered reasons why females are at greater risk of autoimmune diseases such as multiple sclerosis, rheumatoid arthritis, and lupus compared to males.

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Trust Your Gut: Prevention, Not Panic Key in Curbing Coronavirus

CISION PR Newswire March 10, 2020

Scott Mendelson, M.D. Author, 'Fleishbaum's Escapes'

Intestinal Flora and Mental health

Posted: 01/13/2014 1:02 pm EST | Updated: 03/15/2014 5:59 am EDT

What Is Your Gut Telling You?

Listen Share this: Facebook Twitter

By Sonya Collins
WebMD Health News
Reviewed by Arefa Cassoobhoy, MD, MPH

Aug. 20, 2014 -- Scientists have long studied the link between our genes and our health. Now, in a growing area of scientific research, they're studying the link between the bacteria in our intestines and virtually every disease that ails us.

Bacteria -- along with viruses and fungi -- are microbes, and we're filled with them. For each one of your human cells -- that is, for every cell

Why Michael Pollan Says We Should Get Friendly With Bacteria

Human Microbiota and Depression

Intriguing links found between the bacteria in our guts and our moods

Post published by Emily Deans M.D. on Jun 30, 2014 in Evolutionary Psychiatry

"A strong gut is key to Coronavirus prevention, **the gut directly relates to immunity,** especially with at-risk groups."

– Dr. Hazan, MD, Gastroenterologist

THE GUT MICROBIOME

- **Ecosystem in the digestive tract**
- **Bacteria, viruses and fungi**
- **Communicate with each other and body**
- **Make important vitamins, enzymes and immune compounds**
- **A strong line of defense against pathogens**
- **Alive**



BIOME KILLING FOODS

- **Sugar and refined foods**
- **Chemicalized “food like substances”**
- **Highly processed, enriched items**
- **Alcohol, caffeine**
- **Soda, sport drinks, juice, flavored coffee beverages**
- **Industrial, oxidized fats**
 - Cell membrane health
 - Fried food

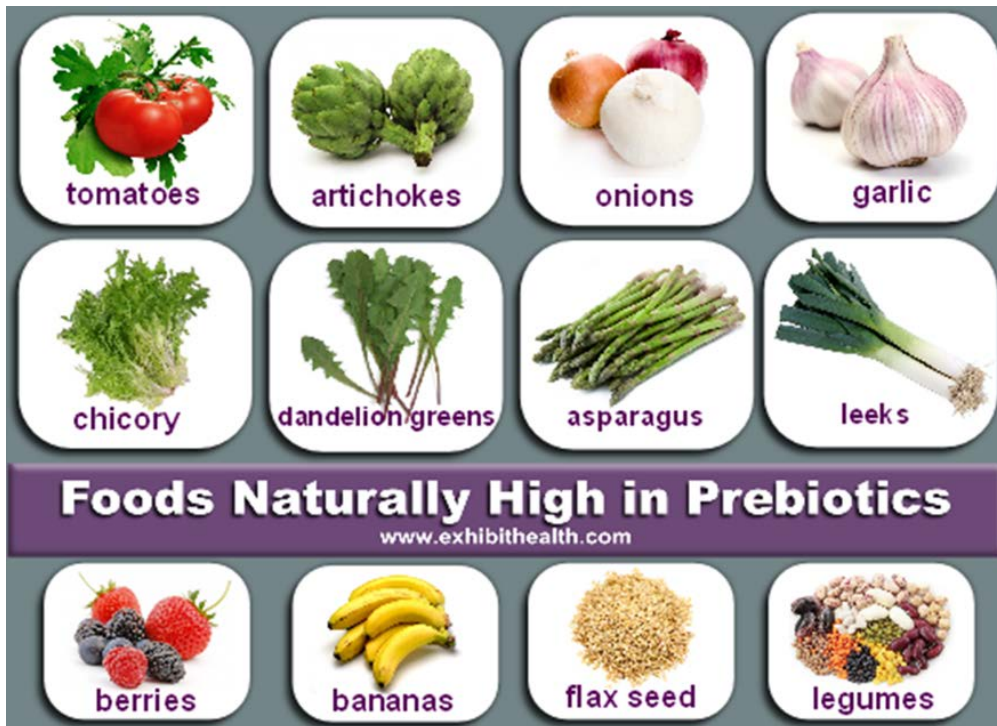


Photo courtesy of Hungry Planet

FERMENTED FOODS

- **Trillions** of good probiotics
- **Partially “pre-digested”** food
- **Used as condiments around the world**
- **Every culture had these:**
 - Japan: miso, natto, tempeh, pickled ginger
 - Korea: kimchi
 - Norway: Rakfisk
 - South America: raw fermented cheese, sour cream and yoghurt (unpasteurized)
 - Russia: kvass, kefir
 - Europe: sauerkraut

PREBIOTICS



- **Foods that feed gut bugs**
- **High in fiber**
- **Resistant starches**
- **Flora is alive and needs to eat**

Eat for yourself and your bacteria!

GERD / ACID REFLUX



- Mainstream medicine treats this as **excess of stomach acid**
- Most likely it is a **lack of HCL** that is the cause
- Sphincter separating esophagus and stomach can malfunction, letting acid or vapors into esophagus and burning

PPIS - HEADLINES

Proton-pump inhibitors increase risk of kidney damage

The Pharmaceutical Journal | 15 APR 2016 | By Kirsty Oswald

Health News Men's Health Women's Health Children's Health Alternative Medicine Diabetes Heart Health Nutrition & Fitness

ACID REFLUX

Study suggests why common heartburn drugs increase risk for dementia, heart disease

YOUR HEALTH

Popular Heartburn Pills Can Be Hard To Stop, And May Be Risky

February 15, 2016 - 4:41 AM ET
Heard on Morning Edition

- **PPIs are often prescribed and bought OTC**
- **FDA only approves for **2-3 week** use**
- **Tied to dementia, kidney disease, stroke...**

SIGNS OF DIGESTIVE ENZYME INSUFFICIENCY

- **Indigestion/fullness 2–4 hours after meal**
- **Bloating or flatulence 2–4 hours after meal**
- **Undigested food in stool**



ENZYME SUPPLEMENTS

- **Many kinds available:**
 - Plant or synthetic
 - With or without HCL
 - Different focus (fat, protein, carbs)
- **Relatively benign supplement**
- **Can use long term**
- **Take in **middle of meal****



CHEWING

- **Digestion begins in the mouth**
- **Releases saliva and activates enzymes**
- **Helps ease the rest of GI work**
- **Makes food more alkaline – less gas**
- **Try counting chews**
- **Slow down when eating**








Chew everything – even liquids

WHAT YOUR POOP IS TELLING YOU

Optimal



Bristol Stool Chart

Type 1		Separate hard lumps, like nuts (hard to pass)
Type 2		Sausage-shaped but lumpy
Type 3		Like a sausage but with cracks on its surface
Type 4		Like a sausage or snake, smooth and soft
Type 5		Soft blobs with clear-cut edges (passed easily)
Type 6		Fluffy pieces with ragged edges, a mushy stool
Type 7		Watery, no solid pieces. Entirely Liquid