



Eating for a Healthy Gut



Learning Objectives

- To develop an understanding of why the bacteria in our gut are important for our health
- To understand the different actions and food sources of pre- and probiotics
- To identify three ways to help positively influence gut health

What Makes a Healthy Gut?

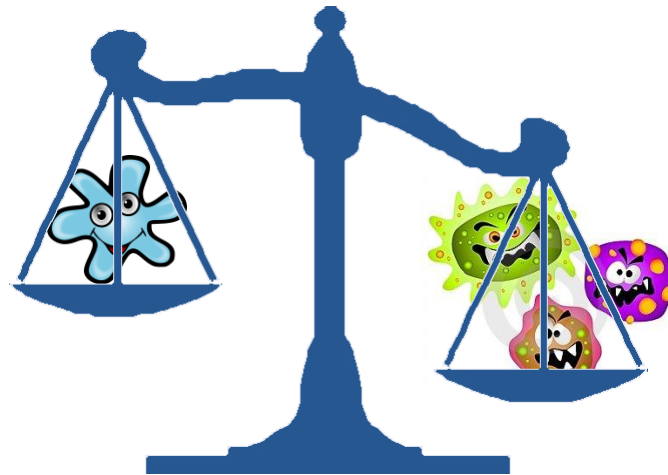
- The trillions of microorganisms (like bacteria) living in the human gut (intestines)
- These microorganisms are called the *Gut Microbiota*
- These microorganisms are important to keep us healthy!



Gut Bacteria

- Helps the immune system
- Helps to protect us from bad bacteria
- Helps with digestion

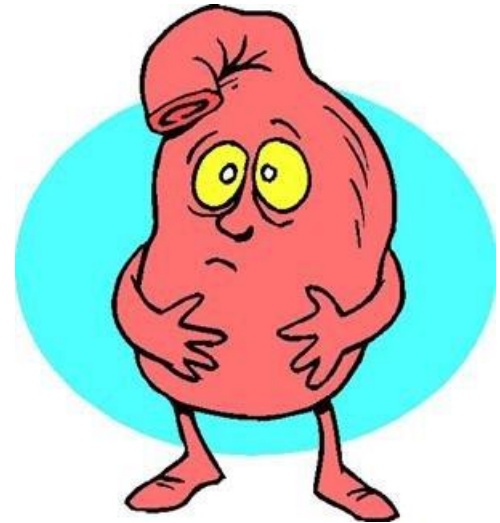
Unbalanced gut bacteria = increased risk for disease



Gut Bacteria

Imbalance is associated with disease:

- Colorectal Cancer
- Obesity
- Diabetes
- Allergies
- Asthma
- Irritable Bowel Syndrome (IBS)
- Inflammatory Bowel Disease (IBD)

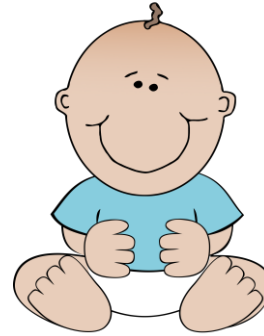


Balance + Diversity = Healthy gut!



What can affect our gut bacteria?

- 1) How we are born
- 2) Infant feeding
- 3) Antibiotics
- 4) Environment
- 5) **Diet**



What can affect our gut bacteria?

1) How we are born

- Affects the first types of bacteria to grow in our gut

2) Infant Feeding

- How we are first fed helps to grow bacteria in our gut
 - Breast milk

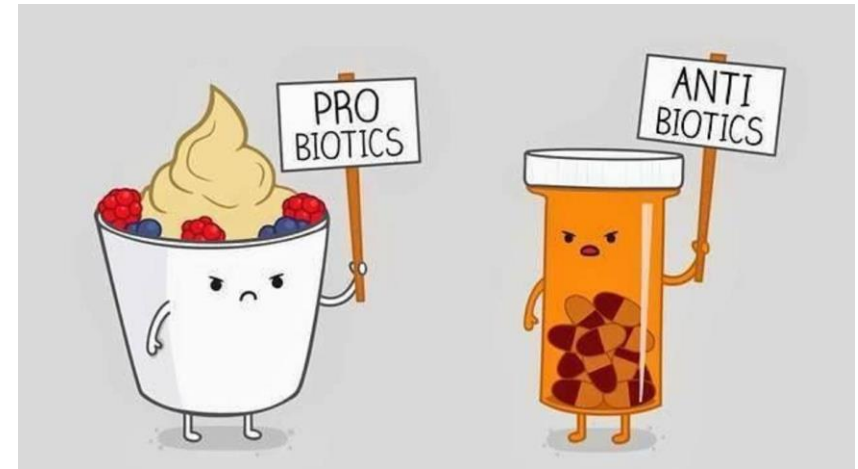


Once we are ~ 2 ½ years old, we have our “adult” gut bacteria

What can affect our gut bacteria?

3) Antibiotics

- Can kill the good and bad bacteria



4) Environment

- Exposes us to a variety of bacteria throughout our life

What can affect our gut bacteria?

5) Diet

- What we eat impacts our gut bacteria and overall gut health
- Food helps to increase the diversity, balance of bacteria in our gut... and so much more!

Specifically, we will look at...

- **Probiotics**
- **Prebiotics**



Probiotics

Probiotics are live microorganisms that can be beneficial to the health of the host

Known benefits:

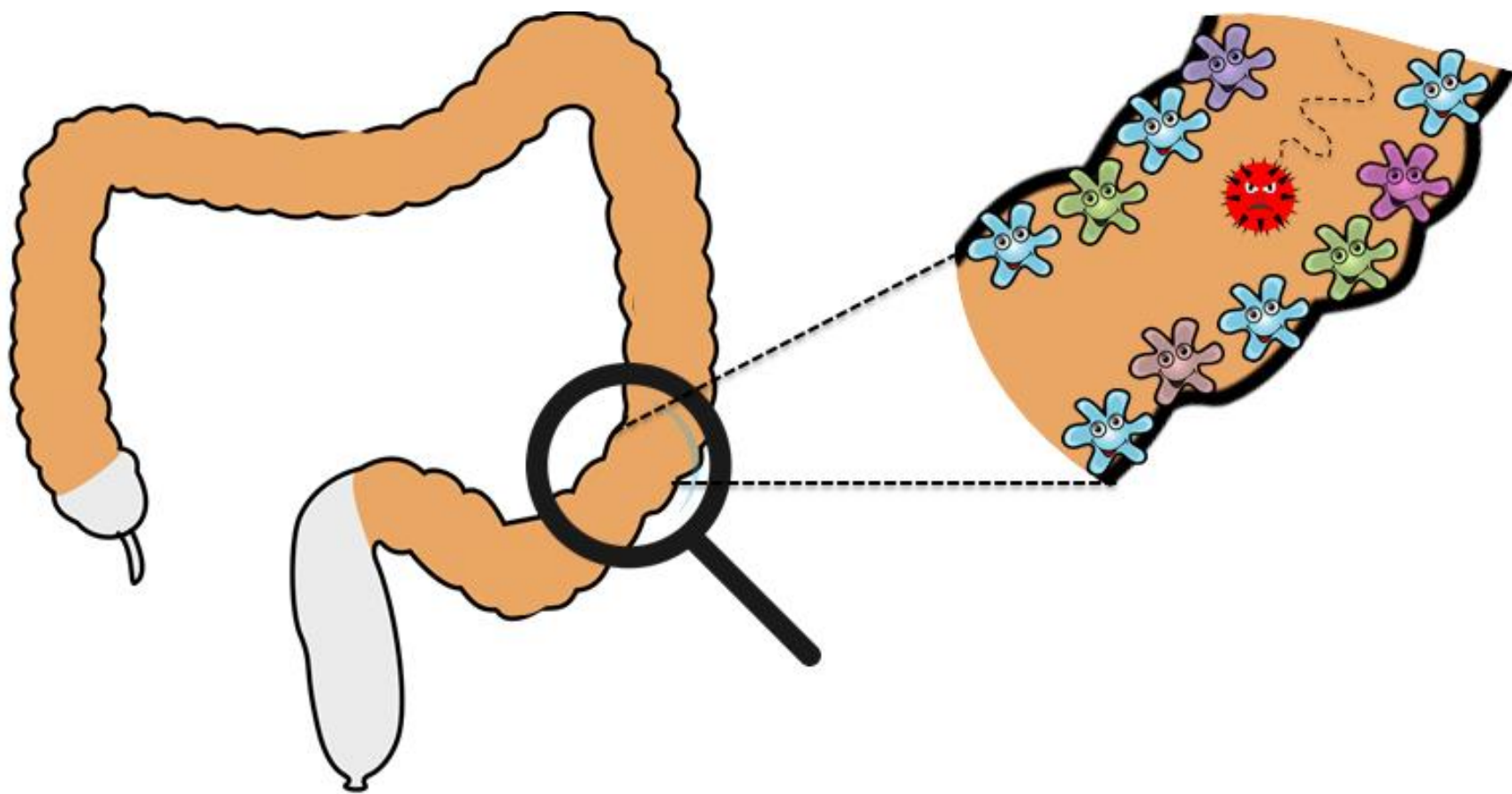
- Helps with digestion
- Promotes regularity
- Improves nutrient absorption
- Helps keeps a balance of “good” bacteria in the gut



Probiotic Criteria

In order for microorganisms to be considered a probiotic, they must:

1. Remain alive during product transport and storage
2. Be able to survive digestion
3. Won't make you sick
4. Have beneficial effects
5. Help balance gut microbiota
6. Help protect against bad bacteria



Probiotic Products

Probiotics come in a variety of forms:

- Supplements
- Naturally occurring in food
- Added to food products



Note: Probiotics must be taken regularly for any benefits to continue

Foods with Probiotics

Naturally containing:

- Sauerkraut
- Kimchi
- Kefir

Sometimes added to:

- Yogurt
 - Check label for “live cultures”



Kefir



Kimchi



Yogurt

Buyer Beware

Not all foods with added probiotics are healthy choices



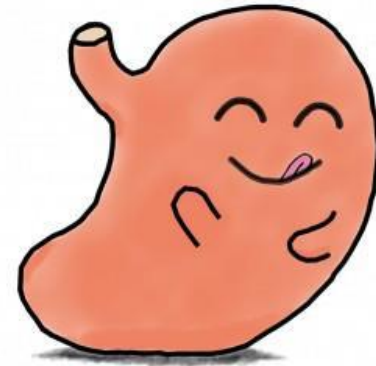
Companies may add probiotics to help market their product

Prebiotics

Prebiotics are non-digestible foods that help the growth of bacteria in the gut

Known benefits:

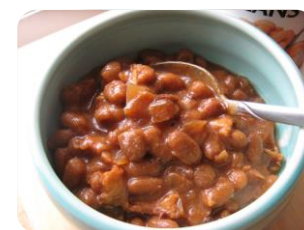
- Helps feed good bacteria in the gut
- Helps good bacteria grow in the gut
- Helps with constipation (keeps us regular)



Prebiotics

Often found in high fibre foods, like:

- Whole grains
 - Barley, rye and buckwheat
- Fruits and vegetables
 - Bananas, onions and asparagus
- Legumes
 - Lentils, chickpeas and kidney beans



Note: an increase in fibre means an increase in fluid

So...

**What's the difference between
probiotics in food vs supplements?**

Probiotics in Food

Benefits	Downside
<p>Provides other nutrients Example: Calcium and protein with yogurt</p> <p>Can provide both pre- and probiotics Example: Cabbage in Sauerkraut</p>	<p>Only certain foods have probiotics</p> <p>May not be able to tolerate yogurt with lactose intolerance *Note: You can get lactose-free yogurt</p>

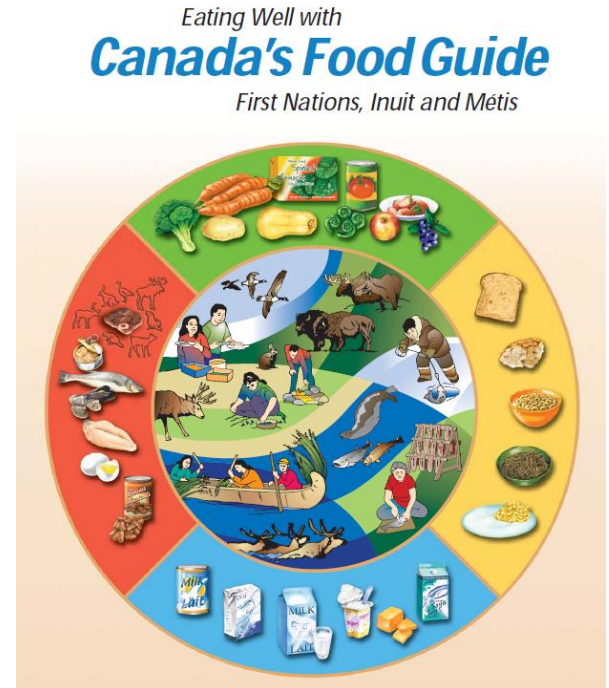
Probiotics in Supplements

Benefits	Downside
<p>May have a greater number and variety of microorganisms Example: VSL #3</p> <p>May be beneficial for specific conditions Example: Ulcerative colitis</p>	<p>Doesn't have other nutrients that food sources would provide</p> <p>Expensive</p> <p>Evidence??</p>

Healthy Eating Everyday

Will help keep you and your gut healthy:

- Energy and nutrients from healthy foods will feed you and your “good” gut bacteria
- More realistic for including pre- and probiotics in everyday life



Test your knowledge!

3 Minute Activity

At each site...

Work together to group foods (on the next slide) as either:

- A) Probiotics**
- B) Prebiotics**
- C) Neither**

Probiotics, Prebiotics, or Neither?

Chocolate



Kimchi



Chickpeas



White Bread



Whole Wheat Bannock



Bananas



Yogurt



Onions



Probiotics

Kimchi



Yogurt
(live cultures)



Prebiotics

Whole Wheat Bannock



Onions



Chickpeas



Bananas



Neither

Chocolate



White Bread



Yogurt
(no added cultures)



What can we do to keep our gut healthy?

1) Feed your “good” gut bacteria with fibre

- Choose whole grains, vegetables, fruits and legumes

2) Increase in fibre = increase in fluids

- Drinking healthy fluids over the day helps to keep foods moving through the gut

3) Feed your gut everyday with “good” bacteria

- Example: as a snack, have $\frac{3}{4}$ cup of yogurt (with live cultures) with a piece of fruit (like a banana)

Thank You!

Questions?

Eating for a Healthy Gut – Overview

Microbiota video:

<http://cdhf.ca/en/videos/introducing-the-human-gut-microbiome>

For More Information

Gut Microbiota

<http://www.gutmicrobiotaforhealth.com/en/home/>

<http://cdhf.ca/en/staying-healthy/your-microbiota/section/about>

<http://loveyourtummy.org/>

<http://www.probioticchart.ca/>

Probiotics/Prebiotics

<http://cdhf.ca/en/staying-healthy/pre-probiotics/section/resources>

http://cdhf.ca/bank/document_en/72understanding-probiotics-.pdf#zoom=100

<http://cdhf.ca/en/videos/pre-and-probiotics>

<http://uat.eatrightontario.ca/en/Articles/Probiotics/prebiotics/Prebiotics.aspx>

<http://www.eatrightontario.ca/en/Articles/Digestion/The-Pros-of-Probiotics.aspx>

References

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