



# Steps to a Healthy Gut

## What is the Gut?

- The gut, or lower gastrointestinal tract includes the small and large intestine
- The gut has many roles in overall health, so a healthy gut is important
- There are several steps you can take to a healthy gut

## Gut Functions

- Digestion of food and absorption of nutrients and water.
  - In the gut, food is digested and nutrients and water are absorbed.
  - To support this process, the gastrointestinal tract, including the small and large intestine, is surrounded by muscles to help move food along.
  - For overall health, including gut health:
    - **Eat a healthy diet**
      - The gut needs proper nutrition and water to function and stay healthy.
    - **Be physically active**
      - Regular physical activity helps maintain the strength and elasticity of the intestinal muscles.
    - **Get enough sleep**
      - Adequate sleep allows for repair and maintenance of the gut.
- Gut and brain communicate
  - The gut is filled with nerve cells that allow communication between the brain and the gut.
  - Stress can adversely affect the whole body, including the gut.
  - **Reduce and/or manage stress**
    - Reducing and/or managing stress can benefit the whole body, including the gut.
- Protects the body from pathogens
  - The gut acts as a physical barrier protecting the body from pathogens
  - The gut is a major part of the body's immune system.
    - The following can help support a healthy immune system:
      - **Eat a healthy diet**
      - **Get enough sleep**
      - **Reduce and/or manage stress**
      - **Be physically active**
- The gut microbiome has an important role in health promotion
  - Probiotics are live bacteria that when consumed in adequate amounts, provide health benefits
    - Probiotic bacteria are found in fermented dairy products like yogurt , buttermilk , soft cheeses, and kefir as well as fermented foods like sauerkraut, kimchi, tempeh, and miso
    - Probiotics are believed to help maintain or restore a healthy gut microbiome. Prebiotics have been shown to have beneficial effects on diarrheal conditions and decrease symptoms of irritable bowel syndrome and ulcerative colitis.
    - The gut microbiome and probiotics is an emerging area of research and there is a lot to learn.



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- Prebiotics are food for the gut bacteria
  - Many prebiotics are found in high-fiber foods that are not broken down by human digestive enzymes and make it to the large intestine where they are fermented by gut bacteria
    - Vegetables, fruits, whole grains and legumes (beans and peas) are among the best sources
  - When gut bacteria ferment prebiotics, some bacteria produce short-chain fatty acids, which can provide many health benefits such as helping to maintain the gut lining, lowering the risk of infections, may lower risk of colon cancer, enhance calcium absorption, may relieve constipation and diarrhea, regulate the immune system and regulate inflammation.
- To help support a healthy gut microbiome
  - **Eat a healthy diet**
    - **Make half your plate fruits and vegetables, Make half your grains whole grains and Vary your protein routine**
      - Fermented vegetables (sauerkraut and kimchi) and fermented soybean products (tempeh and miso).
      - Fruits, vegetables, whole grains and legumes (beans and peas) are among the best sources of naturally occurring prebiotic fiber.
    - **Move to low-fat or fat-free dairy**
      - Probiotics are found in fermented dairy foods such as yogurt, buttermilk, soft cheeses, and kefir.
  - **Reduce and/or manage stress**
    - Stress can negatively affect the gut microbiome

## Some Common Gut Problems

- Constipation and diverticulosis
  - To lower the risk of constipation and diverticulosis
    - **Eat a healthy diet**
      - **Make half your plate fruits and vegetables, Make half your grains whole grains, and Vary your protein routine**
        - Fruits, vegetables, whole grains, and legumes are all good sources of fiber.
          - Fiber absorbs water making larger, softer stools, which are easier to pass.
        - Fruits, vegetables, whole grains, and legumes are good sources of prebiotic fiber.
          - Gut bacteria ferment prebiotic fibers producing short-chain fatty acids, which are associated with relieving constipation.



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- **Drink enough water**
  - Dehydration is a risk factor for constipation
  - As mentioned, fiber absorbs water making larger, softer stools that are easier to pass.
    - Thus, it is important when increasing fiber to also drink enough water.
    - Increasing fiber without enough water can increase risk of constipation
- **Be Physically Active**
  - Regular physical activity helps maintain the strength and elasticity of the intestinal muscles, allowing for faster intestinal movement.
- General guidelines for increasing fiber in the diet:
  - Increase fiber slowly
  - Drink enough water
  - Some people have health conditions that require a low fiber diet, check with your health care provider before increasing fiber.
- Colon Cancer
  - To lower the risk of colon cancer:
    - **Eat a healthy diet**
      - **Make half your plate fruits and vegetables.**
        - Fruits and vegetables provide both nutrients (vitamin C, vitamin E, and beta-carotene) and phytochemicals that function as antioxidants, which can defend against colon cancer.
        - Nutrients and phytochemicals also support the immune system, which helps to defend against cancer development.
      - **Make half your plate fruits and vegetables, Make half your grains whole grains, and Vary your protein routine**
        - Fruits, vegetables, whole grains and legumes are a good source of fiber.
          - Fiber protects against colon cancer by binding, diluting, and rapidly removing potential carcinogens from the gastrointestinal tract.
        - Fruits, vegetables, whole grains, and legumes are good sources of prebiotic fiber.
          - Gut bacteria ferment prebiotics producing short-chain fatty acids, which are associated with reducing the risk of colon cancer.
      - **Vary your protein routine**
        - As mentioned, legumes are a good source of fiber and prebiotic fiber, which are associated with a lower risk of colon cancer.
        - Diets **high** in processed meat (meat preserved by smoking, curing, salting, or by addition of preservatives) and red meat are associated with colon cancer.
          - Thus, it is important to vary your protein routine and eat a variety of protein foods as recommended by MyPlate.



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- **If you drink alcohol, do so in moderation**
  - Alcohol is associated with certain types of cancer, including colon cancer.
- **Maintaining a healthy weight**
  - Excess body fat increases the risk of certain types of cancer, including colon cancer.
- **Be physically active**
  - Physical activity may lower the risk of certain types of cancer, including colon cancer, by helping to maintain a healthy body weight and by other mechanisms unrelated to body weight.
- **Foodborne Illness**
  - Those who are most vulnerable to foodborne illness are older adults, pregnant women, young children and people with compromised immune systems.
  - **Keep your food safe**
    - Following safe food handling practices can lower the risk of foodborne illness.
    - Safe food handling practices are highlighted by the four basic food safety principles which work together to reduce the risk of foodborne illness. These principles are:
      - Clean. Clean hands, food contact surfaces, and vegetables and fruits.
      - Separate. Separate raw, cooked, and ready-to-eat foods while shopping, storing, and preparing foods.
      - Cook. Cook foods to a safe temperature.
      - Chill. Refrigerate perishable foods promptly.

## Summary

- In summary the following are some simple steps you can take to have a healthy gut:
  - **Eat a healthy diet**
    - **Make half your plate fruits and vegetables**
    - **Make at least half your grains whole grains**
    - **Move to low-fat or fat-free milk or yogurt**
    - **Vary your protein routine**
    - **Drink plenty of water**
    - **If you drink alcohol, do so in moderation**
  - **Be physically active**
  - **Maintain a healthy body weight**
  - **Get adequate sleep**
  - **Reduce and/or manage stress**
  - **Keep your food safe to eat**
- It is important to note that these recommendations are similar to recommendation for overall health and well-being.