

# Saarth

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### GUT BACTERIA: HELPFULLNESS TOWARDS HUMAN HEALTH

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#### ABSTRACT:

Nowadays humans are facing quandary relating to stomach disease and it is prevalent quandary. Gut bacteria plays crucial role to balance human digestive system. However, due to consumption of junk and high calorie pabulum people forgot to take salubrious victuals such as green vegetable, fruit and high protein victuals. In addition to boost gut bacteria there are many types of medications are available in market. Gut bacteria affects metabolism rate and immune response.

**KEYWORDS:** Human health, immunity, gut bacteria, digestive tract

#### INTRODUCTION:

The gastrointestinal tract is a specialized tube segregated into different well-defined anatomical regions elongating from the lips to the anus. Secondly, human body is filled with trillions of bacteria and they avail to digest pabulum and play a paramount role in human salubrity. These bacteria living inside of human gut and around 300 to 500 different kinds of bacteria containing proximately 2 million genes and it paired with other diminutive organisms like viruses and fungi, they make what's kened as the micro biota or the micro biome. In additament, like a fingerprint, each person has a unique micro biota. Bacteria in human body vary from person to person and it determined by mother's micro biota and human diet and lifestyle as well. Furthermore, most of the bacteria live in intestine and colon and it affects human metabolism and immune system. The gut bacteria in salubrious people are different from those who are suffering from certain diseases. Gut bacteria protects humans from infection and inflammation. Less amount of gut bacteria caused chronic diseases and to ameliorate gut health many types of probiotics and foods are available in the market. Rudimentally small intestine contains lactobacillus species and these bacteria secretes lactic acid and it avail to digest carbohydrate and sugar.

#### FLORA OF SMALL INTESTINE:

during digestion, the gastric contents enter the minuscule bowel they are mixed with immensely colossal volumes of biliary and pancreatic secretions which include bicarbonate (to neutralize the gastric acid), bile (to emulsify fat to micelles minute enough to be digested yarely by lipase and phospholyases), and pancreatic digestive enzymes including proteinases, lipases and saccharidases. Many of these secretions are bactericidal and help to sterilize the material entering the minuscule bowel. Further, there is extensive fluid secretion from the bowel mucosa which accommodates to flush the crypts and avert colonization of the mucosal layer. Minuscule bowel contents are very fluid but the bowel forms of kineticism incline to slow transit thereby incrementing the opportunity for digestion.

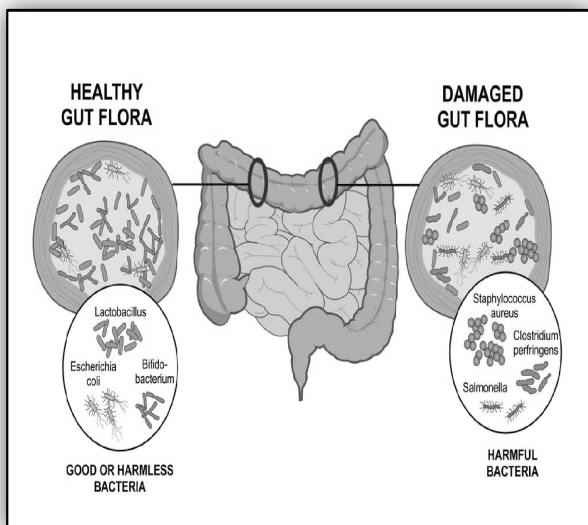
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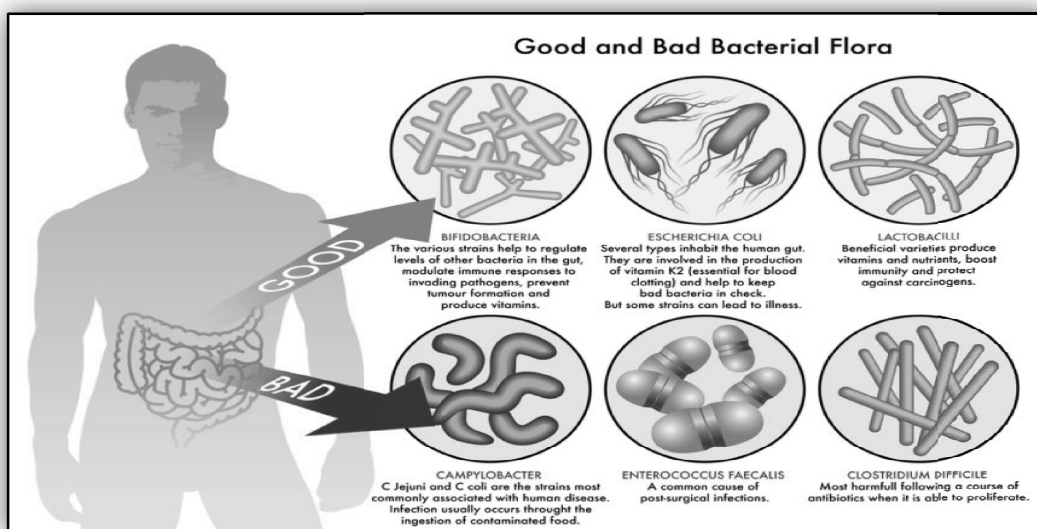


Human gut micro biome is a community of bacteria which is highly present in large intestine. There is little difference between small and large intestine is that the wall of large intestine is dense compare to small intestine. In addition the normal gut micro biota is dominated by anaerobic bacteria.

### FLORA OF LARGE INTESTINE:

Most information on the composition of the flora of the large intestine has come from the fecal samples. The flora is highly dominated by the strictly

anaerobic rod shaped organisms, gram negative (fusobacterium spp.) and Eubacterium spp. This represents 99% of the total flora. Other genera that flourish in the gut are the strictly anaerobic are at an intermediate level and more numerous than the dominant facultative organisms (coliform group). Whereas the count of the dominant organisms are stable and those of the minor organisms show considerable fluctuation, as is shown by standard deviations. Bacteria in the large intestine also make some important substances such as vitamin k, role in which plays an important blood clotting.



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### **INTESTINAL DISORDERS:**

The major function of the large intestine is to absorb water from the remaining indigestible food matter and transmit the useless waste material from the body. There are numerous disorders can affect the large intestine or colon.

### **Disorders:**

1. Chronic diarrhea
2. Colon cancer
3. Colon dysmotility
4. Irritable bowel syndrome
5. Polyps

### **Symptoms:**

The types of symptoms that can occur with a large bowel disorder are dependent on what part of the large bowel is affected these symptoms can range from mild to severe. Some of the more common symptoms of intestinal disease include:

1. Abdominal pain
2. Abdominal swellings
3. Constipation
4. Fatigue
5. Fever and chills
6. Nausea
7. Anxiety
8. Depression
9. Malnutrition
10. Weakness

### **Diagnosis of intestinal disorders:**

To diagnose any disease, experts first examine patient medical history and then other process will be conducted. Medical examination includes:

1. blood tests
2. breath tests with lactose
3. colonoscopy
4. capsule endoscopy
5. CT scans and MRI
6. Ultra sound: good for the detection of large intestinal tumors.

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### Treatment of intestinal disorders:

1. Avoid smoking
2. Avoid foods that trigger the symptoms
3. Exercise
4. Maintain healthy weight

### PROBIOTICS AND NUTRITIOUS FOOD TO IMPROVE GUT HEALTH:

Probiotics are live microorganisms and it claims that they provide fitness benefits when fed on, usually through improving or restoring the intestine. Probiotics are taken into consideration commonly secure to consume, however it may additionally cause bacteria-host interactions and undesirable aspects results in rare instances.

### **What are probiotics?**

Dietary amounts of protein, saturated and unsaturated fats, carbohydrates and dietary fiber influence the abundance of different types of bacteria in the gut. The microbiota can be also modified by adding live microorganisms to food or by period of fasting. Probiotics are live bacteria and yeasts that, when administrated in a viable form and in adequate amounts, are beneficial to human health. They are usually added to yogurt or taken as food supplements. Probiotics food such as, soft cheese, kefir, sour pickles, miso soup, yogurt, sauerkraut. Probiotics will help to replace healthy bacteria in your body when you lose them after taking antibiotics. They will help to maintain a healthy balance of positive and poor bacteria in a body. Lactobacillus is a type of bacteria that can be found in the intestine and it's possible that this is the most well known probiotics. Bifidobacterium is a type of bacteria that can be found in the human intestine. Saccharomyces boulardii is yeast found in probiotics. It appears to help fight diarrhea and other digestive problems.

### Conclusion:

Gut bacteria are highly important for healthy intestine and because of hectic schedule; nowadays young people are likely to take probiotics to improve gut health. Probiotics supplements are can be taken. Moreover intestinal disease can be treated well the help of healthy food.

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