

Friendly Flora

Let us first define “Intestinal Fortitude”: ‘Intestinal’ *adj.* related to the intestines; ‘Fortitude’ *noun* strength, resilience, staying power. Our synonym for these: ‘L. Plantarum OM’ *proper noun*, new and novel strain of good Bacteria that delivers strength, resilience, and staying power to the intestines.

So how can L. Plantarum OM create Intestinal Fortitude? First we must look at the intestines to see what they do for us. The small and large intestines are basically the foundation of our being. They are responsible for supplying us with our primary source of energy, without which we could not survive. Their function is simple; take in food, turn it into energy-supplying and cell-building nutritional elements, recycle fluids, discharge waste. What a wonderful factory we possess! However, many of us are unaware that this factory has trillions of ‘employees’ called “bacteria”. Like any factory, when the employees work hard (friendly bacteria or ‘Probiotics’) and stay positive, things run well. But, when some of the ‘employees’ are negative or destructive (unfriendly bacteria or pathogens), and these negative employees gain control, things go wrong and we suffer. How does this occur? The diagram below will give us a general idea.

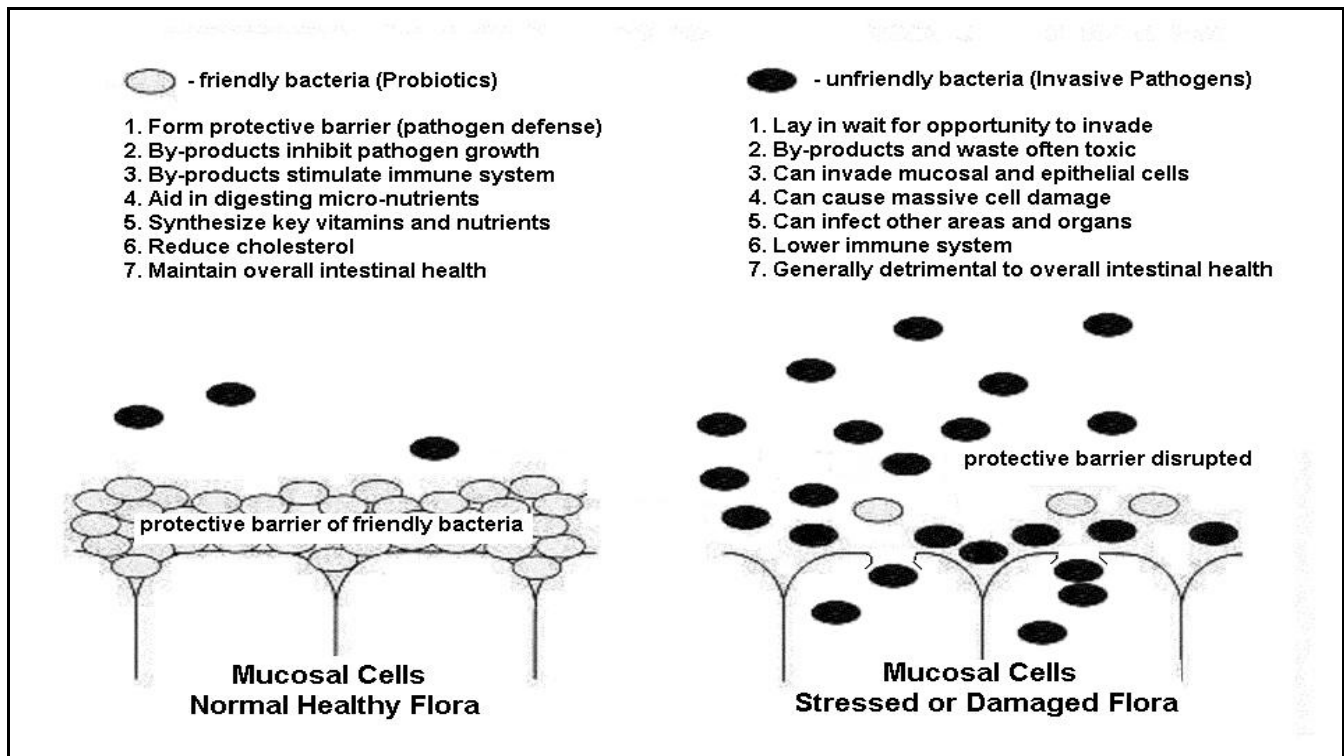


Figure 1. Normal Flora (left) vs. Stressed Flora (right)

The normal healthy intestinal flora (left above) is heavily colonized with Probiotics (Lactobacilli, L. Salivarius, and such).

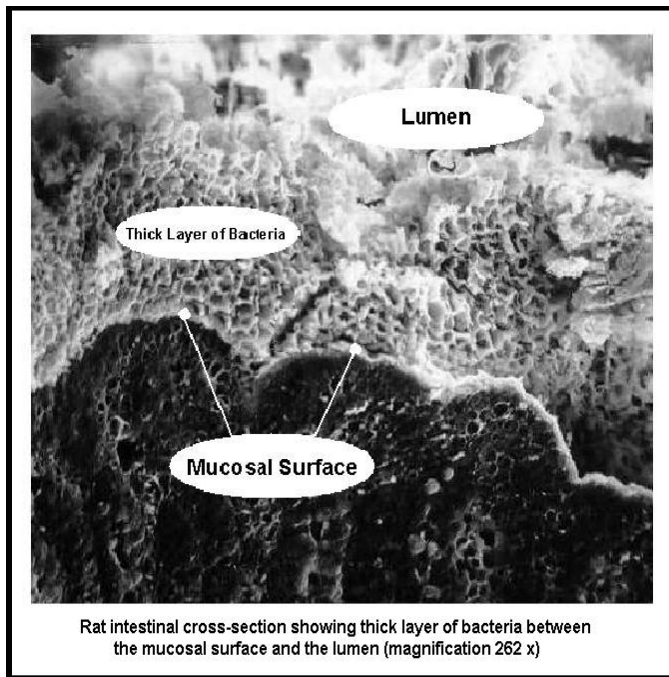


Figure 2. (left) shows an electron microscopic view of how bacteria form their defensive layer described in Figure 1.

These friendly bacteria provide many benefits to our bodies. **First** they provide a barrier that protects us from invading pathogens and harmful elements (unfriendly bacteria, viruses, toxins, chemicals, etc). **Next** they emit many beneficial by-products that stimulate the immune system, suppress the growth of pathogens, and perform other important tasks. **Finally** they assist us with the digestion and absorption of valuable nutrients, vitamins, and minerals. In some cases they actually synthesize vitamins and key nutritional elements from sources that our bodies would otherwise not be able to use.

Figure 3. (right) shows a further enlarged electron microscopic view of the actual colonies of bacteria as seen in Figure 2.

As you can see, Probiotics are ‘model employees’ in our wonderful factory. But what happens if their numbers are reduced or they disappear entirely?... we get sick!

MEET THE PATHOGENS

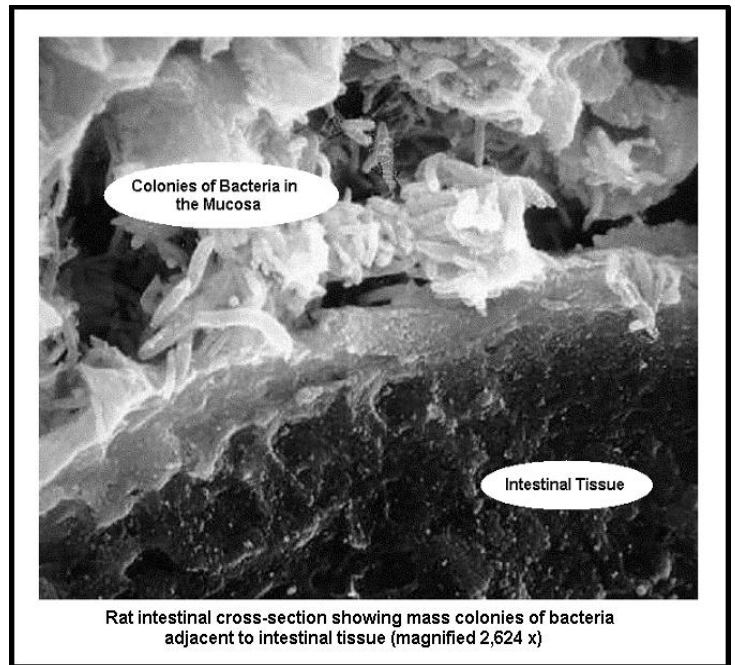
In Figure 1, we saw how the friendly bacteria, or Probiotics are so important to us.

However, there is a darker side lurking in the balance (as shown in Figure 1 on the right side). If our intestines undergo stresses like antibiotic or drug use, physical or mental trauma, diet deficiencies, or exposure to chemicals and adverse environmental factors,

the unfriendly bacteria, or pathogens, can take over and create major health concerns. This may even cause death, as we recall from recent “fast food” restaurant exposures to a deadly strain of E.coli. Let us take a look at two such pathogens.

E.COLI

Certain strains of E.coli are common in our intestine and are usually kept in check by our Probiotics. These bacterial infections will attack the kidneys. However, there are vicious opportunistic strains (as shown in Figure 4 below) that can create horrible conditions of dysentery, including massive fluid and blood loss through diarrhea. Many times, the onset of these types of



bacterial infections can be directly linked to a stressed intestinal system with depleted or unbalanced populations of Probiotics.

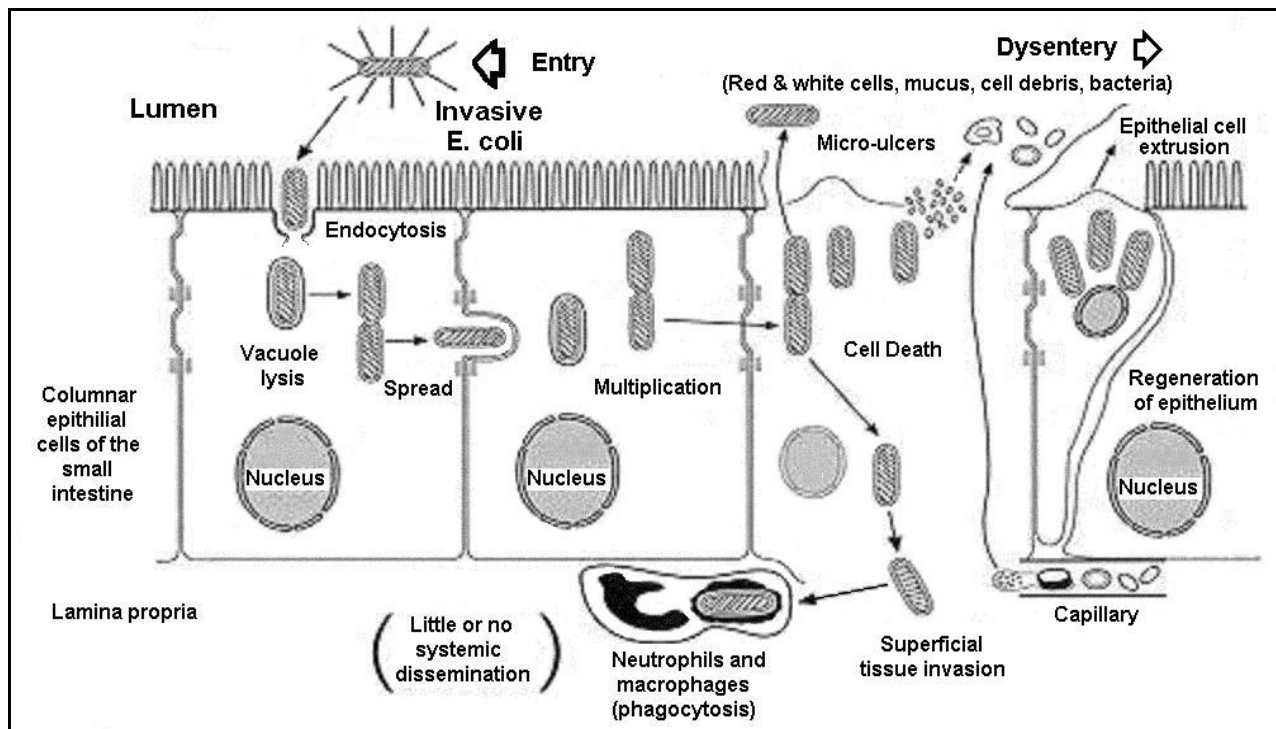


Figure 4. Invasive *E.coli* causing severe damage and destruction in the intestinal walls.

SALMONELLA

As with *E.coli*, certain strains of *Salmonella* are also common in our intestines and are also usually kept in check by our Probiotics. These can mimic flu symptoms of nausea, cramps, and vomiting. Many people exposed get cold sweats after eating. However, *Salmonella* also have opportunistic strains (Figure 4 next page) that can create similar conditions of dysentery, including massive fluid and electrolyte loss through diarrhea. A new strain, DT104 is now responsible for nearly 10% of food poisoning cases. The onset of these types of bacterial infections can also be directly linked to a stressed intestinal system with depleted or unbalanced populations of Probiotics.

PATHOGENS CAN CREATE MULTIPLE BURDENS ON OUR BODIES

Most of these pathogens have their own defenses to resist being reduced or eradicated by the work of the by-products of Probiotics. Our main problem is that we often set the stage to help with this resistance by our dietary habits. One of the primary defenses of pathogens is that they will infiltrate and colonize any undigested protein for their food. Most Probiotics are not protein eaters, thus leaving this large percentage of undigested protein nutrients as breeding grounds for the pathogens, which causes many distinct problems illustrated in Figure 5.

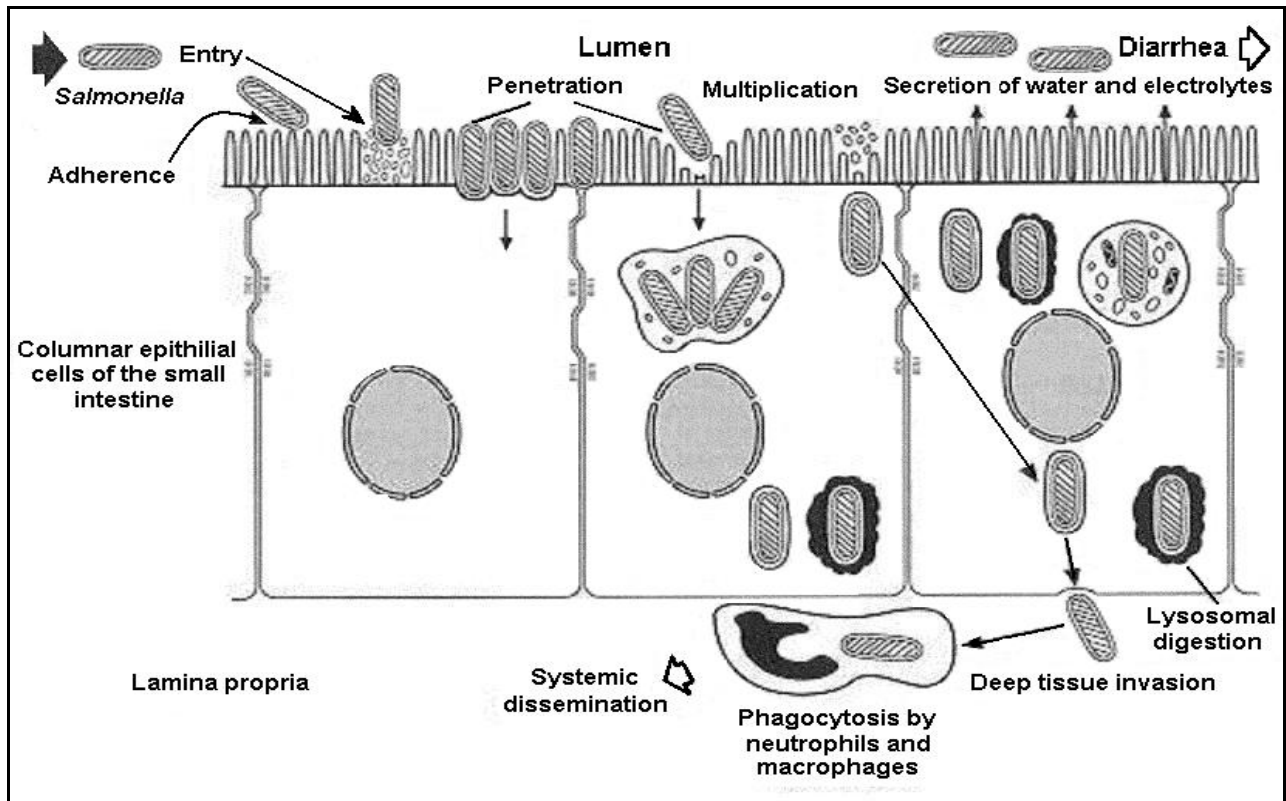


Figure 5. Invasive Salmonella causing damage in the intestinal walls resulting in diarrhea.

PATHOGENS CAN CREATE MULTIPLE BURDENS ON OUR BODIES

1. Pathogens that use undigested protein as a food source create toxic by-products through a process called putrefaction (rotting of proteins). These toxic by-products include, but are not limited to, hydrogen sulfide, phenols, creosols, indoles, ammonia, and many more. These toxins continually make it into our blood and organs causing damage, creating stress, and inciting energy expenditures in the body's efforts to detoxify itself.
2. The more undigested protein that is available, the larger population of pathogens. This creates a struggle between Probiotics and pathogens for colonization space and for gut-wall control.
3. If high populations of pathogens are present, and the body undergoes further stresses as previously described, infiltration and infection often ensues.
4. Cumulatively, all of these adverse responses can contribute to more complications like Irritable Bowel Disease (IBD), Colitis, Intestinal Ulcerations, Polyps, Cancer, etc.

SEND IN THE RE-ENFORCEMENTS

Now that we know how the pathogens operate, let's look at effective counter-measures. We see from above that our populations of Probiotics can be adversely altered, resulting in imbalance. We see also how the pathogens can take advantage of these situations. So let's explore the following:

GENERAL PREVENTION - If we continually introduce new populations of Probiotics into our intestines, we replace any Probiotics that have been lost from adverse conditions.

INCREASE PROBIOTICS IN TIME OF NEED - If we increase Probiotic supplements during and after times of intestinal stress, we further re-enforce our Probiotic defense mechanisms. This is especially important after antibiotic use or consumption of foods with antibiotics.

DIETARY CONSIDERATIONS - If we eat a diet conducive to Probiotic growth (easily digested proteins and a large variety of high-fibre fresh fruits and vegetables), we significantly reduce the pathogens' growth medium and populations.

MEET THE PROBIOTICS

What defines a Probiotic? A Probiotic is a type of bacteria that is:

- naturally occurring and survivable through our stomach and in our intestines
- does not represent an infection risk
- emits beneficial by-products
- exists in harmony with other Probiotics in our system

Lactobacilli and Bifidobacteria strains are the most common, but there are also other types and strains.

THIS PROBIOTIC STRAIN CROSSES THE BOUNDARIES OTHERS CANNOT:

Lactobacillus Plantarum OM is a bacteria strain that exceeds all expectations in the normal realm of Probiotics. In fact, we consider it the best Probiotic strain available on the market today!

What defines this "Super Probiotic"? Not only does it exhibit all the characteristics of other Probiotics, it also has beneficial properties that far exceed typical Probiotics, and represents incredible potential in health maintenance applications. This "Super Probiotic" is a novel strain recently awarded U.S. Patent # 5,895,758. The Patent was awarded allowing the following claims:

- It is Proteolytic** It will efficiently break down undigested proteins without producing the toxins that pathogenic bacteria do. It will compete with pathogens for their primary food source. It suppresses pathogen growth in their typical growth medium.
- It is Anti-Tumoral** Mice were inoculated with the Sarcoma 180 Tumor Model and then fed L. Plantarum OM. These mice exhibited suppression of tumor growth by up to 96% compared to mice left untreated. The scientist conducting this study claimed: "This is remarkable for a natural product."
- It is Anti-Viral** Mice were inoculated with the Rauscher Leukemia Virus (RLV) and then fed L. Plantarum OM as both pre, and post-inoculation treatments. Using spleen weight as a primary indicator of viral effect, mice were sacrificed at 4 weeks after inoculation and spleen weights were compared. The group of

mice pre-treated with L. Plantarum OM exhibited only a 10% increase in spleen weight as compared to a 3,620% increase in the spleen weight of the mice left untreated! The group of mice post-treated with L. Plantarum OM exhibited only a 40% increase in spleen weight as compared to a 2,870% increase in the spleen weight of the mice left untreated!

It is Anti-Retro Viral Since the RL Virus is a known example of an animal retro virus, L. Plantarum also exhibits exceptional anti-retro-viral activity. It can also be used to screen other pharmaceutical agents for anti-retro viral activity!

Nutritional Supplement It is a Nutritional Supplement that **can be maintained in the Human Gastrointestinal Tract**. This is crucial as survivability means it can perform all of these wonderful functions within our bodies.

Aside from the above Patent claims, L. Plantarum OM has a long track record in nutritional supplement applications with phenomenal positive feedback, and with no adverse health issues reported. It also has undergone heat-stability testing over a four-month period that resulted in 96% viability at temperatures near 100° Fahrenheit. Being combined with a rice bran base allows Friendly Flora to have a food source of its own for survival in the acid bath as it travels through the stomach.

L. Plantarum OM exhibits stability, with benefit and application diversity far in excess of normal Probiotic strains. That is why we consider it the best Probiotic strain available on the market today! L. Plantarum and L. Salivarius are natural bacteria that were previously found in abundance in the human gastrointestinal tract, until our modern diet with chlorinated water and also drug-based antibiotics greatly diminished them.

Avena Originals live Friendly Flora (L. Plantarum OM and L. salivarius) help change the acidity levels in various parts of the body, thus making it more difficult for harmful bacteria to survive. These probiotics assist in normalizing the intestinal pH and also create an environment for other good bacteria to colonize for more effectiveness.

To summarize, these hard-working friendly bacteria produce substances that create an electrical matrix to help inhibit cancers, viruses, reduce cholesterol, enhance the immune system, and even help distribute vitamins and minerals to every organ in the body. Re-populating the intestinal tract with natural, friendly bacteria in a formulation that is electrically harmonious is of paramount importance to health and vitality.

Capsules may be taken on a long-term basis as a 'preventative' or increase the number to restore the intestinal micro flora after an antibiotic cycle. Avena's sweet-tasting Friendly Flora powder is second to none in this emerging new field of intestinal health maintenance. This formulation does not contain fillers, yeast, dairy products, nor any other allergenic components.

Another natural product from Avena Originals that offers protection we can trust and depend on!