Probiotics, prebiotics, bacteria and cancer

18 March 2015

Beneficial Bacteria: Mother’s little helpers

PART 1 of an in-depth look into the real scientific facts behind probiotics and prebiotics.

PART 2 next issue is entitled ‘Probiotics and cancer’
Part 1 - Gut bacteria and cancer

Probiotics, prebiotics and probiotic foods can help rebuild your gut, rebuild your immune system, make important compounds you may be lacking like vitamins B and K, melatonin and glutathione, and help you fight illnesses including cancer.

Bacteria in your gut can cause cancer

Some bacteria in your gut are good (commensal bacteria); some are bad (pathogens).

One study has shown that women with breast cancer have a very different set of bacteria to those who are healthy, with a high presence of E.coli. Another showed that young people who had food poisoning had a higher risk of colorectal cancer, even though the Salmonella or Listeria had been wiped out. Again E.coli was implicated. In the SYNCAN study, colorectal cancer was associated with lowered levels of a sugar-metabolising Clostridium strain, but high levels of Fusobacterium, itself known to produce carcinogenic chemicals. Artemisinin has been shown to have an effect against these pathogenic bacteria.

Go to: Artemisinin and bacteria like E. coli

Helicobacter pylori, another bacterium is linked to stomach cancers. The Lyme disease bacterium Borrelia burgdorferi has been found in all samples of brain tumours.

For more Go To: All cancer begins in the gut

Gut bacteria make you healthy; gut bacteria can make you ill

The fact is that if you are healthy your gut is about 90 per cent good bacteria and only 10 per cent pathogens. The 2009-2012 American Microbiome Project along with other large studies has shown a number of clear conclusions:

1. You have about 90 trillion bacteria in your microbiome. You only have 7 trillion cells - they out-number you 13 to one!
2. They have 75,000 genes to your 25,000. They make three times more messages - proteins, RNA and so on - and you cannot live without them.
3. Your gut microbiome gets ill first, then you get ill. And, you cannot get better fully until it get's better fully.
4. It gets ill? It loses volume and diversity. The good bacteria keep the pathogens in check - some (Lactic Acid Bacteria) produce acid (the gut needs to be acidic) and this can damage pathogens and prevent them from growing. A healthy set of gut bacteria are also your first line of defence - they also eat the yeasts that came into your body with every mouthful of food during the previous day. Damage the good bacteria and you will have an excess of yeasts and they, your pathogens and even parasites will thrive. You can have a bad guy in your body for 20 years or more before it comes out to play, according to research from Maryland Medical school.
5. How do you damage your gut? Two ways - One: take drugs or antibiotics, or Secondly: change the gut pH - you smoke, drink too much alcohol, eat too much sugar, salt, pickles or become overly stressed and some of the good guys (commensal bacteria) will die and/or fail to grow and reproduce at the required rate.

Go to our brilliant book: 'Heal your Gut - Heal your Body'

How do pathogens increase cancer risk?

All organisms produce chemicals - the commensal bacteria produce compounds you need and use; the pathogens and parasites produce compounds that are toxic, and in some cases carcinogenic.

Commensal bacteria:

* The 'good guys' make useful compounds - at any time 38 per cent of circulating molecules have come from them. They control your biochemistry. Your physical and mental wellbeing.

* Some like bifidobacteria MAKE B vitamins

* Some produce glutathione; others produce melatonin. Both fight cancer.

* Some produce short chain esters which manage your blood sugar, manage your triglyceride levels, and control inflammation in the body. High triglyceride levels have been linked to higher rates of metastases; inflammation spreads cancer. One such ester, sodium butyrate, even kills cancer cells.
Gut health is all important

Certain illnesses like IBS, Crohn's and colitis, diabetes, Alzheimer's, heart problems, dementia, blood pressure, and even obesity have been linked to problems with the gut bacteria.

And some of these conditions, like Crohn's, have been linked with cancer.

Yeast and pathogens can make you sick - they debilitate you. Some can even produce carcinogenic chemicals.

Go to our brilliant book: **'Heal your Gut - Heal your Body'**

You really must rebuild your gut in order to be fully well and 'fighting fit'. If you have had stomach problems, infections, might have a parasite and so on - HEAL YOUR GUT, right now.

So what about probiotics?

People don't really understand probiotics. These are good gut bacteria. Only good bacteria. Usually you have 5 or 6 strains and maybe 4-8 billion. Any more is often a waste of money. But when someone is in poor gut health, they may have lost 250-300 strains of commensal bacteria adding up to trillions. No single pill is going to replace that.

Probiotics like *L. acidophilus* make lactic acid. The gut needs to be acid, it keeps pathogens in check. You also need *Bifidobacteria* - they actually make B vitamins and can attack the bad guys. One *B. Infantis* has been shown to correct IBS and several gut problems.

Another, called *L. rhamnosus* conducts the orchestra, lifting levels of good, reducing the bad. It also heals a leaky gut.

Looking for a Probiotic that contains several Lactic Acid bacteria strains including *L. rhamnosus*, plus strains of *Bifidobacterium* including *B. infantis*? Go Here: to see what Our Natural Selection has to offer.

Then you feed them properly. Pectins and inulins - raw vegetables. High natural soluble fibre.

And never take them with hot liquids or keep them in the fridge.

There is a lot of research on people taking probiotics regularly - they help manage mood problems, they reduce the risk of colorectal cancer, they make your chemotherapy drugs work better and so on. You should always take them when having chemotherapy.

And what about Prebiotics?

Prebiotics are the foods that specifically feed the gut bacteria. Commensal bacteria love fibre especially soluble fibre - people who consume the highest levels of soluble fibre have the strongest immune systems.

Soluble fibre is typically in whole rolled oats and legumes or pulses like lentils, red kidney beans and chickpeas.

If you feed you probiotics correctly (Lactobacillus strains like pectins; *Bifidobacterium* strains like inulins, mother's breast milk, cocoa or very dark chocolate and even a glass of merlot according to research) you will turn your 8 billion in your pill into 8 trillion 24 hours later. Now you have enough to compete with the yeasts and pathogens!

And what about Probiotic foods?

This is possibly the most interesting are for health, but also the most 'dangerous'.

Unpasteurised cows' dairy is exceedingly healthy - it brings a large number of commensal bacteria in to your body, mainly *Bifido* strains, and also immunoglobulins, which can help repair the lining of your gut and kick-start the immune system if it needs it. No one has died in Europe for more than 50 years, and its sale is totally legal in shops. You can also find unpasteurised goats and sheep's cheeses too.

*Kefir* -this comes best as grains which you drop into organic goats milk and make your own Greek Yoghurt. It is almost totally made up of Lactic Acid strains.

*Sauerkraut* - this must be fresh. Many glass jars have been pasteurised and the potential benefits killed off. Excellent and with many different strains.

*Apple Cider Vinegar* - the raw version is cloudy. An avocado, take out the stone, pour in Extra Virgin Olive Oil and a splash or Apple Cider Vinegar. An excellent snack.

Then there's others like Kombucha and Kempeh.

The concern is that if the Hospital have flattened you immune system with their drugs, and there is a dodgy strain of bacteria in the food, you
You can go the whole way - have a Faecal Transplant

Faecal Transplants have been used with IBS, *Clostridium difficile* and various gut illnesses, but have also been successfully tested with illnesses like diabetes.

Enemas are prepared from the stools of healthy people and used on the sick. And so far, it seems to work. This, of course, produces a very rapid, and complete ‘re-boot’ of the microbiome.

Do not try this at home!

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From the previous article -

**Gut bacteria and cancer**

The Human Microbiome Project in America involved over 200 top scientists. The individual studies spawned show again and again how important the genes from the bacteria colonising your body are. These genes can literally direct your health.

One research study has been an eye opener. In America *Clostridium difficile* kills over 12,000 hospital patients a year. The bacteria ends up controlling the gut. But the use of faecal transplants - that is enemas made from the faces of healthy humans - have been used to restore health quickly and effectively in those who were dying. Incredibly, these transplants containing maybe 800 different types of bacteria, beat the drugs and mixtures of drugs and transplants. In other words, the drugs were part of the problem.

In some American hospitals Rheumatoid Arthritis is now not treated with drugs, just diet. And the results are better.

Not everybody likes the thought of a stranger's gut contents being inserted into their rear end. So already, 'experts' are trying to clear away the food and rubbish and prepare ‘Super- Probiotic pills’. They will probably have a super price too.

In our opinion, everyone over 50 needs to consider taking a multi-strain Probiotic daily. (And avoid the sort of things that disrupt your balance of natural Intestinal Flora). But more than this, we suggest you feed also these little helpers properly, with Prebiotics like whole fibrous foods, for example grains and greens. Chlorella is one such natural choice. [Click here](#) to read an article on Chlorella). Chlorella is a pure, whole, natural food taken as a daily supplement. It is a preserved algae, often subtitled greens in the USA. Together with the Probiotic it provides excellent levels of vitamins, minerals, essential amino acids and enzymes. For example, weight for weight it provides 300 times the level of beta-carotene in carrots!!

If you are thinking of buying chlorella, you might like to look at the Natural Selection Product of Choice. You can do this by[clicking this link](#). Try the synergistic effects of multi-strain Probiotic and Chlorella for three months. Your good health deserves it.

**Bacteria the good, the bad and the ugly**

There are thought to be somewhere between 4,500,000 and 5 million different types of bacteria on this planet. We are surrounded by them.

Around 4,000 have so far been identified by scientists. These include the dangerous ones that cause illnesses such as Typhus and Cholera, certain *E. coli* strains, strains that produce the toxin Botulinum, varieties that infect NHS hospitals, *Salmonella, Listeria* and other bacteria, amoeba variants and even yeasts like *Candida*. They cause disease, infections like tonsillitis, thrush, and severe chest ailments whilst others like *Helicobacter pylori* are linked to stomach ulcers and even cancer. They can invade our cuts and our wounds causing fever, even death.

Right now, you have them on your skin, in your eyes and ears. There are more bacteria on your tongue than there are people living in the world. They're scary; they're horrible; they're ugly. We are all under attack.

Well, at least that is the common misconception out of the way!

**Many bacteria are good!**

Bacteria were the first living organisms on this Earth, nearly 4 billion years ago. We evolved from them. Our biochemistry is naturally linked and balanced to theirs. Many of them help us live our lives and, in turn, we help them live theirs. In fact the vast majority of bacteria are pretty innocuous and we've learned not merely to co-exist, but to work together to live better lives. Those that live on grape skins and make our wine for us; others make our yogurts; some even manage our sewage plants and our compost heaps.

**Weapons of mass destruction**

Professor Mel Greaves, when interviewed in icon a couple of years ago told us that the fear was that children were developing more illnesses today because they didn’t eat enough dirt. (Mind you, he didn't use those actual words - they're my grandmothers. But I'm sure that's what could easily get sick. You won't with a probiotic pill though - even though many Hospitals in the UK are incredibly trying to warn against them.
Probiotics are microbial food supplements designed to top-up the residential beneficial bacteria in your body, thus making a positive contribution pro-life your life!

**Probiotics**

Beneficial bacteria build your immune system

There is one function where they are increasingly being shown to play a crucial, life enhancing role: the development of the immune system. Over the last few years, scientists have started to realise the importance of environmental microbes as development agents for a full immune system. Early contact with house pets (Nafstad et al 2001) or being brought up in a farmyard environment (Braun-Fahrlander et al 1999) have been linked with reduced levels of atopic disease. What's that? The fact that our sanitised city children are developing more eczema, allergies and asthma than ever. German research is very clear. Children brought up on farms develop half the asthma of nearby children, and nearly a third of those in towns.

Children with such diseases have lowered levels of lactobacilli, but an almost adult-like range of bifidobacteria species. (Ouwehand et al 2002)

In icon in 2003 we covered research, which showed that children who took antibiotics in the first year of their lives had a considerably higher risk of allergy by the age of seven. We now know why. Adaptive immune responses developed and initiated in the mucosal system, especially in the intestine, are essential for healthy immune system maturation (Rautava et al 2004). Local bacterial presence helps develop cytokines (Romagnani 2000) and helps build strong infant immune systems (Holt and Jones 2000).

Biotic is derived from the Greek word meaning life. So literally antibiotics are anti-life. They wipe out nearly all bacteria, the ones that cause the tonsillitis or the infant infections, and nearly all the beneficial ones present in the body at the same time. So that's not simply the short-term end of the infection it's now believed to be where your longer-term problems start.

**Probiotics**

If antibiotic literally means anti-life, you will understand that probiotic means for life or pro-life.

Probiotics are microbial food supplements designed to top-up the residential beneficial bacteria in your body, thus making a positive contribution pro-life your life!

Roughly 400 species of bacteria that live in your stomach and intestines have been identified. Probably there are really more than double that number found there but scientists have yet to isolate them all. Some of these bacteria (e.g. bifidobacteria and lactobacilli) are beneficial to us, others are harmful and some may be positively dangerous. The trick is to try to make sure the activities of the beneficial bacteria are dominant. Easy if you live on a remote island with no pasteurisation, chemical toxins, chlorine, irradiated foods or antibiotics!

Like any bacteria on our remote island, the good guys are all around us and an integral part of our lives. For example:

- During natural childbirth, the baby takes beneficial bacteria from the mothers birth canal, into its gut (caesarean births do not provide this).
- Raw organic foods give us beneficial bacteria on their surfaces (pesticides and irradiation kill them off).
- Raw, naturally fermented milk products provide beneficial bacteria (the EU has killed these off).
Most of these beneficial bacteria live in your intestinal tract where they get on with their daily lives, for example:

- Eating their favourite foods;
- Producing acid mixtures that aid our digestion;
- Producing waste products that we actually use and need like vitamins;
- Cutting up our food for us taking large molecules we could not absorb and turning them into smaller ones.
- Acting as our foot soldiers in the first line of defence against unwanted invading micro-organisms.

Let’s look at these in more detail.

**Beneficial bacteria control invading bacteria**

The good guys in the gut prevent infection by the bad guys. This they can achieve in a number of ways. For example:

- By their actions on certain foodstuffs, they can control the pH (acidity/alkalinity) levels in the gut rendering the bad guys unable to grow or metabolise properly and so they die out.
- By direct attack and even digestion of some of these rivals. At night beneficial bacteria digest up to 2.2 kgs of yeasts and microbes for you. They are your first line of defence.

In the stomach *Helicobacter pylori* is attacked by stomach acid, so it hides in the mucous membrane. It is helped by lowered acid conditions, for example we make less as we age; we make less if we consume carbohydrate at the same time as protein; we make less if we consume too many packaged and prepared foods. Certain bacteria aided by natural herbs like Goldenseal will increase beneficial acid levels, and also attack *Helicobacter pylori* directly, preventing stomach lining irritation (and, thereafter, even ulcers and cancer).

In the intestine, some harmful bacteria and yeasts have the ability, under helpful conditions, to colonise. This can cause irritation to the gut wall and even result in holes being made in the lining (this may be called **Irritable Bowel Syndrome**). Under certain circumstances this allows some of the invaders and/or their toxic by-products into the blood stream where they may circulate and even stick to cells.

The finding, reported in 2004, that cinnamon could help some people with diabetes significantly reduce their symptoms, was shown to be due to the action of cinnamon on circulating yeasts which had bound to and blocked insulin receptor sites on cell membranes. The cinnamon acted on the microbes, freeing the insulin receptor site to do its proper job. A number of herbs like nutmeg, cinnamon, garlic, caprylic acid, Pau da Arco, chillies all have this yeast-killing ability, often working in conjunction with beneficial bacteria that exist throughout the body.

In 2004 US research indicated that women who had taken large amounts of antibiotics had twice the risk of breast cancer. Some experts believe this could also be due to microbes (yeasts) which are anaerobic like cancer cells and also produce toxins. Others believe it is due to a weakened immune system in the absence of beneficial bacteria.

If you have too few of the beneficial bacteria, then the result is more bad guys, more circulating bad guys, more disease. Fact.

**A collection of individuals**

The biggest problem facing scientists is that each of these bacteria is unique. Of course, there are strains which show similarities but the action (protective or harmful) of one helpful bacteria may be very, very different to others.

Bacteria from the genera *Lactobacillus* and *Bifidobacterium* have very different characteristics and abilities to those of *Escherichia*, *Enterococcus*, *Bacillus*, or *Saccharomyces* (a yeast) to name but a few.

As a result scientific research is made extremely difficult. A reaction in the gut may be noticed but identifying which bacterium or combination of bacteria - caused it, is often a question of trial and error in the laboratory. Also a large number of beneficial bacteria has yet to be grown, tested and researched, either on their own or in combination with others.

However, scientific research has grown significantly over the last decade, as has our knowledge. Prior to 1990 there had been about 5 published articles and no clinical trials. In 2002 and 2003 alone, there were 774 probiotic citations and 77 clinical trials. Some useful references are included at the end of this piece. It is important to understand that the majority of our scientific understanding has only developed in the last five to ten years, which is why certain quarters of the medical world are not fully informed.
The implication for us all, and the health and balance in our intestinal tract is that we need the presence of the widest range of the various species as possible ideally representing most of the 400 or so helpful bacteria.

And if we are not living on our desert island, but are subject to pasteurisation, irradiation, chemicals, chlorine and antibiotics in our food (most animals are regularly fed antibiotics), then we may even need a daily top-up, to ensure the balance and dominance of the good guys in our stomach.

Which brings us to Prebiotics

Bacteria, divide frequently. Feed them and just a few days later you could have millions! Clearly then, the type of foods you eat will result in a preponderance of certain types over others. Put simply: What you eat determines which ones predominate, or even whether you have the desired levels of any of the good guys.

For example, the bifidobacteria family like complex sugar chains of fructose and galactose. Mothers milk is full of prebiotics and contains large quantities of galactose. Not surprisingly children who are breast-fed have colons with up to 10 times the bifidobacteria levels, compared to children who are fed formula products. Research seems to suggest that breast fed children have higher levels of immunoglobulin in their immune system and are better protected against the severe diarrhoea-causing rotavirus. There are a number of research studies (some noted in the references at the end), including clinical trials, which show that prebiotics can increase and strengthen the immune system, because they stimulate the beneficial bacteria do their jobs.

Whole Foods

Prebiotics (pre-life) are non-digestible or fibre components of food. Which leads us to another big concern of the modern world. If we feed our children refined foods and fats, how will they take in the whole fibres, and indigestible chains that are needed to feed the probiotic bacteria and thus keep them thriving and in the best condition to help us?

Whilst these fibres would be useless to us without our friendly little helpers to break them down, they are essential life support systems for our pals.

Examples of these fibres can be found in:

- Whole oats and other whole grains;
- Fresh vegetables especially, chlorella and greens in general (from wheatgrass to chicory, cabbage, onions, leeks, asparagus);
- Pumpkin, sunflower and other seeds;
- Lignans in liquids like olive oil and aloe vera.
- Fresh and dried fruits like apples, pears, bananas and apricots that contain pectins

Inulin (for example from chicory and onions) also promotes the growth of bifidobacteria in the gut. Several studies have shown that bifidobacteria increase short chain fatty acid (SCFA levels) in the gut from digestion-resistant fibre. SCFAs include butyrate, acetate and propionate have been linked in research to lowered cancer levels and lowered blood cholesterol levels.

The action of beneficial bacteria is also enhanced by a number of herbs. These include garlic, turmeric, echinacea, propolis, slippery elm bark, cat's claw bark and liquorice.

Beneficial bacteria actually make nutrients for you!
Your friends in your intestinal tract aid digestion, in that they help break down molecules in foodstuffs that otherwise would be indigestible. And so, without the helpers, you would derive no benefit from certain foods and they would just pass straight through.

But more than this, depending upon the actual bacterium a number of beneficial by-products are produced. For example:

- Biotin
- Folic Acid
- Vitamin B-12
- Vitamin K
- Short chain fatty acids.

There is also some evidence that they can even breakdown harmful oestrogen products. Science is increasingly showing that maintaining a healthy level of the widest range of good bacteria is essential to our lives.

**If you don't have enough good guys in your intestine on any particular day, you could be deficient in any of the above, and vitamins like B-12, folic acid and vitamin K are now known to be crucial in the anti-cancer process.**

**Beneficial Bacteria kill cancer cells**

A finding in 2009 by the American Medical College of Georgia seems to demand a rethink from medical authorities who think the only answer to cancer is drug treatments.

According to the research beneficial bacteria breakdown certain fibres to produce sodium butyrate. This then acts in the body in two ways:

- a Firstly it can lower the levels of an enzyme COX-2 known to cause pre-cancerous inflammation
- b Secondly in cancer a gene is silenced so that these rogue cancer cells do not self-destruct. Sodium butyrate turns this silenced gene back on. And the cancer cells self-destruct!

The action of sodium butyrate has been shown via a cellular receptor GPR109A.

(Of course you could take sodium butyrate, but it tastes awful. The next best thing apparently is the B vitamin niacin. But why not have a healthy gut and let the beneficial bacteria cut up fibrous foods and protect you as nature intended?)

**Enemies of the state**

As we have said, antibiotics are a direct threat, but so is anything that can change the acidity or alkalinity of the environment in which the good guys live. That would include anything and everything from highly chlorinated drinking water to pesticides, a poor diet high in fat and low in fibre, alcohol, smoking and even stress and rushed meals. Most medications will alter the balance of bacteria in the intestine, as will any illness or infection. Even travel, which will cause stomach stress, possible temporary blockage, and deliver a whole new set of bacteria when you reach Vietnam or Turkey.

Obesity is linked to your gut bacteria. In experiments with normal mice, some were given bacteria from fat people, others from thin. And guess what? The ones with fat boy bacteria grew fat, and those with the thin person's bacteria grew thin. But, you need to know the rest of the research. The mice were then put in the same cage with low calorie feed. As they eat the droppings, their gut bacteria soon became the same, and all the mice became thin. Next the experiment was repeated but this time with a choice of foods. And the fat ones went for fat boy food and the thin ones went for healthy food. So your bacteria are part of the equation and their genes seem able to influence your thinking.

But then there is research showing exactly that for illnesses from Autism to dementia. The types of bacteria in your gut, through chemicals they produce that pass into the blood stream and end up in the brain, or through the nervous system seem capable of influencing your mood and your brain damage!

Finally, research indicates that the level of beneficial bacteria and their balance may change as you age. This is fascinating as it may also be one factor in a declining immune system and dementia.

**How much is enough?**

On your desert island, in your gut you may well have 50 trillion bacteria, weighing 3-4 lbs in total.
A good supplement should have representation of just one or several probiotic strains and deliver about 8 billion live bacteria in total across a day. Any health claims should be backed by scientific evidence.

What is becoming clear from the masses of recent research is that *bifidobacteria* and *lactobacilli* are the primary beneficial bacteria species. However, to repeat, many of the bacteria of the intestine still have not been researched and much more is to be learned.

Many supplements talk about how many billions of probiotics they contain but actually it is slightly missing the point. For example, given the right prebiotic foods, those bacteria will multiply many times over in just a few days. Another issue is to provide the width of genera. If you don't have an original, you can't make copies. Diversity is everything.

But first the most crucial issue is getting these live bacteria past the acid stomach which can kill them off, and into the intestine where they can do their topping-up job. This is not as simple as it sounds. Many potential probiotic bacteria are killed off long before they ever reach the large intestine. Indeed, implicit in the definition of a probiotic is that it should be a bacterium from a strain proven to survive transit through the gut and proven to have a beneficial effect in the large intestine, in clinical trials.

*Lactobacillus casei* Shirota and *Lactobacillus casei* Immunitas are examples of strains that meet both criteria, whereas (and this is why you should be careful) *Lactobacillus acidophilus* is the name of a common species used to make many yoghurts. This species has some strains that may meet the probiotic criteria but others that don't. A yoghurt with acidophilus is not a probiotic yoghurt unless it says it is on the pot. Many acidophilus strains never reach the large intestine. Saying it contains acidophilus is no guarantee that it is a probiotic.

Some supplements come in dried form. Belgian research found that up to a third of 30 supplements tested contained only dead bacteria, or even bacteria not listed on the label. So choose your supplier carefully. They must have research that shows their strain reaches the large intestine, perhaps helped if they are coated or protected in some way.

Some bacteria come live in milk based products. Bacteria have a long history of association with milk products, being associated with fermentation and yogurt production. If the bacteria are from probiotic strains then they have a reasonable chance of passing through the stomach intact. There may also be further protection afforded by the dairy constituent against the stomach acid. Some strains can also use the sugar/lactose constituent of the dairy as food.

The Belgian research also showed that, of the 30 dried supplements, and 25 dairy based supplements, only 13 per cent contained all the bacteria types listed on the label; some even contained bacteria not listed.

If you take a supplement

- Take it about 40 minutes after a meal, to protect the bacteria from stomach acids. Ideally the meal should be a carbohydrate meal.
- Always take it with a cold liquid, never hot.
- Ensure a naturally fibre-rich diet.
- Always keep the probiotic in a refrigerator.
- Only use a reputable manufacturer, with live strains that are genuinely probiotic.

Which illnesses might probiotics help?

If you are thinking of buying a probiotic, you might like to look at the Natural Selection Product of Choice. You can do this by clicking here.

*icon* is primarily a cancer magazine, but it would be totally wrong of us not to mention the main illnesses beneficial bacteria have been proven, in research, to affect. But there is much, much more of the very latest research in Chris Woollams’ excellent new book ’The Secret Source of Your Good Health’.

Here we cover just a little of the research - Part II is specifically about cancer. Meanwhile here is a summary list, and references can be found at the end of the article.

Cancer

From the breakdown of dangerous nitrosamines to the destruction of yeasts/fungi and *Helicobacter pylori*. From the development of a strong immune system to the breakdown of toxins and carcinogens. For example: The SYCAN study is being conducted by the EU on colon pre-cancer polyps and the benefits of probiotics currently. For example: *Streptococcus thermophilus* possesses anti-cancer and anti-tumour benefits and is a natural anti-biotic. For example: Levels of certain beneficial *Lactobacillus casei* strains have been linked to reduction of harmful substances
and improved activity of natural killers (NK) cells in the immune system (cells that target cancer and virus-infected cells).

**Autism**

Recent research shows significant benefits for autistic children, especially when the children had antibiotics at an early age. *Lactobacillus plantarum 229v* seems to help (Nature, May 5 2004)

**Asthma/Allergies**

There are a number of very recent studies showing the benefits of probiotics with young children and even with pregnant women and their eventual offspring. Less eczema and allergy were reported in their infants after taking probiotics.

**Immune System Deficiency**

Probiotic cultures have been shown to simulate certain cellular and antibody functions, and to reduce toxicity from unfriendly bacteria. Probiotics are proven in clinical trials to strengthen the immune system. Fact.

**Kidney stones**

Probiotics have been shown to reduce levels of oxalate in the urine a risk factor for kidney stones.

**High Cholesterol and Hypertension**

Certain lactobacilli have been shown to reduce hypertension in research studies. Other research shows markedly lowered cholesterol levels in humans supplementing with probiotics.

**Lactose-Intolerance, Irritable Bowel Syndrome, Diarrhoea, Inflammatory Bowel Disease, Lupus, Crohns disease**

There are clinical studies available in all these areas showing probiotics help. Certain probiotics can actually help heal the lining of the stomach, preventing toxins from entering the bloodstream.

**Stomach Ulcers**

*See Helicobacter pylori and cancer above.*

**Vaginosis and cystitis**

The imbalance in these microsystems by invading bacteria may be shown in research to be neutralised by probiotics which both change overall pH and attack invaders.

**Signs of deficiency?**

The following could be considered a starter list:

- Bad breath, body odour;
- Bad gums, bad teeth, mouth ulcers;
- Bloating, wind, indigestion;
- Diarrhoea and/or constipation;
- Candida yeast infections, cystitis, thrush, yellow toe nails;
- Fatigue;
- Frequent colds;
- Acne, Eczema, Psoriasis;
- High cholesterol;
• Allergies.

In Summary

We don't live on desert islands. We don't even live on farms any more. We do destroy the natural balance and dominance of our healthy gut flora. The medical world seems almost oblivious antibiotics, chemotherapy, drugs all make matters far, far worse. Consider this quote: Cancer patients undergoing chemotherapy did not ultimately succumb to cancer, but to an infestation of Candida albicans. That comes from the 1993 Spring edition of the prestigious US medical journal Contemporary Oncology. Topping up with probiotics and the correct prebiotic diet will help defeat the Candida albicans. But our normal daily lives have changed so much in the last 100 years. Chlorinated water, antibiotic chicken breast, pasteurised Camembert. The fact is that our natural evolved relationship with bacteria is almost certainly out of the balance nature intended and, apart from the constant daily pressures, these pro-life bacteria exist in an incredibly delicate ecosystem provided by our bodies where one sudden change can destroy everything.

Fortunately science has decided that Probiotics - and Prebiotics are hot topics and large volumes of quality scientific research and clinical trials are available to those who want to find out more.

It is essential that each of us should keep our natural and wide range of beneficial bacteria happy, topping them up daily if needs be and feeding them the prebiotics that will cause their numbers to thrive, as a positive step against a huge list of modern diseases. Beneficial bacteria, the little helpers we get on day one from our mothers, may even be the missing link as to why we have so many new and rapidly growing twenty-first century diseases. If you are thinking of buying a probiotic, you might like to look at the Natural Selection Product of Choice. You can do this by clicking here.

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At Last - the definitive, research based book on how to build a diet to help beat cancer. Click here to read about it.
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Exposure to pets and atopy-related diseases in the first 4 years of life.  


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Protective role of probiotics and prebiotics in colon cancer.  


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Although probiotics and prebiotics sound the same, prebiotics have an entirely different role in the body when it comes to your digestive health. Now, as essential as probiotics are for your gut, these friendly bacteria simply wouldn’t exist if it weren’t for prebiotics. You see, prebiotics are the “food” that feed probiotics, and allow them to grow and repopulate in your gut. For this reason, you can think of prebiotics as “gut fertilizer.” Prebiotics act as a “gut fertilizer” to feed those probiotics in your system. While probiotics are found in fermented foods such as sauerkraut, kimchi, kombucha and coconut yogurt, prebiotics are a type of indigestible fiber that’s found in certain plant foods. Probiotics provide your gut with the beneficial bacteria it needs to thrive. Prebiotics provide your beneficial bacteria with what they need to survive and to provide you with all of the benefits mentioned earlier in this article. Think raw produce, herbs, and spices. Dairy has also been linked to various cancers, especially prostate and breast cancer. Combine these findings with the fact that conventional yogurt lacks beneficial prebiotics and contains high amounts of sugar, and it becomes clear why it may be best to limit the consumption of dairy. Due to the state of the dairy industry and how yogurt is processed, even plain, unsweetened conventional yogurt is more likely to feed pathogens than to be a source of probiotics. The Dirty Truth about Supplements.