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Probiotics

Your questions answered

Written by June Rogers MBE with thanks to Biofloratech Ltd for supplying the answers to our questions.



What are probiotics?

Probiotics are live microorganisms which, when consumed in adequate amounts, can provide health benefits.

What do we need to know about ingredients?

There are so many different types of bacteria, it's important to choose a product that is evidence-based.

For example the ingredients in Labinic Drops, which have been highly studied, are:

Lactobacillus Acidophilus NCFM
Can help with the digestion of lactose which is present in breastmilk and most formula milks, as well as cheese and other dairy products. It also produces anti-infective molecules.

Bifidobacterium bifidum Bb-06
Can help with improving digestion of nutrients and help to 'fight off' potentially harmful bacteria. It may also help to reduce allergies and viral infections.

Bifidobacterium infantis Bi-26
Can reduce inflammation in the gut. It offers support with maintaining normal digestive functions, reducing 'dysbiosis' which can include pain, wind, abnormal stools, for example constipation, and reflux.

MCT (Medium Chain Triglycerides) oil
Selected to stabilise the bacteria as it does not contain any common allergens i.e. gluten, soy, nuts, egg extract etc.

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What is the difference between pre and probiotics and are they both needed?

Prebiotics 'feed' probiotics allowing them to multiply.
Prebiotics are found in breast milk, cow's milk (unpasteurised), certain fruits and in plant-based foods including grains. Therefore, a normal balanced diet will provide adequate 'prebiotics'.

Should we be switching out strains/products i.e. do our bodies get used to a type of strain meaning it becomes less effective over time?

No, it is not necessary to switch as you are aiming to establish a stable balance of probiotic bacteria.

Are probiotics needed if you breastfeed as it contains probiotics?

Yes, they are as you are trying to eliminate 'bad bacteria' and establish a healthy and good microbiome.

WHICH ONE TO CHOOSE & WHY

How do you know which probiotic works better than another for each individual?

In addition to the information above about the strains, there is evidence that probiotics that contain multiple strains of different probiotics may be more effective than preparations that only contain a single strain. This is thought to be because the probiotics work together co-operatively (called 'synergistically').



Also, different probiotic strains colonise different parts of the gastrointestinal tract. As an example, Lactobacillus tends to inhabit the mouth and upper tract, whereas Bifidobacteria inhabit the larger lower bowel.

It is considered desirable to have a good distribution of probiotics throughout the gut.

Are some probiotics better than others?

In short, Yes:
Manufacturing probiotics requires specialist knowledge and skills, as the bacteria can be fragile and will not survive, unless they are correctly prepared and stabilised. For example, contact with moisture results in activation and death of bacteria, which can happen in a matter of hours or days.



Therefore, bacteria need to be stored in either sealed individual sachets stored in fridges or in an oil-based formula at room temperature to stop the ingress of water molecules. Large tubs of powdered probiotics are unlikely to have many 'live' bacteria present after a while as water molecules can cross the 'joins' in the tub.

It is also worth noting that many probiotic products will give you the count of bacteria present at the time of manufacturing, not at the end of the expiry date. Medical grade probiotics, like Labinic drops, are guaranteed to have the quoted live strain counts at the Best Before End (BBE) date on the packaging.

Do you get better probiotics in a more expensive brand, or is there no real difference between them?

Much of the cost of probiotics is due to the quality of the manufacturing process to provide guarantees of live bacteria throughout the shelf life of the product after manufacturing. Some probiotics require refrigeration and, if that is the case, it needs to be shown that the product has always been refrigerated.

The cost of the probiotic is also determined by the number of probiotics in the preparation, and the concentration of those probiotics.

More expensive probiotics will often have been used in clinical studies because of their superior quality, and healthcare systems (such as the NHS) will tend to use higher quality probiotics because of the differences explained above.

Can we mix different strains /products simultaneously for different benefits?

A premixed multistrain product already achieves this, and the stability of the probiotics when combined has already been tested. So it is not generally recommended to take a DIY approach to this.

Which probiotics are evidenced to pass through mouth, stomach and intestine and still present in gut to be effective?

Lactobacillus inhabit the small intestine, Bifidobacteria inhabit the large intestines.

WHEN TO GIVE



When are the best times of day to give probiotics and should it be before or after food?

The time does not matter but it may be helpful to give it with food to disguise the taste if necessary.

Should probiotics be introduced as soon as weaning starts?

They should be given from birth, particularly if the infant has been given courses of antibiotics.

What type of probiotic should you use when weaning and older and when to stop?

You should use the same type/brand to help establish a healthy microbiome.

The microbiome is established around 3 years old but will be affected by change in diet, illness and antibiotics. There is no need to stop.

HOW TO ADMINISTER & DOSING

Is powder form or liquid better absorbed and is any type more suitable for children?

Liquid probiotics are more stable.

Do children with Down syndrome tend to need more than the typical bottle indicated dosage - ie: is absorption an issue for our kids?

It should not be necessary as the bacteria should establish and proliferate (Multiply).

Can you stay on one strain of probiotics for a long time, or should you switch every 6 to 12 months?

No need to switch as you are trying to establish a stable healthy microbiome in the gut.



SIDE EFFECTS & CONTRA-INDICATIONS

Are there any side effects from taking them?

Wind, bloating, loose stools have all been described but usually any side effects are short-term. It may be helpful to reduce the dose if side effects are troublesome then gradually increase once these have diminished.

Are there any contra-indications?

If your child has recently (in past 6 months) had gut surgery, then it would be worth discussing with their surgical team, but this is not a contra-indication (inadvisable).

Are there any disadvantages to using probiotics?

Probiotics are generally recognised as safe and there are no known disadvantages.

Are probiotics safe if Neutrophils are low?

In the presence of severe neutropenia (very low white blood cells below laboratory normal reference ranges) we would recommend a discussion with your haematologist. However, it is normal to have trillions of bacteria in the gut, so there is no reason to think that probiotics (which are a couple of billion each day) would not be safe.

Can you buy allergen free probiotics?

Yes, but it depends on the product.

SO HOW CAN THEY HELP?



Will probiotics mean my child can stop taking laxatives/softeners for constipation?

By creating a healthy gut environment, the function of the bowel can be improved and there are reports of improvements in stool consistency, both diarrhoea and constipation. However, all laxatives/stool softeners should not be stopped abruptly, but can be very slowly weaned, depending on the stool consistency and frequency after starting probiotics.

Which strains of bacteria are most beneficial for constipation?

Bifidobacteria, which tend to colonise the large bowel, are likely to have the most effect on constipation.

ANTIBIOTICS

Probiotic and antibiotics? We usually take a course after antibiotics.

Take them during the course of antibiotics and continue afterwards, the gut microbiome will need a few weeks to a few months to recover to its previous ‘healthy’ state.

If my child is taking antibiotics do you have to wait to introduce probiotics/stop taking any probiotics until the antibiotics have finished so the antibiotics don't kill the 'good bacteria'?

Antibiotics are designed to kill bacteria and are not selective about which ones so the bacteria in the gut will be severely disrupted. This can happen within a few days.

When the gut microbiome is weakened, it can lead to digestive issues (bloating, diarrhoea, constipation), weaker immunity, and allow harmful bacteria to multiply leading to an increase in some other infections.

Probiotics are often given at the same time as antibiotics. Whilst the antibiotics may kill some of the probiotics, it is unlikely that they will kill all, as they are designed to be absorbed into the bloodstream where they are most effective.

The stool in children on antibiotics does not become ‘sterile’ which supports this concept. However, it is also known that there can be increases in ‘non-healthy’ bacteria (including antibiotic-resistant bacteria) in the gut, as well as fungi (such as Candida), during and after antibiotic treatment, and giving probiotics at the same time as antibiotics helps to reduce the prevalence of those non-healthy organisms.

RESEARCH

There are different kinds of probiotic bacteria, and has any any research been carried out with regards to Down syndrome specifically?

The research on probiotics in children with Down syndrome is very limited, so much of the knowledge is based on literature from infants and children who do not have Down syndrome. Over the last few years, the knowledge of the effects of probiotics, the impact of antibiotics and importance of gut health for long-term health has increased significantly, arguably to the point where probiotics in children could be considered to be as advantageous as vitamins.



Pants 4 School Programme

How do probiotics interact with coeliac disease?

Coeliac disease can be hard to detect, and the villous atrophy that is a cardinal feature of Coeliac disease can only be reversed with a complete exclusion of gluten from the diet on a lifelong basis. It is important to check that any medicine / remedy is free from allergens such as gluten.

What is the advice for children with Hirschsprung's/Stomas?

Probiotics potentially play a protective role in maintaining intestinal mucosal integrity and studies have shown that probiotics not only significantly diminished the incidence but also decreased the severity of enterocolitis. Enterocolitis is the most common and serious post-operative complication of Hirschsprung's disease.



OVERALL BENEFIT

Are there other benefits from probiotics use e.g. immune system support and which strains are good for this?

Evidence has shown that probiotics reduce the carriage of antibiotic-resistant Gram-negative bacteria. This further reduces the risk of the spread of Antibiotic Resistant Genes.

Is it right that homemade probiotics are superior to shop bought stuff and if so what is?

No. Home-made probiotics are not medical grade – it is impossible to know what bacteria have been grown (they may not be probiotic and may be pathological), if probiotic bacteria are alive, present in the right quantities, free from contamination, stable, what strain variations are present, whether they carry antibiotic resistance genes etc.

For further information on Probiotics, please contact
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