

Name:	Name Surname
Activation Code:	00-00-400000
Sample Date:	12th Apr 2022

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FUNCTIONAL GUT TEST

HELLO, NAME,

Congratulations on taking this important step to improving your **gut health!**

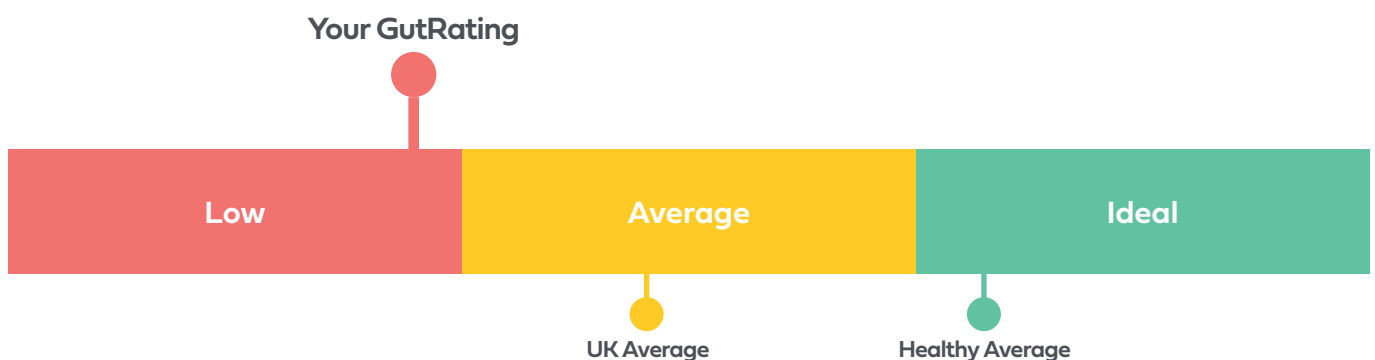
Information is power after all. And by seeing where you currently are, you can see exactly where you need to focus your energy for best results.

You and Your Gut

The bacteria in your gut have been looking out for you since day 1! Maybe they could be doing more for you, but in fairness you could be doing more for them. Each day we should be nurturing the bacteria in our gut to create an environment for them to thrive and in doing so will bring many many health benefits.

But, you already know that, that's why you're here...

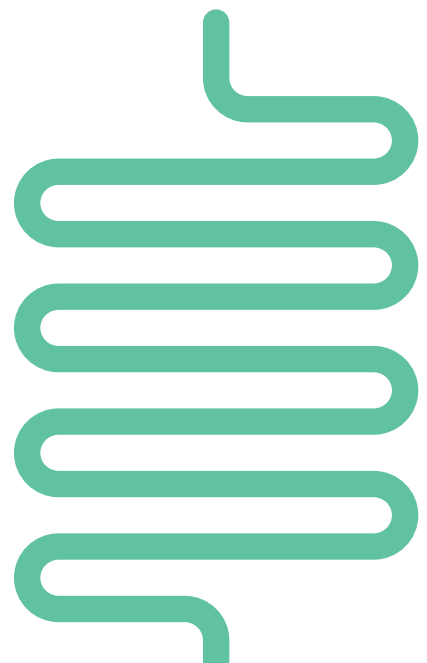
Let's take a look at your **GutRating**.



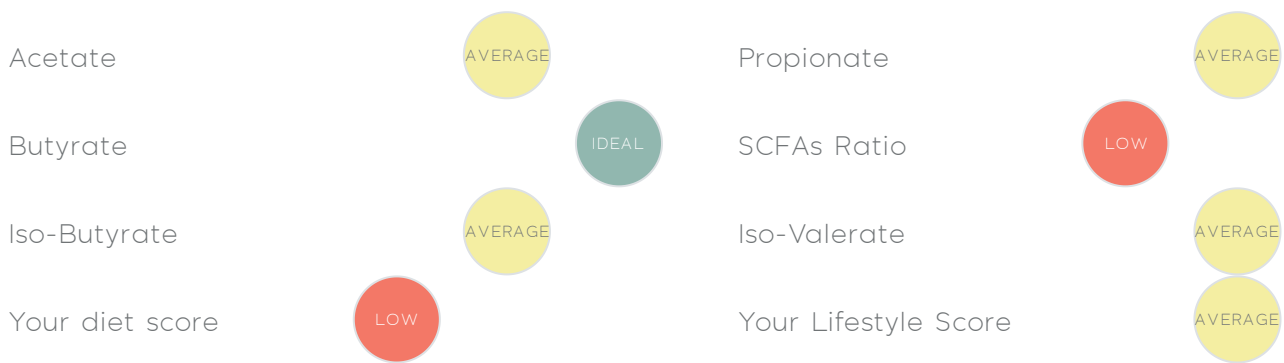
Your **GutRating** is a snapshot in time of how successful the bacteria in your gut are at producing key chemicals that keep you healthy. **Remember:** gut health is not fixed and can change from time to time.

Join our mission and
spread gut health awareness

Share your results



RESULTS SUMMARY



YOUR RECOMMENDATIONS

Your GutRating is **average**. Well done, but you have room for improvement.

Your levels of SCFAs are **average** and your ratio is **low**, this means that the bacteria in your gut are not in balance and they are not producing many key chemicals such as SCFAs.

Your levels of BCFAs are high. Higher BCFAs carry an increased risk of certain gut related issues such as high cholesterol and depression.

Your higher levels of iso-valerate could be having an impact on your mental health, particularly in your mood and by addressing this imbalance will likely have a positive effect on how you feel.

Your GutRating is a snapshot in time and based on your diet and lifestyle over the last two weeks. Your risk of developing further gut-related issues is **average**. But don't panic, you may have found the solution: by focusing on your gut health you are addressing the underlying issue and evidence shows that you are likely to remove or lessen your discomfort in time. You need to create an environment for your gut bacteria to flourish.

We recommend you make your gut health a priority, follow as many of your recommendations below as you can and retest yourself in **six months** to check your new GutRating and to see if the changes you have made work for you.

DIET

1. Increase diet diversity
2. Increase prebiotics
3. Reduce fuel for bad bacteria
4. Increase probiotics
5. Improve hydration

LIFESTYLE

1. Reduce alcohol consumption
2. Increase exercise

A combination of improvements will be most beneficial.
The elimination of an unhealthy choice is just as important as the introduction of a healthy choice.

YOUR KNOWN GUT-RELATED ISSUES

IBS



Anxiety



YOUR RESULTS

SHORT-CHAIN FATTY ACIDS

Short-Chain Fatty Acids or SCFAs are vital for physical and mental health. SCFAs are also the main products of the bacteria in the gut, and so by measuring their concentration, you are able to see how well your gut is performing.

Acetate

49.97 $\mu\text{mol/g}$

Function: Acetate is the most abundant SCFA and should make up more than half of the total SCFAs detected. Acetate regulates gut pH, protects against pathogens, boosts the immune system, controls insulin sensitivity to combat type 2 diabetes and nourishes butyrate-producing bacteria.

To improve acetate levels: increase the number of beneficial bacteria, such as Bifidobacteria or Lactobacillus species, by supplying them with conditions supporting their growth such as a diet high in inulin, oligofructose, oat bran and pectin. Inulin and oligofructose occur naturally in many plants such as bananas, onions, asparagus, leeks, and garlic. Oat bran increases acetate concentration in the blood and is more effective, by 45%, in comparison to wheat bran. Pectin is a fibre found mostly in the skins of hard fruits such as apples, pears, apricots and oranges. Fasting and caloric restrictions transforms the profile of human gut microbes leading to the increase of important acetate producers.

Propionate

14.17 $\mu\text{mol/g}$

Function: Propionate has wide-reaching effects including controlling weight loss and appetite and is anti-inflammatory which relieves and prevents irritable bowel syndrome and Crohn's disease.

To improve propionate levels: Rhamnose, a sugar present in the cell wall of many plants, can specifically increase the level of propionate. Increase the proportion of wheat bran or oat bran in your diet. Supplement your diet with vitamin B12, a vitamin vital in the production of propionate.

Butyrate

29.37
 $\mu\text{mol/g}$

Function: Butyrate has several functions. These include providing up to 70% of the energy needed for the cells in the colon; helping prevent leaky gut; and helping the colon with repair, which prevents illnesses such as ulcerative colitis. Butyrate also maintains the gut-brain axis and supports mental health. For example, butyrate increases the synthesis of the "happy hormone" serotonin, which diminishes anxiety and improves mood.

SCFA Ratio

53% : 15% : 31%

Your rating: **LOW**

Your gut bacteria are out of balance at the moment. This could be causing (or caused by!) your gut related issues.

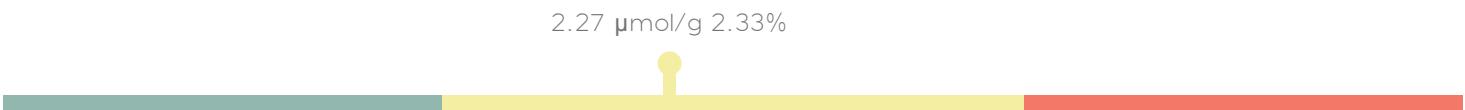
The acetate : propionate : butyrate ratio for healthy individuals is approximately 60% : 20% : 20% and is just as important as the amount of SCFAs produced. Veering too far from this ratio is an indicator that your gut microbes are out of balance and is an indicator for some inflammatory conditions such as IBS, obesity and heart disease.

BRANCHED-CHAIN FATTY ACIDS

Iso-butyrate



Iso-valerate



BCFAs are linked to protein fermentation, which can produce other compounds including ammonia, phenol and p-cresol that can cause cell damage, inflammation and cancer. Excessive protein consumption or the lack of fibre in the diet can cause a shift in the microbiota towards an unhealth state where the levels of BCFAs are increased.

Recent break-throughs in research have highlighted a strong link between our mental health and our gut health called the gut-brain axis. Increased levels of Iso-valerate is a marker for depression. Your higher levels of iso-valerate could be having an impact on your mental health, addressing this imbalance will likely have a positive effect on how you feel.

To decrease BCFAs: the importance of diet is critical. Try to reduce your consumption of protein particularly from meat sources. The recommended dietary allowance for protein is 0.75g per kg of body weight, which calculates to be approximately 66g of protein per day for you. Consider complimenting protein intake with dietary fiber (vegetables, wholemeal bread, brown rice), which stimulates the production of SCFAs and has a rebalancing effect.

OTHER GUT HEALTH FACTORS

BMI



Body Mass Index (BMI) is a useful test which uses your height and weight to work out if you're a healthy weight, or whether you should increase or lose weight. A healthy BMI is between 18.5 and 25 but does not take into account age, sex, pregnancy, fat content or muscular build. Approximately 75% of the UK population are overweight.

By working towards a healthy BMI between 18.5 and 25, you will be creating an environment for the bacteria in your gut flourish, which will improve your gut health. Individuals with a BMI over 30, controversially can have increased SCFAs in their fecal samples which can overestimate their GutRating. Current hypotheses point to the bacteria in the gut being out of balance which can alter SCFAs absorption. Your ratio of SCFAs show an imbalance of bacteria in your gut, which supports this.

Your focus therefore should be on following the recommendations in this report to support bacterial richness in the gut, this will likely normalise gut health, SCFAs absorption and in turn aid weight loss.

Age



As you age, the abundance of beneficial bacteria in your gut naturally decreases, particularly bacteria such as Bifidobacteria, on the other hand the abundance of opportunistic pathogenic bacteria such as C.difficile goes up. The higher your age, the higher your risk of digestive inflammation and gut related issues. This means you need to be constantly working on your gut health through life to curb this decline.

Stool Consistency

The Bristol Stool Scale (BSS) categorises stools from a range of 1 to 7 depending on shape and consistency. It is a basic snapshot in time, to help identify issues with diet, the digestive system and gut microbes. Types 1 and 2 indicate constipation (low water content) while types 6 and 7 indicate diarrhoea (high water content). The ideal stool is generally type 3 or 4.



Your diet score is:

1
5

You are doing 20% of the things you can at the moment to improve your GutRating.

You
Scored

Food Diversity

A diet consisting of a wide variety of whole foods, such as:

- o Fruits (apples, avocados, bananas, blueberries)
- o Vegetables (asparagus, broccoli, carrots, garlic, onion)
- o nuts and seeds (almonds, chia seeds, coconuts)
- o legumes (kidney, lentils, peanuts)
- o meats (lean beef, chicken, lamb)
- o seafood (salmon, sardines, tuna)
- o whole grains (oats, bulgur wheat, brown rice, quinoa)
- o dairy (cheese, whole milk, yoghurt)
- o fats and oils (butter, coconut oil, extra virgin olive oil)

can lead to more variety of bacteria in the gut, which brings wide reaching health benefits.

Challenge: There's always more you can do here. For the next two weeks, make a special effort and eat as many different whole foods you can each day.

Prebiotics

Prebiotics are a type of fibre that passes through the body undigested, promoting the growth and activity of friendly gut bacteria. Good sources include:

- o whole grains (oats, bulgur wheat, brown rice, quinoa)
- o fruits (apples with skin, pears with skin, bananas)
- o vegetables (carrots, beetroots, broccoli)
- o legumes (kidney beans, lentils, peanuts)
- o nuts and seeds (chia seeds, almonds)

Approximately 90% of people in the UK do not eat the required 30g of fibre per day. Many believe this to be the major contributor to the rise in modern illnesses such as IBS and type II diabetes.

Challenge: Be the 10% that eats enough fiber for the next two weeks. Or for an easier way to ensure you are topped up, start taking a prebiotic supplement.

Fuel for bad bacteria

There are up to 2,000 strains of bacteria in your gut, all competing for the food that you eat. Certain foods promote the growth of 'good' or probiotic bacteria and certain foods promote the growth of 'bad' or pathogenic bacteria. Reduce consumption of:

- o refined carbohydrates (white rice, white bread, cereals, fizzy drinks, sweets, snacks)
- o Artificial trans fats (fries, doughnuts; margarine, crisps, popcorn, cakes, pastries)

on a daily basis to re-balance the gut bacteria scales and to give the 'good' ones a boost.

Challenge: You don't need to avoid the above food like the plague, but cutting down and having days where you don't eat any could be a good reset for your gut.

Probiotics

Probiotics are cultures of beneficial bacteria like those found in fermented foods. These living microorganisms directly increase the number of good bacteria in the gut. Good natural sources include yoghurt, kefir, kombucha, sauerkraut and kimchi. Getting enough probiotics naturally can be difficult and a daily probiotic supplement can provide a necessary boost.

Challenge: Next time you do your shopping, put a probiotic item in your basket. Or try a probiotic supplement. They may not be cheap, but 'three-month from now you' is going to thank you!

Hydration

Sipping water throughout the day is often overlooked but has many health benefits. A hydrated gut has a beneficial effect on the mucosal lining of the intestines, helps the balance of bacteria and relieves constipation.

Challenge: For the next two weeks, drink two litres of water throughout your day.

AVERAGE

AVERAGE

AVERAGE

IDEAL

AVERAGE

LIFESTYLE

Your lifestyle score is:



You are doing 60% of the things you can at the moment to improve your GutRating.

You
Scored

Smoking

Smoking has detrimental effects on nearly every organ in the body including your gut.



Alcohol

Alcohol is considered a toxin, reducing alcohol consumption will have a positive effect on your gut health. However, drinking in moderation as part of a healthy diet and lifestyle isn't considered to have a significant effect on gut health. In fact, some types of alcohol have gut health benefits, particularly those high in polyphenols such as red wine.



Challenge: Count how many days a week you have an alcoholic drink. It will be having an effect on how you feel, your energy and your gut health. Consider shaving a day off where you don't have a drink.

Exercise

As well as many other health benefits, physical activity increases blood flow to the muscles in the digestive system that supports peristalsis, which massages our food along the digestive tract. Regular exercise will aid in supporting good gut bacteria diversity.



Challenge: For the next two weeks, do some kind of exercise each day, even if it is a brisk 30 minute walk, a cycle to work or a 30 minute stretching session. Activity fuels activity and you will feel better for it.

Sleep

Sleep deprivation or poor-quality sleep can disrupt the circadian rhythm and have harmful effects on gut bacteria. Sleep problems can cause subtle changes to the gut flora and increase bacteria associated with weight gain, obesity and type 2 diabetes.



Challenge: Whether you are getting between 6 and 9 hours or not, you can probably improve the quality of your sleep. Try a sleep supplement, some lavender oil on your pillow or simply try avoid looking at your phone the hour before bed.

Daily fast

We are what we eat and when we eat. Studies have shown that avoiding food for at least 12 hours a night has wide-reaching health benefits. Eating a large meal late in the evening, late-night snacking and jet lag all throw our gut bacteria out of their circadian rhythm, which is harmful to our gut diversity and therefore to our gut health.



Challenge: For the next week consider avoiding food or drink (water is ok) for at least 16 hours a day and see if you notice a difference.

