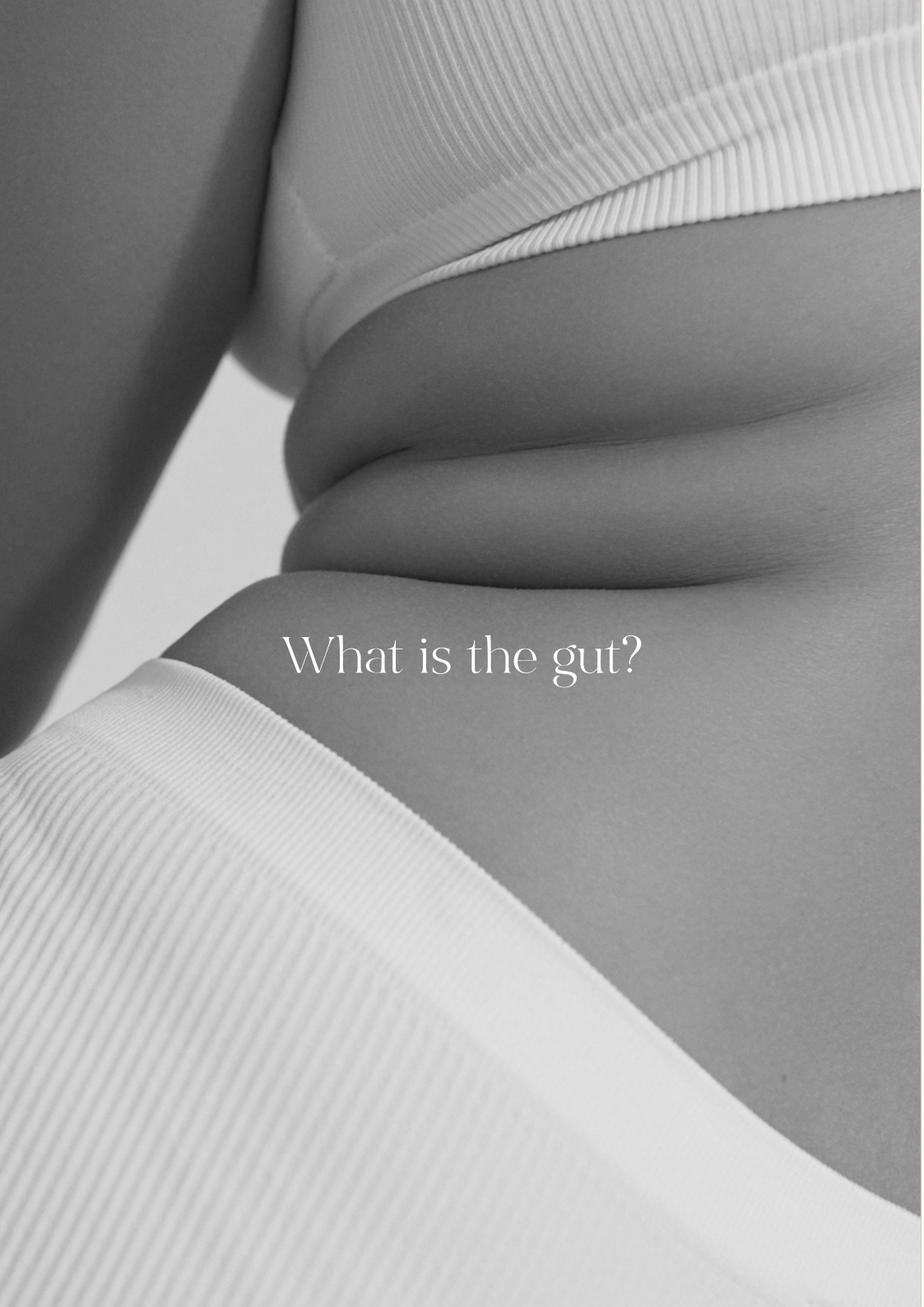
Get Gutsy: Gut Health 101

The Beauty Chef's (mini) guide to gut health

THE BEAUTY CHEF



What is the gut?

At The Beauty Chef, we speak a lot about the importance of gut health—not only for beauty—but also in terms of our overall health, wellbeing and immunity. But before we can fully understand why the gut is so integral to our health, it's first essential to learn more about the physiology of the gut itself—and how it works.

While most of us probably don't give as much thought to our gut as we should, our digestive system is incredibly complex—and remarkably, home to around 1000 species of bacteria. From our mouths to our stomach, small intestine and large intestine—our gut is truly a living ecosystem and is where we produce and regulate hormones and neurotransmitters, metabolise and utilise key nutrients, neutralise toxins and pathogens and it's also where an estimated 70 percent of our immune system lies[1].

Kicking off digestion in the mouth, our food mixes with salivary and digestive enzymes before arriving in the stomach where it's broken down before passing into the small intestine—which is actually the longest section of the digestive tract. Here, digestive enzymes such as lipase, protease and amylase are released from the pancreas as well as the gut wall, assisting in the breakdown of proteins, carbohydrates and fats. The delicate gut wall—or intestinal lining—is made up of villi and microvilli (tiny finger-like hairs) which play a critical role in digestion. And, it's often when these delicate hairs are damaged or irritated that gut health issues can manifest. Although fragile, the gut lining is also incredibly resilient and can begin to regenerate in as little as a week.

While some nutrients are absorbed through the gut wall at this stage, others are taken to the liver for processing—and then the next stop is the large intestine. This is where the large majority of our bacteria live and where they work hard to ferment fibre and produce anti-inflammatory short-chain fatty acids which are critical to our health and immunity.

WHAT IS THE GUT-BRAIN AXIS?

Our gut is often referred to as our second brain—due to the fact that our gut and brain are intimately connected. Influenced by the central nervous system (the brain and spinal cord) and the enteric nervous system (which is found in our gastrointestinal tract), the gut and brain communicate via the vagus nerve. This connection works both ways and can influence our appetite and digestion, mood, energy and blood sugar levels.

THE BEAUTY OF BACTERIA

The evolution of our microbiome begins as soon as we are born and everything we do, come into contact with and eat can impact the diversity and balance of bacteria that forms our internal ecosystem. This means that every action we take as well as what we choose to eat can either help to heal our gut or harm it—and can directly impact the types of microorganisms that are present in our gut.

While often our bacteria are thought of as ‘good’ and ‘bad’—this is, in fact, far too simplistic. There are certainly microbes we want and those that we don’t, but there are also microbes that are somewhat inconspicuous and behave in a fairly neutral way, depending on their interactions with their environment.

Put simply...

- Bacteria we always want: are the species and strains that influence our health in a positive way.
- Bacteria we want, but only in the right way: are those species and strains which can be both harmful and helpful.
- Bacteria we don’t want: are bacteria we refer to as pathogens, and usually we are alerted to their presence when we experience gut health symptoms.

While often our bacteria are thought of as ‘good’ and ‘bad’—this is, in fact, far too simplistic. There are certainly microbes we want and those that we don’t, but there are also microbes that are somewhat inconspicuous and behave in a fairly neutral way, depending on their interactions with their environment.

Why is gut health so important?

Given that our gut can influence everything from our immune and brain health, to our digestive function, energy levels, moods, skin and overall wellbeing—our relationship to it is undoubtedly the most important we will ever have. The growing body of research that illustrates the importance of the link between what we eat, our microbiome and our health and wellbeing is also encouraging as we begin to develop an even deeper understanding of this complex system.

While one of the key roles of our microbiome is to assist in the process of digestion—helping us to break down, absorb and utilise key nutrients—this is simply one of its many abilities and responsibilities. Our gut—or more specifically, our microbiota—a lso manufacture some of the vitamins[2] and amino acids that are integral to our metabolic health, immunity, brain health, skin, energy and mood.

At The Beauty Chef, the analogy we use most often is that our gut is like a garden and just like in a healthy garden where the soil needs to be rich, diverse and well-balanced—or in eubiosis—so too does our microbiome. When dysbiosis—or an imbalance—occurs, we can experience health issues as varied as headaches and fatigue, to bloating, constipation, mood disorders, allergies and food intolerances, autoimmune issues and skin manifestations. The root of many of these ailments is inflammation, which can occur when our delicate gut lining becomes damaged or irritated and endotoxins subsequently escape into the bloodstream. Also known as leaky gut, this condition is linked to a number of skin[3] and health issues[4], which is why it is so essential to nurture our gut and bolster the integrity of our gut wall at every opportunity.

"The skin is a great barometer of what is going on inside the body. If your skin is irritated, inflamed or congested, chances are high that there may be an imbalance in your gut."

– CARLA OATES, THE BEAUTY CHEF GUT GUIDE

SKIN ISSUES CAUSED BY IMPAIRED GUT HEALTH

In other words, where there is skin inflammation, there is likely gut inflammation—which is why it's essential to first divert your attention to your microbiome when dealing with skin issues, as opposed to trying to find a quick-fix topical solution. While at times, the connection between your skin condition and your gut may be obvious—such as when you eat a certain food and then experience a rash or skin breakout—at other times, it can be trickier to determine the role your gut health may be playing in your skin issue.

Some of the most common skin conditions linked to gut health include:

ACNE

A complex skin issue to diagnose and effectively treat, acne can be due to hormonal or digestive imbalances—or both. Hormonal acne can be caused by an excess of or sensitivity to testosterone, or cortisol—the hormone released during times of stress. Digestive acne however, also has close ties to our hormones as oestrogen and progesterone can affect the pace of digestion. Our gut also influences how these hormones are processed and eliminated from the body.

If you experience gut health issues—such as leaky gut and SIBO[6]—however, you are also more likely to experience acne. SIBO, for example, is alarmingly ten times more common in those with acne.

ROSACEA

Similarly to acne sufferers, those with rosacea are 13 times as likely to have SIBO. Rosacea can typically be difficult to treat as the triggers are many and varied. For some, their rosacea is linked to changes in temperature or allergies, while for others food allergies could play a role.

ECZEMA

This dry, red and itchy skin condition can be utterly debilitating and again, it can be tricky to pinpoint triggers. What we now know, however, is that while food triggers can be a source of eczema for some, to manage this condition, fostering a diverse microbiome[7] is essential as this ensures a robust immune system and subsequently a reduced likelihood of skin inflammation.

KERATOSIS PILARIS

Caused by a buildup of keratin, this condition is often referred to as 'chicken skin' and to this day remains a bit of a mystery in terms of its cause. Gut health, however, may be a contributing factor so a diet rich in both vitamin A—essential for healthy skin function—and essential fatty acids—which combat skin inflammation—is beneficial.

AGEING SKIN

Although we are unable to prevent ageing, we may be able to slow it down or mitigate its detrimental effects by fostering a healthy microbiome. Inflammageing—or ageing caused by inflammation—may be triggered by gut dysbiosis[8] and low-grade inflammation is also one of the key factors when it comes to skin and body ageing.

Influenced by everything we come into contact with, our diet, behaviours and even our emotions—our gut is both sensitive and resilient. As such, it's essential to nurture and nourish it at every opportunity with nutrition and lifestyle habits that promote a healthy, thriving, symbiotic relationship between ourselves and our microbes.

WHAT TO EAT

Fermented foods: Forming the cornerstone of The Beauty Chef philosophy, fermented foods are one of the most simple and effective ways to support a healthy microbiome. Rich in beneficial gut-loving bacteria, fermented foods also assist with digestion and improve the bioavailability of nutrients—meaning your body absorbs and utilises more of the good stuff. The probiotics in fermented foods have also been well-studied and help to support gut wall integrity, immune function, combat inflammation[9] and improve overall digestive health[10].

Fermented foods contain a broader variety of species and strains of probiotics than over the counter supplements (which typically only include a small handful of strains)—and they are also a good source of postbiotics. These anti-inflammatory compounds are a by-product of the fermentation process but are said to reduce inflammation and combat pathogenic bacteria whilst also modulating the immune system[11].

Healing foods: Gut healing foods loaded with amino acids—such as bone broth, homemade chicken soup and gelatin gummies—as well as loading up your plate with anti-inflammatory ingredients and spices like ginger, turmeric and peppermint, all help to calm and heal the gut.

Our GUT PRIMER™ Inner Beauty Support powder has also been formulated to specifically heal and restore good gut health. Containing nourishing ingredients such as slippery elm and milk thistle which are traditionally used in Western herbal medicine to heal leaky gut, as well as anti-inflammatory turmeric and zinc—which is integral for skin and immune health—GUT PRIMER™ is a simple way to support your microbiome, daily.

Fibre: To encourage the proliferation of good bacteria, we need to consume an abundance of fibre daily. Found in fresh fruits and vegetables, beans, legumes, nuts and seeds, fibre not only functions as prebiotic and nourishes our good gut microbes, but when this fibre ferments, the by-products known as short-chain fatty acids (SCFAs) support our health in a number of ways. As powerful anti-inflammatory compounds, SCFAs strengthen our gut wall and support overall immunity, brain and metabolic function[12]. Fibre is therefore one of the simplest and most effective ways to support and influence our microbial health

WHAT TO AVOID

Harmful foods: Put simply, any food that causes irritation or inflammation can be harmful to our gut health. This includes refined sugars and carbohydrates, processed foods, artificial sweeteners, too much red meat and any food we are allergic or intolerant to. For some people, gluten and dairy can be particularly troublesome with gliadin—deriving from wheat—linked to increased intestinal permeability and leaky gut[13].

Stress: Due to the bidirectional nature of the gut-brain axis, stress can be problematic and as detrimental to our gut health as it is to our mental health. Stress can impact the balance and diversity of our microbiota, but interestingly, an imbalanced gut is also linked to stress. It's therefore important to discover ways to manage stress, wherever possible.

Toxins: While it's virtually impossible to avoid all harmful chemicals and toxins in today's modern world—we can minimise our exposure to toxins by reducing our chemical load at home. This means switching to organic or homemade cleaning products whenever possible and choosing natural and organic skincare products, too. As our body's largest organ, our skin is porous meaning that every chemical and product we apply can be absorbed directly into our bloodstream—placing further strain on our gut as it works to process and eliminate any toxins we come into contact with.

WHAT TO PRACTISE

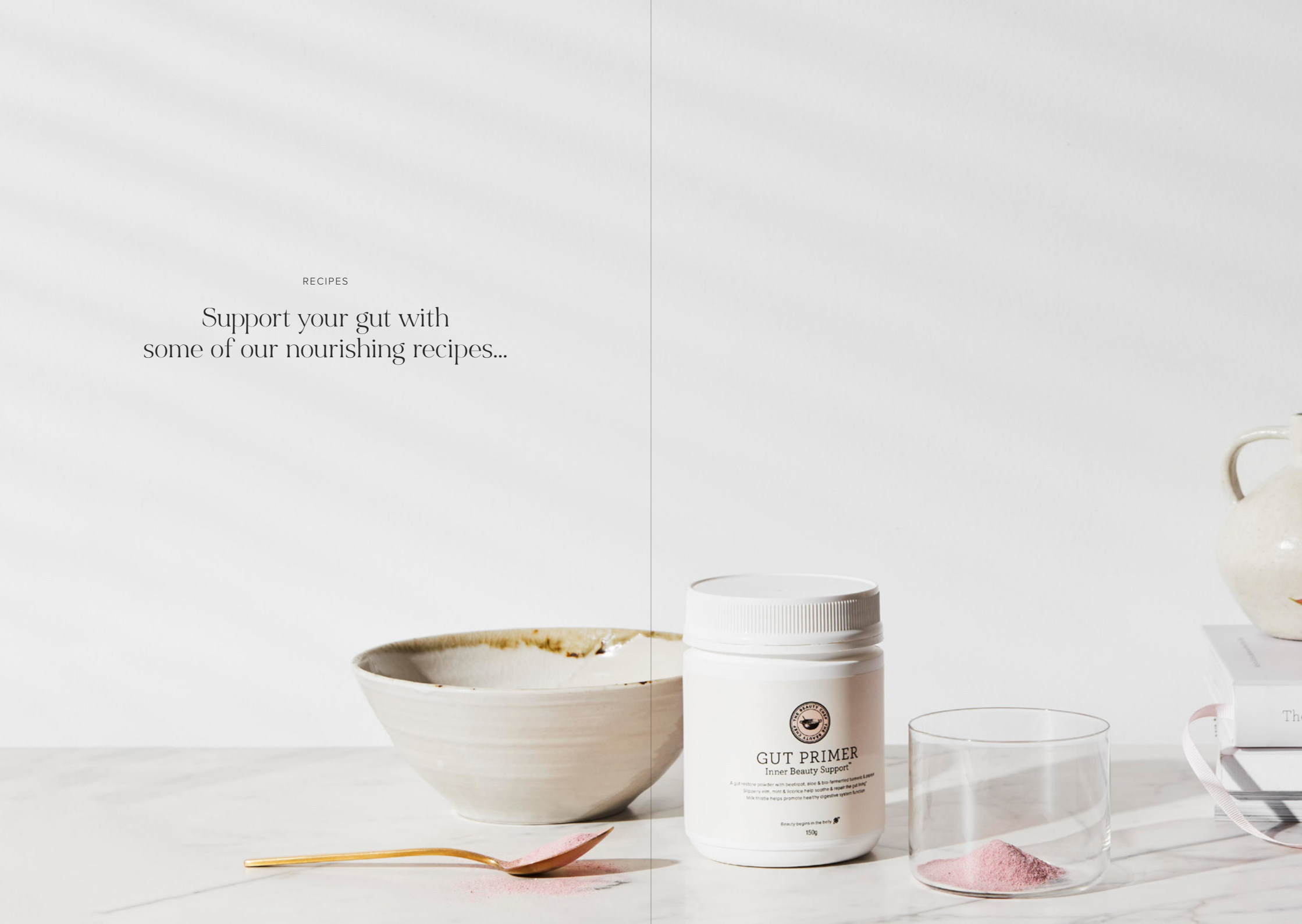
Fasting: We have evolved to cope with periods of fasting and yet many of us tend to graze all day long—which unfortunately doesn't allow our digestive system much time to rest and recover. While experts are still trying to establish the perfect amount of time to fast, even giving our hardworking microbes enough time overnight to do their job is beneficial to our overall health. Munching on foods that are easier to digest is another way to ease the burden on your belly—for example, soups, stews and slow-cooked warming curries.

Sleep: Getting enough sleep not only helps to effectively manage stress, but recent studies have also highlighted how sleep deprivation or disrupted sleep can negatively impact our microbiome[14]. There is also 400 times more melatonin in our gut[15] than in our pineal gland, indicating that healthy sleep patterns and a healthy gut go hand in hand.

Exercise: Helping to boost microbial diversity[16], exercise also assists in the production of short-chain fatty acids[17]. The key is, however, to choose a form of exercise that you love to also reap the serotonin-boosting benefits of moving your body. Whether you enjoy walking, running or practising Pilates and yoga—consistent, daily movement is essential for our overall health, as well as that of our gut.

RECIPES

Support your gut with some of our nourishing recipes...



SERVES 1

Chocolate, Raspberry & Mint GUT PRIMER™ Smoothie

INGREDIENTS

½ cup (125 mL) unsweetened almond milk

⅓ cup (80g) coconut yoghurt

¼ cup (60g) fresh or frozen raspberries

1 large handful of mint leaves

⅛ avocado

1 ½ tablespoons cacao powder

1 tablespoon GUT PRIMER™

4 ice cubes

Stevia equivalent to 2 teaspoons sugar, or to taste

METHOD

Place all the ingredients in a blender and blitz to combine.

SERVES 1

Pomegranate & Raspberry GUT PRIMER™ Tonic

INGREDIENTS

½ cup (125mL) filtered water

¼ cup (60mL) sugar-free pomegranate juice

¼ cup (60g) fresh or frozen raspberries

1 teaspoon freshly squeezed lime juice

1 teaspoon GUT PRIMER™ Inner Beauty Support™

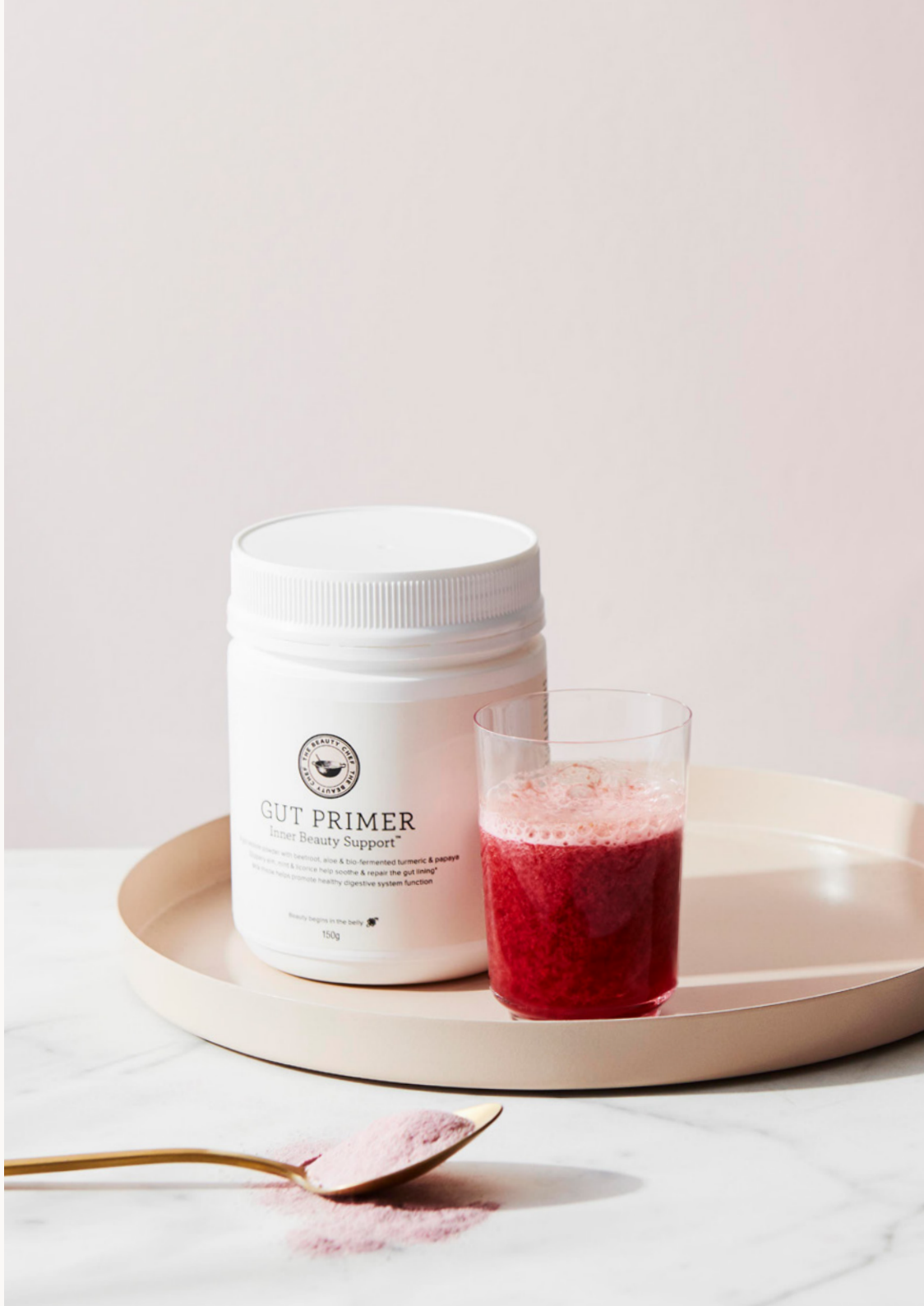
½ teaspoon finely grated ginger

4 ice cubes

Stevia equivalent to 1 teaspoon sugar, or to taste

METHOD

Place all ingredients in a blender and blitz to combine.



SERVES 4

Zucchini, Fennel, Mint & Basil Soup

INGREDIENTS

2 tablespoons extra-virgin olive oil

1 small or medium fennel bulb, trimmed, thickly sliced, fronds reserved

1 medium onion, finely sliced

1 garlic clove, finely chopped

450g (about 3 medium) zucchini, thickly sliced

2 handfuls basil

2 handfuls mint

1 litre homemade vegetarian or chicken bone broth, or store-bought stock

1 ½ tablespoons freshly squeezed lemon juice, plus zest to serve

Sea salt & freshly ground black pepper, to taste

Extra-virgin olive oil, to serve

Dried chilli flakes, to serve

METHOD

Heat the oil in a medium saucepan over a medium heat. Cook the fennel, onion and garlic until softened, about 3 minutes.

Add the zucchini, basil, mint and reserved fennel fronds and stir to combine.

Pourin the brothe and bring to the boil over a medium heat. Reduce to a gentle simmer. Cook for 5 minutes until the vegetables are tender.

Add the lemon juice and season with salt and pepper. Using a high-speed blender or hand-held blender, blend the soup until smooth.

Serve topped with a drizzle of extra-virgin olive oil, a sprinkle of lemon zest and some chilli flakes.

SERVES 2–3

Pan-Fried Cauliflower Gnocchi with Creamy Pesto Sauce

INGREDIENTS

400g cauliflower stalk and florets, broken into large pieces

50g ground almonds

2 tablespoons arrowroot, plus additional for rolling 15g nutritional yeast flakes

1 free-range organic egg white (optional)

1 teaspoon psyllium husk

½ teaspoon sea salt

2 tablespoons ghee or extra-virgin olive oil

FOR THE CREAMY PESTO SAUCE::

125L tinned coconut milk

125mL almond milk

90g chunky pesto (We love the Pumpkin Seed & Herb Pesto on page 244 of The Beauty Chef Gut Guide)

Fresh basil, finely shredded, or micro herbs (optional), to serve

Freshly ground black pepper, to serve

METHOD

Steam the cauliflower for 10 minutes, or until tender. Transfer to a food processor and blend until finely chopped.

Put in a medium bowl and add all remaining ingredients except the ghee. Stir to combine.

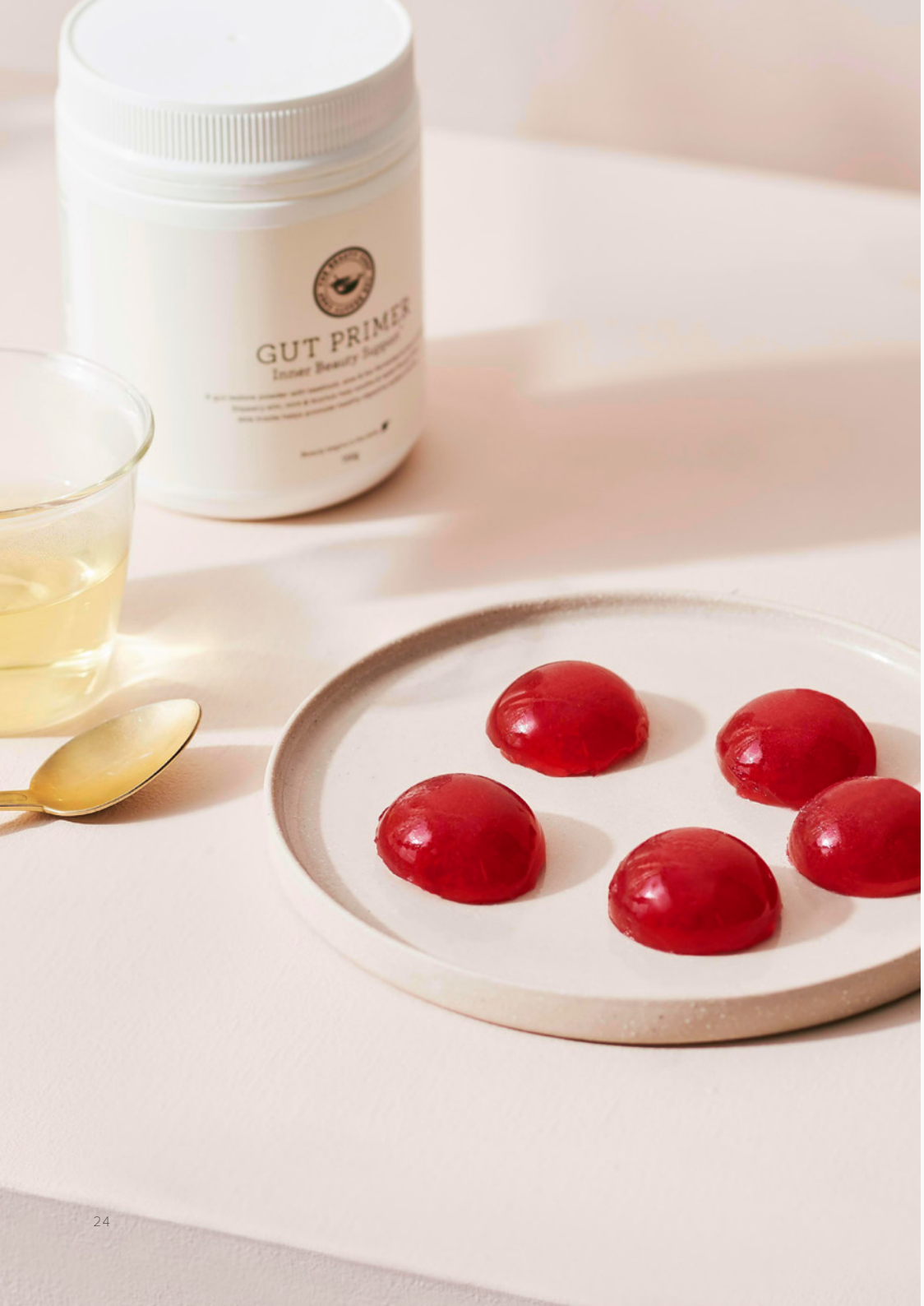
Line a baking tray with baking paper. Dust a clean kitchen bench, and your hands, with some arrowroot.

Divide the gnocchi mixture into quarters. Using your hands, gently roll one quarter at a time into 2 cm (¾ in) thick logs. Dip a small sharp knife in some arrowroot and cut each log into 2 cm (3/4 in) pieces. Gently squeeze each piece in the centre to give it the classic gnocchi shape, then transfer to the prepared tray.

Melt the ghee in a large frying pan over a medium heat. Cook the gnocchi in batches for 1–2 minutes on each side until golden brown. Transfer to a plate and set aside.

To prepare the creamy pesto sauce, pour the coconut and almond milk into a frying pan and simmer over a medium heat for 2–3 minutes until reduced a bit and slightly thicker. Add the pesto, stirring to combine, and heat through. Add the gnocchi to the pan and ladle with sauce to coat.

Serve the gnocchi in shallow serving bowls scattered with shredded basil and topped with freshly ground black pepper.



MAKES 375ML (1 ½ CUPS)

Raspberry, Licorice & Star Anise Gummies

INGREDIENTS

⅓ cup (340mL) cold water

2 tablespoons grass-fed powdered gelatin

1 teaspoon fennel seeds

1 star anise

2 cups (240g) fresh or frozen raspberries

2 licorice root tea bags

Stevia equivalent to 1 ½ tablespoons of sugar

METHOD

Pour 180mL of water into a small bowl and sprinkle the gelatin over the surface in an even layer. Set aside from 10 minutes to bloom.

In a medium saucepan, toast the fennel seeds and star anise over a low–medium heat for 30 seconds, or until fragrant. Pour in the remaining 160mL water, add the raspberries and bring to the boil. Decrease the heat and simmer for 2 minutes. Remove the pan from the heat, add the tea bags and set aside to steep for 3–5 minutes.

Remove the tea bags, squeezing out all of the liquid, and discard.

Add the gelatin mixture and stevia to the hot raspberry liquid and stir until dissolved. Strain through a fine-mesh sieve into a measuring jug, using a spoon to press the raspberry pulp to ensure you get all of the juice out. Don't scrape, as you don't want to push too many of the seeds through. Top up the liquid with water to make 375mL (1 ½ cups), if necessary.

Place ice cube trays or silicon molds onto small baking trays. Fill with the raspberry liquid. Refrigerate for at least 1 hour, or until completely set.

To unmold, briefly dip the base of the ice cube trays or molds into boiling water. Using your fingertips, gently pull the gummies away from the edge of the molds to release the seal, then invert onto a plate.

Store the gummies in an airtight container in the refrigerator for up to 2 weeks.

[1] Vighi, G, et al. “Allergy and the Gastrointestinal System.” Clinical and Experimental Immunology, Blackwell Science Inc, Sept. 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2515351/.

[2] Rowland, Ian, et al. “Gut Microbiota Functions: Metabolism of Nutrients and Other Food Components.” European Journal of Nutrition, Springer Berlin Heidelberg, Feb. 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC5847071/.

[3] Salem, Iman, et al. “The Gut Microbiome as a Major Regulator of the Gut-Skin Axis.” Frontiers in Microbiology, Frontiers Media S.A., 10 July 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC6048199/.

[4] Mu, Qinghui, et al. “Leaky Gut As a Danger Signal for Autoimmune Diseases.” Frontiers in Immunology, Frontiers Media S.A., 23 May 2017, www.ncbi.nlm.nih.gov/pmc/articles/PMC5440529/.

[5] Bowe, Whitney P, and Alan C Logan. “Acne Vulgaris, Probiotics and the Gut-Brain-Skin Axis - Back to the Future?” Gut Pathogens, BioMed Central, 31 Jan. 2011, www.ncbi.nlm.nih.gov/pmc/articles/PMC3038963

[6] Weiss, Emma, and Rajani Katta. “Diet and Rosacea: the Role of Dietary Change in the Management of Rosacea.” Dermatology Practical & Conceptual, Derm101.Com, 31 Oct. 2017, www.ncbi.nlm.nih.gov/pmc/articles/PMC5718124/.

[7] Forno, Erick, et al. “Diversity of the Gut Microbiota and Eczema in Early Life.” Clinical and Molecular Allergy : CMA, BioMed Central, 22 Sept. 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2562383/.

[8] Ragonnaud, Emeline, and Arya Biragyn. “Gut Microbiota as the Key Controllers of ‘Healthy’ Aging of Elderly People.” Immunity & Ageing, BioMed Central, 5 Jan. 2021, immunityageing.biomedcentral.com/articles/10.1186/s12979-020-00213-w.

[9] Bell, Victoria, et al. “One Health, Fermented Foods, and Gut Microbiota.” Foods (Basel, Switzerland), MDPI, 3 Dec. 2018, www.ncbi.nlm.nih.gov/pmc/articles/PMC6306734/.

[10] Dimidi, Eirini, et al. “Fermented Foods: Definitions and Characteristics, Impact on the Gut Microbiota and Effects on Gastrointestinal Health and Disease.” Nutrients, MDPI, 5 Aug. 2019, www.ncbi.nlm.nih.gov/pmc/articles/PMC6723656/.

[11] Marco ML;Heeney D;Binda S;Cifelli CJ;Cotter PD;Foligné B;Gänzle M;Kort R;Pasin G;Pihlanto A;Smid EJ;Hutkins R; “Health Benefits of Fermented Foods: Microbiota and Beyond.” Current Opinion in Biotechnology, U.S. National Library of Medicine, pubmed.ncbi.nlm.nih.gov/27998788/.

[12] Silva, Ygor Parladore, et al. “The Role of Short-Chain Fatty Acids From Gut Microbiota in Gut-Brain Communication.” Frontiers, Frontiers, 14 Jan. 2020, www.frontiersin.org/articles/10.3389/fendo.2020.00025/full#h5.

[13] Lammers, Karen M, et al. “Gliadin Induces an Increase in Intestinal Permeability and Zonulin Release by Binding to the Chemokine Receptor CXCR3.” Gastroenterology, U.S. National Library of Medicine, July 2008, www.ncbi.nlm.nih.gov/pmc/articles/PMC2653457/.

[14] M;, Deaver JA;Eum SY;Toborek. “Circadian Disruption Changes Gut Microbiome Taxa and Functional Gene Composition.” Frontiers in Microbiology, U.S. National Library of Medicine, pubmed.ncbi.nlm.nih.gov/29706947/.

[15] Chen, Chun-Qiu, et al. “Distribution, Function and Physiological Role of Melatonin in the Lower Gut.” World Journal of Gastroenterology, Baishideng Publishing Group Co., Limited, 14 Sept. 2011, www.ncbi.nlm.nih.gov/pmc/articles/PMC3198018/.

[16] Monda, Vincenzo, et al. “Exercise Modifies the Gut Microbiota with Positive Health Effects.” Oxidative Medicine and Cellular Longevity, Hindawi, 2017, www.ncbi.nlm.nih.gov/pmc/articles/PMC5357536/.

[17] Carey, Ryan A, and Doreen Montag. “Exploring the Relationship between Gut Microbiota and Exercise: Short-Chain Fatty Acids and Their Role in Metabolism.” BMJ Open Sport & Exercise Medicine, BMJ Specialist Journals, 1 Apr. 2021, bmjopensem.bmj.com/content/7/2/e000930.abstract.