



# Anti-inflammatory Diet

PATIENT HANDOUT

Your practitioner may have recommended you follow an anti-inflammatory diet to help reduce inflammation that may be contributing to your health conditions or symptoms such as pain.

Depending on what your current symptoms are, and the underlying health factors that are causing them, your practitioner may request you take 'inflammatory' foods out of your diet for a period of time. Depending on how your symptoms and condition change, highly inflammatory foods may be reintroduced to your diet as 'foods to enjoy occasionally', with the goal to integrate a predominately anti-inflammatory diet as a long-term lifestyle choice. Your practitioner can provide further guidance around how to do this.



## What is inflammation?

Inflammation is a natural process that occurs in response to tissue damage, which may be caused by physical trauma (e.g. burns, infection, toxins or injury). This can be something that triggers pain to signal something is wrong in the body, or it may be due to an infection or injury that sends the message that more blood flow is required to the area to promote healing.<sup>1</sup>

While this is a completely normal and protective process, if it does not resolve, inflammation may become long-term, which can create further damage to the body, and more pain. Chronic inflammation can underlie many chronic health conditions and in itself can become a disease.

There is evidence that a diet rich in anti-inflammatory foods and low in inflammatory foods may help with chronic health conditions such as those detailed in Table 1.<sup>2,3,4</sup>

**TABLE 1. CONDITIONS THAT ARE RELATED TO CHRONIC INFLAMMATION<sup>2</sup>**

Arthritis	Asthma	Depression
Heart disease	Cancer	Chronic pain
Type 2 diabetes	Inflammatory bowel diseases	Autoimmune diseases
Eczema	Psoriasis	

## What is an anti-inflammatory diet?

It is well established that certain foods and beverages can contribute to either health or disease. Some foods can promote inflammation in the body, while others help to combat it.<sup>5</sup> Processed foods are often high in sugar and fructose, low in fibre, and depleted of their nutrients and antioxidant compounds.<sup>6</sup> Processing also changes the quality of fats, altering their chemical structure to inflammatory "bad fats" e.g. trans fats found in hot chips, rather than anti-inflammatory "good fats" found in olive oil.<sup>7</sup>

Consuming foods in their most natural state, with minimal processing means that they maintain their nutrients i.e. antioxidants, vitamins, minerals, essential fats, and fibres.<sup>6</sup> Following a diet with a focus on high amounts of nutrient-dense whole foods and minimal nutrient-deficient processed foods, ensures your body has the fuel it needs to heal and function optimally. It also ensures that the food you are eating isn't contributing to your inflammatory health condition.<sup>8</sup>

## Top 10 Anti-inflammatory Foods

- 1 Berries
- 2 Fatty fish – salmon, sardines (wild caught)
- 3 Nuts and seeds (fresh/raw)
- 4 Olive oil
- 5 Capsicum
- 6 Dark green leafy vegetables (Kale)
- 7 Green Tea
- 8 Chocolate (80% and cacao)
- 9 Turmeric and ginger
- 10 Fresh herbs

### CHALLENGE

Include 3 or 4 of these in your diet each day

## Lifestyle factors that may help to reduce inflammation

### THE ANTI-INFLAMMATORY LIFESTYLE INCLUDES:

- Eating anti-inflammatory foods<sup>2,5,6</sup>
- Avoiding smoking<sup>10</sup>
- Limiting alcohol intake<sup>2</sup>
- Enjoying adequate exercise and being active – keeping active with regular exercise reduces inflammation, as well as your predisposition to cardiovascular disease, type 2 diabetes and chronic disease.<sup>11</sup>
- Getting enough quality sleep<sup>2,12</sup>
- Stress management<sup>2,13</sup> – note what represents stress for you and take steps to reduce where you can. Adopting tools and strategies to help you build resilience to stress, such as exercise, meditation and breathing exercises is also essential to reducing stress levels.
- Maintaining a healthy weight<sup>2,14</sup>
- Spending time with people you love – meaningful and healthy personal relationships are attributed to a longer life with less chronic illnesses, possibly due to lower levels of inflammation.<sup>15</sup>
- Finding a happy work-life balance<sup>2,13</sup>
- Spending time outdoors – exposure to nature and 'greenspace' is associated with many health benefits, including significant reductions in blood pressure, heart rate and stress response, as well as improving a wide variety of health outcomes.<sup>16</sup>

# Foods that are anti-inflammatory

A diet rich in colourful fruit, vegetables, fibre, and essential fats ensures that you will get the benefit of beneficial antioxidants and phytochemical compounds (flavonoids, polyphenols and carotenoids) that protect and promote many anti-inflammatory mechanisms in the body, see Table 2.<sup>2,6,9</sup>

TABLE 2. FOOD GUIDE – EAT A DIET RICH IN ANTI-INFLAMMATORY FOODS TO REPLACE OR LIMIT INFLAMMATORY FOODS

Food type category	Anti-inflammatory	Inflammatory
 <b>CARBOHYDRATES – GRAINS, LEGUMES, STARCHY VEGETABLES</b>	<ul style="list-style-type: none"> <li>• Wholegrain breads and cereals (sourdough wholemeal bread, rolled oats, cooked grains – millet, quinoa)</li> <li>• Brown rice or basmati rice</li> <li>• Wholemeal pasta (wheat, spelt, vegetable/bean varieties)</li> <li>• Beans and legumes - lentils, navy beans, broad beans, chickpeas, kidney beans, black beans</li> </ul> <p><b>Tip:</b> try swapping out pasta and rice for the vegetable version - zucchini noodles, sweet potato noodles or cauliflower rice options</p>	<ul style="list-style-type: none"> <li>• Sugars and refined carbohydrates</li> <li>• Refined flour products - white bread, white rice, white pasta</li> <li>• Breakfast cereals that are highly processed with added sugars, including toasted muesli</li> <li>• Baked goods - cakes, biscuits, pastries</li> <li>• Fried foods – hot chips, takeaway foods</li> <li>• Most commercial crackers and crispbreads</li> </ul>
 <b>PROTEINS – MEAT, SEAFOOD, POULTRY, EGGS</b>	<ul style="list-style-type: none"> <li>• Fresh, organic, grass-fed meat and poultry. Limit red meat to 2x a week</li> <li>• Organic, free-range eggs</li> <li>• Fresh seafood, including omega-3 rich fish such as sardines, wild salmon and mackerel</li> </ul>	<ul style="list-style-type: none"> <li>• Processed, cured meat - bacon, ham, salami, smoked goods, hot dogs, sausages</li> <li>• Canned and tinned meat</li> </ul>
 <b>DAIRY</b>	<ul style="list-style-type: none"> <li>• Some organic, fermented dairy including kefir and yoghurt can be included in small amounts</li> </ul>	<ul style="list-style-type: none"> <li>• Cow's milk, cheese (cheddar, soft and hard cheeses)</li> <li>• Ice-cream, cream</li> </ul>
 <b>FATS AND OILS</b>	<ul style="list-style-type: none"> <li>• Extra virgin olive oil</li> <li>• For cooking - avocado, coconut, olive oil, ghee, rice bran oil, grapeseed (these oils have a higher smoking point, see 'tips' below)</li> <li>• Organic butter and ghee</li> <li>• Raw nuts and seeds - almonds, walnuts, sunflowers, pepitas, brazil nuts</li> <li>• Natural nut butters - almond, brazil, cashew, macadamia</li> </ul>	<ul style="list-style-type: none"> <li>• Vegetable oils (peanut, sunflower oil, sesame etc.)</li> <li>• Lard, shortening, animal fats (goose and duck fats), tallow</li> <li>• Foods containing hydrogenated oils and fats – margarines, baked goods</li> </ul>
 <b>FRUITS AND VEGETABLES</b>	<ul style="list-style-type: none"> <li>• Fresh, seasonal fruits and vegetables (organic if possible)</li> <li>• Leafy greens (spinach, kale, Asian greens)</li> <li>• Fresh herbs (mint, parsley, coriander)</li> <li>• Apples, pears, berries, banana, citrus (lemons, oranges, lime, mandarin), pomegranate</li> <li>• Brightly coloured vegetables e.g. purple or green cabbage, broccoli, cauliflower, leeks, pumpkin, asparagus, tomatoes, carrots, sweet potatoes, potatoes with skin on</li> </ul> <p><b>Tip:</b> try growing your own sprouts and adding them to meals. Sprouts are a rich source of vitamins and minerals, chlorophyll, antioxidants and protein.</p>	<ul style="list-style-type: none"> <li>• Canned, concentrated juices</li> <li>• Jams and marmalades</li> </ul>
 <b>DESSERTS AND SNACKS</b>	<ul style="list-style-type: none"> <li>• Raw nuts and seeds (consider soaking - "activating" them for easier digestion) - almonds, walnuts, pepitas, sunflower seeds, cashews, macadamia nuts and brazil nuts.</li> <li>• Seaweed snacks</li> <li>• Apple or pear with fresh nut butter (almond, cashew, brazil, hemp seed)</li> <li>• Fresh guacamole and vegetable sticks</li> <li>• Hummus and vegetable sticks</li> <li>• Fresh dates with some nut butter (2-3 max)</li> <li>• Chia pudding with berries and maple syrup/honey to sweeten</li> <li>• Fresh berries and fruit in yoghurt</li> <li>• Dark chocolate (80% and higher)</li> </ul>	<ul style="list-style-type: none"> <li>• Salted, heated nuts (beer nuts, peanuts, etc.)</li> <li>• Chips, crisps</li> <li>• Baked goods – donuts, pastries, cakes, biscuits</li> <li>• Crackers and cheese</li> <li>• Ice-cream, gelato</li> <li>• Chocolate bars and blocks</li> </ul>
 <b>BEVERAGES</b>	<ul style="list-style-type: none"> <li>• Filtered water</li> <li>• Alcohol in moderation i.e. red wine</li> <li>• Green tea</li> <li>• Herbal teas</li> <li>• Freshly ground organic coffee – 1 to 2 cups per day</li> </ul>	<ul style="list-style-type: none"> <li>• Carbonated, flavoured drinks - cola, diet cola, other fizzy, colourful soft drinks and energy drinks</li> <li>• Granulated/instant coffee</li> <li>• Juices – orange, concentrated juice</li> <li>• Cordial</li> <li>• Alcohol – beer, flavoured alcoholic drinks, liqueurs</li> </ul>





## Did you know?

### What are antioxidants?

Antioxidants have protective effects throughout the body and function to prevent damage (oxidative damage) caused to cells by free radicals – unstable molecules that the body produces in response to exposure to toxic compounds (pollution, smoking etc.). When our antioxidant status is inadequate to counteract the amount of free radicals we are exposed to, oxidative damage increases, leading to inflammation and acceleration of the ageing process, both of which contribute to chronic disease.<sup>17</sup>

**Red wine** contains many antioxidants, including flavonoids, polyphenols and resveratrol. There is a lot of evidence for its benefits in health, particularly cardiovascular health.<sup>18</sup> However, these benefits are only sustained with intakes of small to moderate amounts, such as 1 to 2 glasses of wine, consumed with a meal a day.<sup>18</sup>

**Coffee** contains polyphenols that can protect from inflammation,<sup>9</sup> however quality and quantity are key to getting the most benefit out of it. We recommend 1 to 2 cups of organic, freshly ground coffee per day.

**Herbs and spices** contain a variety of antioxidant and anti-inflammatory compounds. Cooking with these on a regular basis can help to protect your body from inflammation. Turmeric, rosemary, saffron, cinnamon, thyme, garlic and ginger are all well-renowned for their positive healing benefits on the body.<sup>7</sup>



### Cooking with oils

Oils such as polyunsaturated vegetable oils are not recommended when cooking as the oils can become unstable under high heat. This changes the molecular structure of the oil and has been linked to many disease processes, including cardiovascular disease, cancer, diabetes, obesity and allergy.<sup>7</sup> The major dietary sources of trans fats are cakes, cookies, crackers, animal products, margarine, fried potatoes, potato chips, popcorn, and household shortening.<sup>6</sup> When cooking at higher temperatures, the best oils to use include: coconut oil, olive oil, avocado oil, grape seed oil, rice bran oil and ghee; as mentioned in Table 2.<sup>20</sup>



### Getting the balance right

Finding the right balance of omega-3 to omega-6 oils is an important consideration for reducing inflammation - it is important to consume a higher ratio of omega-3 to omega-6. Omega-3 oils are known to help reduce the risk of heart disease, lower triglycerides and relieve inflammatory conditions such as rheumatoid arthritis and inflammatory bowel disease.<sup>20</sup> Unfortunately, most people don't get enough omega-3s in the diet as they are primarily found in oily fish, such as sardines and salmon. Omega-6 oils are found in a variety of plants foods, such as seeds, nuts and eggs therefore are much easier to obtain through the diet. However, this can create an imbalance of omega-3:6 oils which may be a risk factor for ongoing, chronic inflammation.<sup>20</sup>



### Not all foods are created equally

Whilst some people find they can tolerate many foods, there are some healthy foods that may cause an issue in some sensitive people. Some examples are: eggs, gluten/wheat, dairy, tomatoes (nightshade family of vegetables), soy and corn. Your practitioner may be able to help you to identify if these foods may be a problem for you.



# Meal ideas

## Breakfast options:

- Rolled oats, soaked overnight in water and a little almond milk, topped with fresh berries and a dollop of organic yoghurt
- Chia pudding – soak in coconut milk overnight in the fridge, add a sprinkle of cinnamon, a dash of maple syrup, some fresh berries and coconut flakes



## Lunch options:

- Vegetable frittata (organic free-range eggs) and leafy green salad
- Oven-roasted sweet potato with black beans and salsa, avocado and a dollop of kefir or yoghurt

## Dinner options:

- Oven-roasted salmon with asparagus and whole new potatoes
- Sri Lankan dhal

