

all about NUTS & SEEDS

– why they should be *activated*
(& how to do it)

ON the low-carb lifestyle, we avoid bread and grains, so nuts and seeds tend to be our 'go-to'. In a nutshell (couldn't resist!), they make wonderful snacks, are great additions to salads and meals, work well as a flour for baking – and everyone loves them. What's more, they're abundant in nutritious fats, minerals and vitamins. But there's a problem: all that goodness is largely unavailable to us.

Nuts and seeds contain enzyme inhibitors, such as phytates (phytic acid), to prevent them from germinating too soon. These compounds make nuts and seeds difficult to digest and block the absorption of nutrients. In fact, they're also known as 'anti-nutrients' and 'protease inhibitors'. If you've ever gone on a low-carb baking spree with nut or seed flours and felt bloated, lethargic or slightly depressed afterwards, this can probably be

A COUPLE OF YEARS AGO, ACTIVATED NUTS AND SEEDS TOOK AUSTRALIA BY STORM. THE UK FOLLOWED SUIT, AND NOW SOUTH AFRICANS HAVE CAUGHT ON. HERE'S WHY THIS WAY OF EATING NUTS AND SEEDS IS HEALTHIER.

attributed to these compounds. Anti-nutrients trap any minerals in a meal (both from the nuts and seeds and other sources) and some of the protein, preventing uptake, which means the meal is a waste of time from a nutritional standpoint. All is not lost, however – the solution is to 'activate' your nuts and seeds.

LET'S GET ACTIVATED

There are just three steps:

- 1 soaking in a salt water solution
- 2 rinsing well
- 3 dehydrating

SOAKING in salt water begins the germination process and breaks down or neutralises the phytic acid and other enzyme inhibitors. The salt in the solution also helps to increase enzyme activity in the nut.

RINSING removes the phytic acid and other enzyme inhibitors.

DEHYDRATION – as opposed to drying – makes the nuts unbelievably tasty and light, preserves their wonderful creaminess and prolongs shelf life. But if the heating process is too extreme, the creaminess is lost, the nutrients are destroyed and the taste is ruined.

THE BENEFITS OF ACTIVATING NUTS AND SEEDS

- It gives them a shelf life of two years, with no need for refrigeration to keep them fresh.
- They taste *incredible* and they are crispy in a different way to roasted nuts and seeds, although they are still technically 'raw'.
- The nuts and seeds have much less chance of becoming mouldy or rancid.
- Eating them won't make you feel bloated or uncomfortable, or cause you digestive distress.
- Activation makes nutrients – such as essential fatty acids, amino acids (protein), antioxidants, fibre, vitamins A, Bs, C and E, and



minerals such as zinc, potassium, iron, folate, manganese, calcium and magnesium – available to the body.

- These bioavailable nutrients and fats help to reduce inflammation,

as well as lower raised cholesterol and blood pressure.

- Activation removes or reduces anti-nutrients, which can cause leaky gut.

HOW TO DO IT

Place different nuts and seeds in separate bowls according to type and cover completely with a

This chart gives you the estimated time you need to soak and dehydrate nuts and seeds.

Nut/seed	Amount	Soaking time	Dehydration time in oven below 50°C	Dehydration time in dehydrator	Makes
Almonds	2 cups	8–12 hours	6–7 hours	12–24 hours	3 cups
Cashews	4 cups	2–3 hours	3–4 hours	12–24 hours	4½ cups
Flaxseeds	1 cup	6 hours	3–4 hours	12–24 hours	1½ cups
Hazelnuts	4 cups	7 hours	4 hours	12–24 hours	4½ cups
Macadamias	4 cups	7 hours	4 hours	12–24 hours	4½ cups
Pecans	3 cups	4 hours	4 hours	12–24 hours	4 cups
Pumpkin & sunflower seeds	4 cups	2–4 hours	3–4 hours	12–24 hours	4½ cups
Pine nuts	4 cups	7 hours	4 hours	12–24 hours	4½ cups
Walnuts	3 cups	4 hours	3 hours	12–24 hours	4 cups

mixture of salt and warmed filtered water. (Ideally, choose himalayan salt, as it increases the nutrient level by producing beneficial enzymes, especially B vitamins.) Use one tablespoonful of salt for every four cups of nuts. Leave to soak for the required time, then drain and rinse the nuts and seeds.

Spread them over a baking tray and place in the oven or in a dehydrator (much preferred) at a low temperature for the required amount of time. Dehydrate the nuts and seeds at well under 50°C to protect delicate fats and nutrients. Turn them every two hours if possible. When done, they should be dry and crunchy. Make sure all the nuts and seeds are properly dried. If they aren't, mould could develop.

Soaking and drying nuts and seeds is quite an art. If you soak cashews or linseeds for too long, for example, they become slimy, taste disagreeable and are very difficult to dry.

Plus, the dehydration process is expensive, as electricity costs are high, although you can also sun-dry nuts and seeds. As you can see, however, this is a labour of love, so you may prefer to buy ready-activated ones. Commercially dehydrated nuts and seeds are placed in a highly specialised drying oven where the temperature is regulated for the exact amount of time, to avoid under-doing, cooking or burning them.

ADDING ACTIVATED NUTS TO YOUR FOOD

- Scatter over yoghurt and berries
- Add to smoothies

- Add to salads
- Make nut butters
- Grind into healthy flours

NUTS ABOUT BRAZILS

Let's take a quick look at one amazing nut – the brazil nut. Did you know that two brazil nuts contain your daily quota of selenium, but unless these nuts are activated, the selenium is 'bound' and is not bioavailable? The flower of the brazil nut tree is pollinated by a unique species of bee that has the strength to lift the hood on the flower, as well as a particularly long tongue to reach in for the nectar. These bees only do their job if a special orchid, which prompts them to mate then pollinate the flower, is growing on the tree trunk. If there is any disturbance in the forest, the orchid won't grow on the bark, the bees won't mate, and they won't pollinate the flower. Brazil nut trees are therefore grown in protected conditions, preserving the plants and bees around them, and making this nut 'environmentally friendly'. Who knew?

UNDERSTAND THE SCIENTIFIC TERMS

Enzymes are special catalysts that cause a particular reaction in the body. Think of them as fitting like a key into a lock that opens a door. A good example is salivary amylase, a digestive enzyme that begins the digestion of starch in the mouth. Other examples are peptidase, which assists with the digestion of protein, and sucrase, which breaks sugar down into glucose and fructose. There's also glycogen phosphorylase in muscle

cells, which breaks glycogen down into glucose for energy. Enzymes accelerate chemical reactions without being damaged in the process, without depleting energy from the body and without upsetting its equilibrium. Plus, an enzyme can be recycled forever; it is not 'used up' the way antioxidants are.

Enzyme inhibitors prevent certain enzymes from carrying out their essential functions. **Phytic acid or phytate** is an enzyme inhibitor found mainly in plant seeds. It impairs the absorption of iron, zinc, calcium, magnesium and manganese, and in so doing, causes mineral deficiency, which is why it's an **anti-nutrient**. In plants, phytic acid resides in the seed as a storage mechanism for phosphorous, which is necessary for germination. All edible grains, seeds and legumes have varying quantities of phytic acid, as well as other enzyme inhibitors, like lectins and saponins.

Phytate levels vary in nuts and seeds. Almonds contain up to 9.4 percent phytic acid and brazil nuts, up to 6.3 percent. Eating these with a meal inhibits the uptake of minerals both from the nut and from the meal itself, which is particularly significant if you're anaemic. Plant, or non-heme, iron is severely affected by phytic acid, whereas heme iron from animals is not. Vegetarians are therefore at risk of anaemia if plants are their sole source of iron, and if they eat a lot of non-activated nuts and seeds. ■

Find Sally-Ann Creed's Activated Nuts and Seeds at selected Dis-Chem stores; goodfood.co.za.