

'Don't go nuts over nuts'

Phytic acid is the principal storage form of phosphorus in many plant tissues, especially the bran portion of grains and seeds. It contains the mineral phosphorus tightly bound in a snowflake-like molecule. In humans and animals with one stomach, the phosphorus is not easily available. In addition to blocking phosphorus availability, the "arms" of the phytic acid molecule bind or chelate with other minerals, principally calcium, magnesium, iron and zinc, making them unavailable as well. The compounds formed are referred to as phytates.

Phytic acid not only chelates important minerals, but also inhibits enzymes needed to digest our food, including pepsin, for the breakdown of proteins in the stomach, amylase, for the breakdown of starch into sugar, and trypsin, for protein digestion in the small intestine.

Serious anti-nutritional effects of a diet high in phytate-rich foods can ensue with significant health problems. Over the long term, when the diet lacks minerals or contains high levels of phytates or both, the metabolism goes down, and the body sets itself up to use as little of these minerals as possible. Adults may cope for decades on a high-phytate diet, but growing children run into problems - their bodies will suffer from the lack of calcium and phosphorus with poor bone growth, short stature, rickets, narrow jaws and tooth decay; and for the lack of iron and zinc with anaemia and mental retardation.

Phytic acid is found in all seeds, nuts, grains, beans and legumes, and represents a serious problem in our diet, increasing in recent years for several reasons: 1, we have lost touch with traditional methods of food preparation; 2, the recommendations to consume high phytate foods such as whole wheat bread, oat and wheat bran and all-bran breakfast cereals; and 3, the promotion of raw whole food vegan/vegetarian diets. But raw is not Nature's way for grains, seeds, nuts, and beans. . . and even some tubers, like yams; nor is quick cooking, these foods require long soaking, fermentation and cooking processes and should be consumed with foods that lessen the harmful effects of phytic acid, such as vitamins A and D, calcium, vitamin C.

We have lost our connection with slow! You could say 'slow nourishes, speed kills' - in the kitchen too. It is instructive to look at Native American preparation techniques for the hickory nut used for oils. To extract the oil they parched the nuts until they cracked to pieces and then pounded them to fine grounds. They were then put into boiling water and boiled for an hour or longer, until they cooked down to a kind of soup from which the oil was strained out through a cloth. The rest was thrown away. The Indians of California consumed acorn meal after a long period of soaking and rinsing, then pounding and cooking, and nuts and seeds in Central America were prepared by salt water soaking and dehydration in the sun, after which they were ground and cooked. We need to reinstate these traditional ways.

Here I am focusing on seeds and nuts and next month on grains.

These anti-nutrients exist for the plant's benefit, not ours! Nature protects her right-to-life with a variety of natural chemicals, they are part of the plant's immune system, acting as natural preservatives, protecting against moulds and fungi, preventing the harvested food from rotting, thwarting bacterial and insect predation; maintaining freshness of seeds for germination. Consuming raw and under-prepared foods, we are unwittingly consuming these natural plant sentries. If we wish to eat these foods on a regular basis we must reduce/remove the phytates and other anti-nutrients through traditional processing, by emulating nature's soaking of the seed or nut in water thus neutralizing the enzyme inhibitors, aiding germination and for us, improving digestion and increasing nutrition.

The amount of phytate in grains, nuts, legumes and seeds is highly variable; the levels that researchers find when they analyze a specific food depends on harvesting techniques, processing methods, the age of the food and growing conditions -super phosphate fertilizers will produce foods higher in phytic acid than foods grown in natural compost. In general, nuts contain levels of phytic acid equal to or higher than those of grains. Seed, such as pumpkin seeds are extremely high in phytic acid and require thorough processing to remove it, by soaking and roasting. Cacao is a seed. It would be prudent to avoid snacking on too many raw nuts/seeds.

Now commercially available from small companies as 'activated nuts', or, you can soak the seeds/ nuts in water with some sea salt to release/neutralise the phytic acid and other enzyme inhibitors. Activated nuts are more easily digested and nutritionally superior to non-activated or raw nuts.

In the context of a diet rich in calcium, vitamin D, vitamin A, vitamin C, good fats and lacto-fermented foods, most people will do fine on a handful of nuts a day. If seeds and nuts form a substantial part of your diet and for those suffering from tooth decay, bone loss or mineral deficiencies, and children under age six, pregnant women or those with serious illnesses, it is important you prepare them properly or buy them already activated.

Activated nuts can be sourced from the organic whole foods store in Bowral St.