

What is Wrong with Modern Bread and Grains?

On the Importance of Using Fresh and Wholesome Grains and Bread

By Lars Weckbecker and Tina Krombach

Grains have been grown and consumed by humans for thousands of years and are a staple food for most cultures around the globe. Asian cultures grow mainly rice, South and Middle American countries consume corn, while wheat has become the most important grain for North American and European countries as well as Australia and Aotearoa/New Zealand. Wheat is widely consumed in the form of bread, buns, pasta and other pastries but can also be found in many other packed foods. Today an increasing number of people seem to develop intolerances and health problems that are associated with the consumption of wheat and particularly its protein gluten. While some suggest to avoid gluten altogether, others link gluten intolerances and health problems that are associated with the consumption of bread and other gluten containing grain dishes to the industrialisation of food production and the hybridisation and breeding of “turbo” grain varieties. These modern grains are geared towards a high yield rather than nutritional value and taste (See Issue 5 of *The New Zealand Journal of Natural Medicine*).

For people who do not have coeliac disease or a gluten intolerance, gluten containing grains, including wheat, consumed in moderation provide the body with a Vitamin E, Vitamin B complex, magnesium, calcium, potassium, iron, zinc, selenium, molybdenum and other minerals and trace elements as well as beneficial enzymes – if you eat them as a whole food, rather than consuming white flour products.

So what is the matter with modern, industrially produced bread and other grain dishes?

Most bread bought in supermarkets is produced according to the bottom lines of economic efficiency and profitability. Accordingly most conventional bread today is produced by a process called Chorleywood Bread Process (CBP) that uses about 15 to 25 times more baker’s yeast

(a strain of yeast named *Saccharomyces cerevisiae*) than was common in the early 20th century. While a traditional loaf had a content of added yeast of about 0.1% and was usually made using sourdoughs or leaven[1], modern bread contains about 2.4% added baker’s yeast.[2] The addition of such large quantities of yeast allows proving bread within 30 to 60 minutes as opposed to the slow-fermentation process still common during the first half of the 20th century.

In other words, modern industrial bread making is characterised by a disregard for time. For instance, the proper fermentation and proving of bread dough for at least 6 hours (as opposed to 30-60 minutes) has the advantage of removing around 80% of acrylamide from the loaf’s crust and preserves more B complex vitamins in the dough.[3]

Industrially produced bread furthermore usually contains a load of additives e.g. preservatives, for example in form of calcium propionate, suspected to be a car-

cinogen; emulsifiers that can be made of genetically engineered soy; added flavour; agents that keep toast soft for days and non-beneficial or even unhealthy enzymes that do not require labelling since they are a “processing aid” and so on. Additionally modern bread contains little natural lactic acid.

Another problem of modern bread is the excessive use of white flour instead of wholemeal flour. In the production of white flour the outer bran layer and the germ of the grain are removed – again to improve the shelf life of flour as particularly the germ, which is rich in oil, quickly oxidises and goes rancid after the grain has been milled. This provides flour that is nutritionally depleted. (Schroeder H. Losses of vitamins and trace minerals resulting from processing and preservation of foods. *Am J Clin Nutr.* 1971 May;24(5):562-73.)

A comparison of white flour and wholemeal flour found that overall, about two thirds of beneficial components found in whole grains are removed in the produc-



tion of white flour which contains mainly starch and is deficient in vitamins, minerals and trace elements. Additionally, white flour is usually bleached using chemicals such as chlorine dioxide which is a biocide and greenhouse gas, nitrogen peroxide, chlorine, benzoyl peroxide, or acetone peroxide.

As if this were not enough, another significant loss of beneficial components in modern breads, flours and other grain containing foods results from those products not being fresh and often have been processed and packed weeks if not months before they are consumed. While the natural husk (shell) of grains preserves its nutritional value for months if not years, once a grain has been processed into flour, oxidation begins to break down many of the nutrients found in whole grains.

Taking all factors discussed above into consideration one can only conclude that modern, industrially and conventionally produced baked goods are nutritionally depleted and detrimental to the maintenance or restoration of good health. If one considers the large amount of grains, particularly wheat, consumed in countries like Aotearoa/New Zealand, then it becomes clear how people can be starving of nutrients in times of over-consumption and an abundance of convenience foods. There is a strong tendency to eat “empty” calories instead of nutrient-packed foods.

These food choices can result in “diseases of civilisation” such as gouty arthritis and many rheumatic diseases (the body’s bones and muscles are the greatest storage for specific minerals that are mobilized when blood levels are low due to a lack of mineral intake, which results in a decreased mineral level in the skeleton) [4]; tooth decay and periodontal disease; digestive conditions[5]; kidney and gall-bladder stones[6]; overweight and obesity; diabetes type 2[7]; cardiovascular diseases[8]; allergies[9]; low immunity; low energy levels.

What can be done to avoid the pitfalls and health dangers – not to speak of the lack of natural taste – of conventional grain growing and processing? Here are a few suggestions:

- Wherever possible use organically grown grains to avoid the residues of pesticides, fungicides, herbicides and fertilisers used in conventionally grown grains.
- Avoid the use of refined (read: nutritionally depleted) flours, particularly white

flours, as much as possible.

- Buy freshly prepared bread and baked goods, or, even better, prepare them at home, knowing every single ingredient that goes into your food and thus regain control over your food intake.
- Avoid additives and enzymes – the problem is that enzymes are classified as “processing aids” and do not need to be declared on labels – and unsurprisingly hardly any conventional food manufacturer declares them on the label. If in doubt contact the manufacturer and ask.
- Choose bread and other baked goods that have been properly fermented and contain no or only little amounts of baker’s yeast – sourdough and leavens are a natural alternative to baker’s yeast and referred to as “wild yeast”.

Many people who are sensitive to gluten can tolerate it if the dough has been properly fermented as the lactic acid producing bacteria in the sourdough culture help to break down gluten.

For better nutrition, avoid packed flour which may be months old or older before it is consumed. Ultimately the healthiest option is to buy whole grains and mill them freshly at home, shortly before they are processed and consumed. Since the late 1970s (electric) grain mills for household use have been available that make the milling of grains into flour a breeze and provide flour of superior nutritional value and taste

NOTES

[1] Sourdough and its wheat variation leaven are fermented pastes of ground grains (often rye in sourdough) and water. It is called wild yeast and provides natural lactic acid that is beneficial for a healthy intestinal flora and the body’s immune system

[2] Andrew Whitley *Bread Matters*,

Fourth Estate, (p. 26)

[3] *Bread Matters*, p. 27

[4] Bruker, Max Otto, German physician. *Rheuma – Ursache und Heilbehandlung*. (Rheumatic Diseases – Cause and Treatment). Emu Verlag, Lahnstein.

[5] Bruker, Max Otto, German physician. *Unsere Nahrung Unser Schicksal*, Emu-Verlag, Lahnstein 1999.

[6] Leber-, Galle-, Magen-, Darm- und Bauchspeicheldrüsen- Erkrankungen. Emu-Verlag, Lahnstein

[7] Bruker, Max Otto, German physician. Emu Verlag, Lahnstein.

[8] Bruker, Max Otto, German physician. *Herzinfarkt – Herz-, Gefäß- und Kreislaufkrankungen*. Emu-Verlag, Lahnstein

[9] Bruker, Max Otto, German physician. *Allergien müssen nicht sein, Ursachen und Behandlung von Neurodermitis, Hautausschlägen, Ekzemen, Heuschnupfen und Asthma*. Emu-Verlag, Lahnstein 1992

About the authors:

Lars Weckbecker has recently finished a PhD in Media Studies and is now out there “job hunting”. He is passionate about sustainable living, self-sufficiency and healthy nutrition, particularly wholesome baking. Together with Tina he frequently runs baking courses in the Auckland area and has recently set up the business Flour/Power/Mills, providing quality milling and baking equipment.

Tina Krombach studied alternative medicine and classical homoeopathy in Germany and practises in Titirangi and Auckland, with an emphasising on Homoeopathy, Reflexology, Nutrition and Fasting/Body Cleansing. When she and Lars are not baking, she offers workshops on reflexology with an emfoot massage, relaxation and body cleansing/detoxifying retreats.

For further info on their endeavours visit: www.healing-matters.co.nz and www.flour-power-mills.co.nz.



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