

dairy-free diet

clinical information for practitioners and patients

We are led to believe that milk and other dairy products are an essential and healthy component of a balanced diet and that reduction or avoidance will lead to nutrient deficiency, namely calcium. However, there is much evidence to support the reduction or avoidance of dairy products even if you are not allergic to them.

Health problems resulting from dairy begin with modern farming, breeding and processing methods. For example, hormones and antibiotics are finding their way into our milk, pasteurisation destroys numerous essential enzymes, and the removal of butter fat, as in skim milk, reduces the ability of the body to absorb and utilize the nutrients in the milk and also removes the fat soluble vitamins.

Lactose intolerance

Lactose intolerance is a general description used for people who cannot easily digest lactose, a sugar found naturally in milk. Lactase, the enzyme in the digestive system that helps break down lactose, declines from the age of two. Symptoms may include abdominal pain, gas, cramping, bloating, diarrhoea or constipation. Symptoms may occur one hour to a few days after dairy consumption. Dairy products have also been associated with eczema, dermatitis, acne, respiratory mucus congestion and sinus problems.

Primary Lactose Intolerance is an inherited condition. Levels of intolerance vary, with 90-95% of Asians, Africans and Indians having lactose intolerance, 85% of Aboriginals, 60% of Maoris and Mediterraneans and approximately 15% of Caucasians.

Milk allergy

Dairy products contain a protein called casein, which is very hard to digest. Casein is 300 times higher in cow's milk than it is in human milk. True milk allergy to casein will only affect about 3% of the population; however, milk (lactose) intolerance is more widely spread. Dairy allergy appears to be due to the Casein A1 fraction of milk. It is worthwhile attempting consumption of A2 milk in those with demonstrable dairy allergy

Going Dairy free and reading labels

| Ingredients containing lactose | Ingredients containing milk proteins |
|--------------------------------|--------------------------------------|
| Lactose | Lactoglobulin |
| Butter | Casein |
| Margarine | Lactalbumin |
| Cheese | Sodium caseinate |
| Cream | |
| Yoghurt | |
| Whey | |
| Milk solids | |
| Non-fat milk products | |
| Skim milk powder | |

What about calcium

Calcium is the most abundant mineral in the human body. A massive 99% of it is located in the bones and teeth and the rest is present in the nerves, muscles and bloodstream where it is needed for the production of nerve signals and muscular energy and is involved in many enzymatic reactions.

It is possible to obtain enough calcium daily from a combination of sources, in particular dark green leafy vegetables and nuts & seeds. It is also important to look at factors which reduce calcium balance, including urinary loss due to caffeine, alcohol, smoking or poor absorption due to a deficiency of stomach acid. Adequate magnesium, vitamin D and weight bearing exercise will help the body retain calcium, while a number of trace minerals have been shown to play essential roles in bone metabolism. Adequate calcium intake will slow the rate of bone loss in older people and may reduce the risk of fracture. However, Australian studies have found that the average daily intake of calcium in 65+ age group was 685mg for women and 796 for men. Considering that the RDI is 1000-1500mg in this age group, supplementation may well be necessary if dietary changes do not fill the gap. Calcium supplementation has been shown to slow bone loss in older women by 43% and reduce the risk of fracture by 26-70%.

For information on stockists of A2 milk, see www.phytomedicine.com.au/files/articles/Oceania A2 Milk Vendors.pdf

| Recommended Daily Allowance | | | |
|-----------------------------|-----------|------------------------------|-------------|
| Infants | 350-550mg | Pregnant/breastfeeding women | 1300-1500mg |
| Children aged 1-10 years | 800mg | Adult women and men | 800-1000mg |
| Teenagers | 1200mg | Post-menopausal women | 1300-1500mg |

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Dairy alternatives

| WHAT TO AVOID | SUGGESTED SUBSTITUTES |
|---|--|
| Milk | Soy Milk (preferably organic and Malt free), rice milk, almond milk, goat's milk, sheep's milk |
| Yoghurt /Dairy desserts | Sugar free soy yoghurt, sheeps yoghurt, goats yoghurt |
| Cheese | Goats cheese, goats fetta, sheeps cheese, soya cheese |
| Ice Cream | Soya ice-cream, Non-dairy gelati, fruit sorbet, frozen soy desserts |
| Milk Chocolate | Dairy free carob bars (preferably sugar free) |
| Ready made sauces | Make fresh sauce using corn rice flour and soy milk |
| Packaged soups | Fresh soups thickened with potato or pulses such as lentils or soup mix |
| Butter or spreads | Olive oil, flax oil, macadamia oil, sesame oil, soy cream cheese, nut butters or spreads, avocado, tahini, homous |
| Buttermilk, Butterfat | Ghee, coconut milk/cream, copha |
| Batter (pancakes) | Make with wholemeal flour, eggs, and soy milk |
| Crackers with milk solids | Ryvita, Salada, rice crackers (check labels) |
| Malted chocolate drinks | Soya milk, carob, dandelion coffee, chicory |
| Note on Goat and sheep alternatives | Tips to dairy free eating |
| Both sheep and goats products contain lactose but in lower levels than cow products. People with mild lactose intolerance are often able to tolerate small amounts of these products. Those with allergies or sensitivities to the proteins in cow's milk will be able to tolerate sheep & goat products. | <ul style="list-style-type: none"> • All the above suggestions are available at Coles, Woolworth's, leading health food shops or the health section at any supermarket. • Read labels! • Notify restaurants when you book that you have special requirements. • Margarine commonly contains milk solids. A healthier alternative is olive oil (dip as the Italians do!), avocado, tahini, hummus and nut spreads instead of margarine or butter. • Soy cheeses sometimes contain casein. Read the label! • Mayonnaise and salad dressings traditionally are made without dairy products but many pre-prepared ones now do. Read the label! |

Calcium Counter - mg of calcium per 100 grams or approximately 100mls of food

| | | | | | |
|-----------------------|------|----------------------------|------|-----------------------------|-----|
| Dairy Products | | Soy Products | | Oatmeal | 55 |
| Skim Milk powder | 1190 | Soy milk (brand dependant) | 100 | Brown rice | 33 |
| Whole Milk Powder | 900 | Soy grits | 255 | Wheat or rye crispbread | 55 |
| Whey Powder | 645 | Dried soy beans | 225 | Meats | |
| Yoghurt – cows | 180 | Soy flour | 210 | All meat has < 20 mg /100 g | <20 |
| Goats Milk | 130 | Tofu | 170 | Legumes (cooked) | 95 |
| Skimmed cows milk | 123 | Nuts | | Navy beans | 70 |
| Buttermilk | 115 | Almonds | 250 | Chickpeas & kidney beans | 50 |
| Cows milk – whole | 115 | Brazil | 180 | Lentils | 40 |
| Human milk | 30 | Pistachio | 136 | Black eyed beans | 22 |
| Cheese | | Pecan | 75 | Sprouts | |
| Parmesan | 1091 | Walnuts | 60 | Alfalfa sprouts | 20 |
| Gruyere | 1000 | Macadamia | 50 | Mung bean sprouts | 260 |
| Mozzarella | 817 | Hazelnuts | 45 | Vegetables | |
| Cheddar | 810 | Peanut butter & cashews | 35 | Parsley | 260 |
| Gouda | 810 | Seeds | | Watercress | 190 |
| Edam | 678 | Unhulled sesame seeds | 1160 | Rocket & dark salad leaves | 185 |
| Fetta | 353 | Linseeds | 271 | Spring onions, onions | 140 |
| Ricotta | 223 | Hulled sesame seeds | 110 | Spinach | 135 |
| Cottage | 70 | Sunflower seeds | 98 | Broccoli | 125 |
| Eggs | | Pumpkin seeds | 52 | Silverbeet | 115 |
| Chicken (whole) | 56 | Grains and Cereals | | Fruits | |
| Fish | | White Self raising flour | 350 | Dried figs | 200 |
| Whitebait | 860 | Muesli (depends on brand) | 200 | Orange juice | 60 |
| Sardines (canned) | 550 | Wheat bran | 150 | Most fruit | <50 |
| Salmon (canned) | 100 | Bread (white of brown) | 100 | Other | |
| | | Rice bran & wheat germ | 69 | Crude molasses | 654 |

dairy allergy

clinical information on A2 Milk for practitioners and patients

Milk is made up of Carbohydrates (Lactose) Fats and Proteins. The proteins can be divided into two major groups: Whey Protein and Casein. Casein can be further grouped into alpha, beta and kappa. Each type of casein comes in certain variants, depending on the genetics of the cow that produced it. For example more than 70% of Guernsey cows produce the A2 variety of beta casein in their milk, where as 70% of Red Danish Dairy cattle produce the A1 variety of beta casein.

A2 Milk is free of the protein called beta casein A1. There is significant evidence to suggest that there is a linkage between A1 consumption and some disease; namely Type 1 diabetes, vascular/heart disease and neurological disorders such as autism.

"Preliminary findings showed 95% of 81 autistic children had 100 times the normal levels of milk protein in their blood and urine"

"an Icelandic study across 5 Nordic countries postulates that beta casein A1, not other milk proteins examined (bovine serum albumin, immunoglobulin G, lactoferrin), may contribute to the observed varying diabetogenicity of cow's milk."

"Laugesen and Elliott, 2003 published an epidemiological study concluding that A1-casein per capita supply in milk and cream (A1/capita) was significantly and positively correlated with IHD in 20 affluent countries five years later over a 20-year period."

For more information and where to buy A2 milk look at <http://www.a2corporation.com/english/index2.html>