

Almond

I was born and grew up in the Northern Hemisphere, where February/March (springtime) is a very special time of the year: the celebration of the Lunar New Year, when most households display a cherry blossom branch decorated just like we decorate our Christmas tree here. Now it is August/ September, springtime 'down under', cherry blossoms start to bloom in various shades from white, pale pink to almost crimson red... Time for me to celebrate again!

The almond tree belongs to the *Prunus* genus, which includes many important fruit trees such as peach, plum, apricot, cherry, grown for the delight of the appetite as well as many ornamentals grown for the delight of the eyes. There are over 200 species of these mostly deciduous trees, which originally come from Western Asia, but now are cultivated throughout the world. The almond tree is one of my favourites; in the East it represents 'True Love'. The Greeks also associate this tree with love, according to their mythology, Phyllis was deserted by her lover Demophoon and died of a broken heart, the Gods took pity on her, turned her into an almond tree. When Demophoon finally returned (too late) and was shown the forlorn, leafless and flowerless tree, he cried and rushed to embrace it, the moment his tears fell on the ground, the tree suddenly burst forth into beautiful blooms... The almond tree is mentioned in the Bible, Aaron's rod was an almond branch and the fruit of the almond was among the decorations of the golden candlestick employed in the tabernacle. I believe now the Jews still carry rods of almond blossoms to the synagogues on festivals.

The almond fruit is technically the same as a peach or an apricot, except that its outer portion is leathery, not fleshy and not edible. When fully mature, the fruit splits open its green outer coating revealing the brown husk inside; this is the almond kernel we all recognize. In Western countries the term 'almonds' refers strictly to the nuts of the almond tree (*Prunus amygdalus*) whereas in Asia the term 'almonds' refer not only to the above said almonds but also to the apricot pits from the Apricot tree (*Prunus armeniaca*). There are two types of almonds, the sweet and the bitter ones. Sweet almonds (var. *dulcis*) are used as food; bitter almonds (var. *amara*) are considered toxic, hence not usually available to the public. In Asia and in Asian communities overseas, both types from both the almond and the apricot trees are available, the bitter ones usually in herbal stores. The important difference between the sweet and the bitter almonds is the amount of amygdalin they contain. Amygdalin is a chemical compound containing cyanide which when broken down by enzymes produces the deadly hydrocyanic acid. Amygdalin also yields glucose and benzaldehyde which gives the characteristic 'almond', or more correctly, 'bitter-almond' aroma. The bitter variety of almonds/apricot pits contains 3 to 4% of amygdalin while the sweet variety contains very little or none.

Two commercial products are derived from almonds: the standard oil and the bitter oil. The standard type is prepared from both varieties sweet and bitter, it is the product of the sweet oil and the non-volatile oil from the bitter variety, it has neither hydrocyanic acid nor benzaldehyde so it is not toxic and has no almond aroma. It is very soothing to the skin and is used extensively in cosmetic and pharmaceutical creams, ointments, soaps etc. It is also used as a lubricant in delicate mechanisms such as watches. The bitter oil is prepared from the oil of the bitter almond and/or other kernels such as apricot, cherry that contain sizable quantities of amygdalin. These kernels usually have been pressed to obtain any non-volatile oil such as the sweet oil first, after that the residual cake is soaked in lukewarm water where the amygdalin is broken down to glucose, hydrocyanic acid and benzaldehyde. After the removal of the deadly hydrocyanic (also known as prussic acid) the oil is practically pure benzaldehyde and is used extensively to flavour food products and liqueurs. Although free from hydrocyanic acid, this oil if taken in large dose can still be fatal due to the toxic effect of benzaldehyde. Bitter almonds are usually used in small quantities to flavour pastries and confectionary to give it the almond aroma.

Almond nuts are usually used dried to put in stir-fry dish like 'Chicken and Almond' or pure vegetarian dish to add extra protein to the dish. The nuts are also used frequently in many Middle Eastern dishes and in European cuisine. Almond is also served 'roasted' and 'salted' as an appetiser. Almond paste (marzipan) is made of ground sweet almond mixed with icing sugar and glucose syrup and is used in confectionary or as a filling in pastries.

The ancients attributed many wonderful qualities to the almond, it was valued for its supposedly virtue in preventing intoxication. Could that be the reason behind the custom of serving almonds with drinks before and between courses of a drinking dinner party? Today cooling almond milk is still drunk as a kidney tonic and to ease heartburn. Since almonds contain about 20% protein and practically no starch, they are often made into flour to make biscuits and cakes for diabetic and gluten-intolerant patients.

In recent time, a substance called laetrile (a partly synthetic form of amygdalin, or vitamin B-17) has been touted as a cancer cure and prevention, it has been widely advertised especially in alternate health magazines, any comments from any medical experts among our members? Please come forward as I for one would very much like to learn more.

