

# Summary of journals

[Science](#), [Biology](#)



**Prickly Pear as Food and Medicine** The article discusses the health benefits of Prickly pears based on a number of studies that were conducted during recent years. Although the evidence presented in the studies needs further confirmation, the initial experiments conducted on the Prickly pears have convinced the research workers that it can potentially treat a number of common health conditions like cardiac problems and diabetes.

The traditional use of Prickly pear has been related to problems like local pain and healing of wounds. Prickly pears pads are consumed as vegetable, fruit as dessert and flowers as tea. The author asserts that apart from the traditional use, there are a number of additional health benefits that have been proven by research. The flowers of the plant can improve benign prostatic hyperplasia symptoms whereas fruits can assist in lipid abnormalities and hangovers prevention. Some researchers have also suggested its role as a diuretic. Improved glycemic control is achieved if plants products are consumed along with oral hypoglycemic agents.

Regarding the rising incidence of cancer, the author claims that Prickly pears can prevent carcinogenesis of certain origins.

Like all medication, the use of this plant is also associated with a number of adverse effects. These are in the form of gastric disturbances and dermatitis like rash on the skin if plant products are applied topically. The dermatological manifestations of this dermatitis are similar to the rash of scabies which is primarily found on fingers, wrists, buttocks and genital area.

Overall, the author has attempted to convince the readers about the potential benefits of the plant and to avoid bias; he has put forward a

number of both beneficial and detrimental aspects of the plant before the readers, leaving it up to the readers to decide about the pros and cons themselves.

Tolerances and acclimation to low and high temperatures for cladodes, fruits and roots of a widely cultivated cactus, *Opuntia ficus-indica*

The survival of plants on various regions of the earth is largely dependent upon the ranges of temperatures that persist in those areas. Interestingly, different parts of plants have varying sensitivities to the surrounding temperatures. Freezing temperatures can lead to disruption of cell structure due to ice crystal formation while exceedingly high temperatures may cause cell membrane disruption and denaturation of proteins. Gradual increase or decrease in ambient day/night temperatures can provide a plant the opportunity to adjust to new temperature ranges by developing tolerance due to the formation of certain cryoprotectants and proteins.

This study focuses on *Opuntia ficus-indica* species and aims to highlight the aspect of acclimation in this plant. Different organs of the plant possessed varying levels of tolerance. The age of cladode was an additional factor that affected the tolerance level. With growing age, up to the age of 10 years, a growing trend regarding tolerance to high and low temperatures were observed. As far as acclimation to high temperatures is concerned, the fruits of the plant did not show any improving trends; however, roots and cladodes did demonstrate improvements. Moreover, the fruits were less tolerant to freezing temperatures as compared to cladodes.

When judged in the light of the ability that this plant possesses to acclimate to the new environment, it can be inferred from the discussion that since

fruits are specialized products of plants that develop only after the occurrence of certain metabolic changes within them; their ability to acclimate to high temperature extremes is limited. This is in contrast to the young cladodes which possess considerably enhanced ability to acclimate to environments with higher temperatures.

#### Works Cited

Brinker, Francis. " Prickly pear as food and medicine." *Journal of dietary supplements* 6. 4 (2009): 362-376.

Nobel, Park S., and Erick De la Barrera. " Tolerances and acclimation to low and high temperatures for cladodes, fruits and roots of a widely cultivated cactus, *Opuntia ficus-indica*." *New Phytologist* 157. 2 (2003): 271-279.