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HEALTH BENEFITS & CURATIVE PROPERTIES OF CAMEL MILK

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Persons with diabetes have started drinking camel milk in Karachi. The Reason behind is that it helps to reduce blood sugar level or insulin level and it is one of those rare functional foods that help to manage diabetes better. But the Question arises is that; Are these reasons scientifically correct? To explore these reasons, first we should know about how insulin maintains sugar level in human body and what are the similar properties present in camel milk insulin are.

Insulin is a protein of 51 residues produced in specialized beta cell, islet of the Langerhans in the pancreas. Carbohydrate and fat metabolism in the body is regulated by Insulin. Insulin binds on transmembrane tyrosine kinase receptor (insulin receptor) present in liver, muscle and cells in the fat tissues and stimulates glucose uptake from blood and converts it into glycogen to store in the liver and muscles. Failure to control insulin level leads to diabetes mellitus type I or II. Diabetic patients need insulin to control their blood glucose level. Type II diabetes is the most common and results from insulin resistance; a condition in which cells fail to use insulin properly (Malik, 2012).

Researchers proved that Camel milk has medicinal properties. Camel milk Insulin possesses special properties that make absorption into circulation easier than insulin from other sources or cause resistance to proteolysis, camel insulin is encapsulated in nanoparticles like lipid vesicles that make possible its passage through stomach and entry into circulation. Camel milk is different from other milk because it contains a large concentration of insulin and high amounts of vitamins C, B2, A and E. They also suggested that it contains protective proteins which may have a possible role for enhancing the immune defense mechanism & it can destroy Mycobacterium tuberculosis. Moreover inhibition of pathogenic

bacteria by camel milk was also observed. People with several food allergies improved with camel milk because it can be consumed by lactase deficient patients and those with weak immune system. In pulmonary tuberculosis beneficial role of camel milk has also been reported (Mal, 2001; Elimam, 2014). Insulin contents are also present in other mammals like cows, goat, and sheep. Moreover in colostrum, levels of all the ruminating mammals were higher than those of their milk. In Human woman colostrum's contained insulin but in levels similar to those of milk of the other animals. Cow milk has the lowest amount of insulin & no evidence of anti-diabetic properties has been reported. Studies also report that store milk has the lowest amount of insulin as compared to raw or fresh milk (Zagòrski, 1998).

Researches on camel milk with diabetes, autism, cancer, Parkinson's, heart disease, Crohn's, food allergies and a variety of other illnesses have been done in USA with different countries (Camel Milk, 2014). In India camel milk is used therapeutically for treating diabetes, dropsy, jaundice, tuberculosis, anemia, asthma, piles and problems of the spleen (Knoess, 1979). while in USSR camel milk was used in sanatoria for treating patients suffering from chronic hepatitis. They learned how liver function improved after drinking camel milk (Sharmanov, 1979). Camel milk can cure all type of cancer too? answer is no. According to Dr. Hinkle. "Several cancer patients did not test well for the camel milk, but did test well for donkey milk," states Patients that tested well for donkey milk have had the same impressive results as those who tested well for camel milk. Dr. Hinkle has concerns for several reasons I. Camel milk can have elevated levels of iron, and iron can make certain cancer grow and spread. II. Cancer patients are low in the amino acid glutathione, and donkey milk has elevated levels of glutathione. So we can conclude that

from the literature presented above there is a strong indication that there is a scientific justification for drinking camel milk by certain diabetic patients (Camel Milk, 2014). However, more research is necessary before a final conclusion can be made but Pakistani scientists are not or rarely working on this topic.

Globally there are 19.5 million camels. Pakistan ranks at 5th position. (Iqbal, 2011) but now Pakistan is facing acute dearth of camels with its existing number around 0.7 million while the number was over around one million in 1990. One of the potent reasons behind this shortage is believed to be the regular use of Pakistan-origin camels in the Gulf for the camel-race. The Pakistan-origin camels need special attention of the concerned authorities with every point of view including constant check on animal smuggling and use of country's origin camel in the Gulf for the racing, experts of the livestock department believed. It will also be not out of place to mention here that these camels are not only famous for the racing in the Gulf areas but also for their use for different dishes besides their milk. However these issues were also highlighted by establishment of the camel breeding farms in Choolistan aiming at obtaining the Governments support for farmers of the area to promote better nourishment of the important cattle (The Nation, 2010). The establishment of camel breeding farms will increase population of the animal as well as increase production of the camel's meat and milk but in research sector we need to work on camel and explore the new solutions regarding Health.

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