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Effect of Dates in Milk on Haemoglobin Level of Blood

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Abstract:
Aim: To analyse the influence of milk and dates on the haemoglobin count of a person of the Indian population
Objective: To determine the way dates have an influence on our haemoglobin content
Background: Dates provide a wide range of essential nutrients, and are a very good source of dietary potassium. The sugar content of ripe dates is about 80%; the remainder consists of protein, fiber, and trace elements including boron, cobalt, copper, fluorine, magnesium, manganese, selenium, and zinc.The glycemic index for three different varieties of dates are 35.5 (khalas), 49.7 (barhi), and 30.5 (bo ma'an). Thus it can possibly have an effect on the haemoglobin content

INTRODUCTION:

Phoenix dactylifera, commonly known as date or date palm,[1] is a flowering plant species in the palm family, Arecaceae, cultivated for its edible sweet fruit. Although its place of origin is unknown because of long cultivation, it probably originated from lands around Iraq.[2] The species is widely cultivated and is naturalized in many tropical and subtropical regions worldwide.[3][4][5]. Milk is a pale liquid produced by the mammary glands of mammals. It is the primary source of nutrition for infant mammals (including humans who breastfeed) before they are able to digest other types of food. It contains many other nutrients[6] including protein and lactose. Both substances, milk and dates are rich in various minerals and nutrients which are required for our everyday life. Dates provide a wide range of essential nutrients, and are a very good source of dietary potassium. The sugar content of ripe dates is about 80%; the remainder consists of protein, fibre, and trace elements including boron, cobalt, copper, fluorine, magnesium, manganese, selenium, and zinc.[7]

The composition of milk differs widely among species. Factors such as the type of protein; the proportion of protein, fat, and sugar; the levels of various vitamins and minerals; and the size of the butterfat globules, and the strength of the curd are among those that may vary.[8] For example:

Human milk contains, on average, 1.1% protein, 4.2% fat, 7.0% lactose (a sugar), and supplies 72 kcal of energy per 100 grams.

Cow's milk contains, on average, 3.4% protein, 3.6% fat, and 4.6% lactose, 0.7% minerals and supplies 66 kcal of energy per 100 grams.

Although the nutritional effects of these two substances individually are very well know the effect of both the substances combined is not known with so much certainty. It has been proved in various studies that iron is an important component of dates. It is also known that iron is an important component of the compound haemoglobin present in the red blood cells of the blood. Thus this study aimed at estimating the effect of dates and milk together. The dates were soaked in milk and were boiled for a period of time and this was given to the people that were involved in the study.

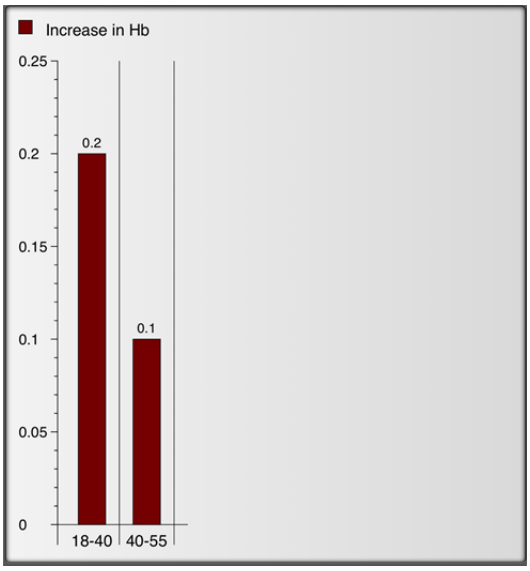
MATERIALS AND METHODS:

The study comprised of twenty people of various age groups. The subjects were selected such that no person involved in the study had any systemic disease or syndrome as that would interfere with the study.The exclusion criteria also stated that the people involved in the study should be more than 18 years of age at the start date of the study and also should not be more than 55 years of age. The haemoglobin content of each person was estimated using Sahli's Haemoglobinometer [9] The readings were recorded and the subjects were exposed to the course of the study. Each person consumed a fixed quantity of the milk which was boiled along with dates early in the morning in empty stomach. The study was continued for a period of 10 days. Once the period of the study terminated the blood was again drawn from the subjects and the haemoglobin level was estimated.Once the results were estimated they were tallied with the original readings to test for the change in the haemoglobin level. The readings were taken such that to avoid any errors in any possible manner. The results were segregated into two age groups of 18-40years as one age group and the age group of 40-55years as another group.

RESULTS AND DISCUSSION:

The results which were obtained during the period of the study and the same were analysed. It was clear that the people who were involved in the study had a greater haemoglobin level than which they had before. The results were analysed with age as a parameter and the graph for the same was obtained.

From the results it was clear that the level of Haemoglobin in the age group of 18-40 years had a greater increase than that of the age group of 40-55 years. The results were averaged out to see the overall effect of the same on the specific age group. The haemoglobin level thus increased in the period of study in the people who participated in the study.



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The graph shows the increase in haemoglobin level as a function of age

CONCLUSION:

Thus the study proved that on consuming dates boiled in milk in an empty stomach helps to increase the haemoglobin level. The increase in the level of haemoglobin depends on the age of the person. This would help patients in a lot of ways such as the people who are anaemic and have the deficiency of haemoglobin in the blood could try this method to boost their haemoglobin levels thus improving their health condition.[10][11][12]

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