

Bitter Gourd relish and Pulse Rate Relationship

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Abstract

The objective of present project “Bitter Gourd relish and Pulse Rate Relationship” was to investigate the normal pulse rate of subjects and relate with likeliness of bitter gourd. Subjects that took part in this project were 219 in number. Pulse rate is a means of physical examination of patient's body and diagnosing the problem. Pulse rate is the beats (blood pumping to body) of heart in a minute. The status (regular, fast, low, strong) of pulse indicated the physical state of subject. Bitter gourd, a vegetable enrich in phytonutrient, anti-oxidants, dietary fiber and vitamin C, also disliked by subjects because of its bitterness. A protocol was followed to find a relationship for pulse rate measurement and questionnaire. Assistance of every subject helped in survey completion. Results were obtained by t-Test and relationship was observed that helped in doing conclusion. P-value was non-significant which meant no relation between bitter gourd and pulse rate measurement.

Keywords: Bitter Gourd, Pulse Rate, Relish, Measurement

Introduction

Mostly, a disease is diagnosed by doing physical examination of patient's body. Pulse is one of the traditional ways of detecting certain diseases by sensing different features of the pulse. Pulse is measured by placing three fingers; index finger, middle finger, ring finger of a hand on the patient's wrist. Pulse is actually the rate at which the heart beats. Rhythmic contraction and expansion of artery anywhere in body is synchronized with the opening and closing of aortic valve of heart. Arteries expand when the heart pumps blood through the body. The number of times the heart beats means pump blood through body per minute is actually the pulse rate. Heart contraction causes increased blood pressure in arteries. Pulse is generated in all arteries, but you can feel a pulse in arteries near to the skin's surface, such as in your upper arm, wrist and neck region. Resting heart rate is normal heart rate means sufficient to carry day activities. To measure pulse rate, count the number of beats from where you feel it either wrist or neck region for one minute. The quality of the pulse monitors every organ's status. From left hand wrist, three organs can be checked. By applying light pressure, one organ is detected that is heart, lightly increase the pressure and another organ's status is monitored that is liver and further increasing pressure kidney's status is monitored. From right hand wrist, state of lung, spleen and kidney can be monitored. Pulse rate for every subject is different. Pulse rate also depends on factors like age, disease, exercise and resting state. In different physical situations of the body, the pulse rate per minute is different. The pulse rate is measured when the body is in resting condition [1-3].

Momordica charantia, scientific name of bitter gourd, bitter melon, bitter squash also as Kerala in Urdu. It is actually a vegetable that

is bitter in taste because of Momordica compounds. Bitter gourd appearance looks like cucumber but with ugly or rough gourd-like bumps on all over its surface. It is grown as a field crop and widely used in Asia. It is edible fruit of Momordica genus of climbing vines. Bitter melon contains a lot natural beneficial ingredients like magnesium; iron, two times of calcium of spinach, vitamin C, two times of potassium of banana, high B-carotene contents, anti-oxidants, being a good source of dietary fiber and low in calories, 17 calories per 100g. Mostly uses as a medical resource as it is beneficial in controlling sugar level naturally because it consists of a phytonutrient, polypeptide-P. Bitter gourd helps in reducing bad cholesterol level as it contains charantin compound that is hypoglycemic in nature. It helps in cleansing oxygen derived free radicals and other oxygen reactive species that increases the risk of cancer and aging as being excellent vitamin C source. Bitter gourd also has side effects if intake is more than necessary. It can induce miscarriage, effects on human fertility, causes emmenagogue, causes toxicity and stomach disorders such as diarrhea and vomiting. Pregnant and lactating women avoid intake of bitter gourd. We cannot combine some food products with bitter melon as bringer, banana and milk because of chemical imbalance. Excessive and continuous uptake of bitter gourd for controlling sugar levels without proper consult causes liver inflammation and boost liver enzymes levels that causes atherosclerosis (a condition in which hardening of arteries occur) [4-6].

Materials and Methods

The number of subjects that participated in this project was 219.

Pulse Rate Measurement

The protocol that we followed to measure pulse rate (number of times heart beats in a minute) of subjects was at the radial point. Radial

point is the point inside wrist of the hand. First of all, a watch with second hand or stopwatch and a chart to record pulse was arranged. To start the procedure of measuring pulse, it was made sure that the hands of both subject and the physician were clean to avoid any sort of cross infection. Also it was taken into account that the subjects were comfy and relaxed. The hands of the subject were placed on the table or any support and put tips of fore and middle finger on the inside of wrist. Fingers were pressed gently or lightly increased the pressure. Strong and regular rhythm of pulse was felt. Pulse was counted for 30 seconds by starting the stopwatch and multiplies the number with 2 and that gave the pulse rate in one minute. Also you can count the pulse for 15 seconds and multiply it with 4 factors and pulse in one minute of a subject was measured. At clinics a thermocouple probe is also used to measure the pulse rate. It detects the temperature variations caused by the blood flow pulsations. The probe is placed under the tongue and the output of probe in the form of DC and AC gives the temperature of body in degree and uses for determination of pulse rate respectively [7-17].

Project Designing

First of all, we designed the project according to topic. We organized the protocol for measuring pulse rate of subjects. The subjects gave their consult and we mark their pulse rate by radial point method and guarantee that they were not suffering from any disease like blood pressure problem that affects their normal blood pressure. Then we asked every subject having different pulse rate to mark their likeliness of bitter melon. Subjects marked accordingly to their taste. We then proceeded for further content analysis of this project.

Statistical Analysis

The results of project were analyzed by t-Test. t-Test was a formula of analyzing the results done by using Microsoft Excel. If p-value of result was less than expected value then it considered as significant. $P < 0.05$ was considered as significant.

Results and Discussion

Results regarding to project is shown in Table-1 and discussion regarding to results is mentioned in following paragraph.

The average pulse rate of subjects that liked the bitter gourd was 80.34 and statistical analysis done by standard deviation was 11.9. The subjects that disliked bitter melon had average pulse rate 81.4 with statistical analysis 10.7. P-value according to t-test was greater than the expected value which meant that the result was non-significant. Non-significant p-value showed that there was no relationship found between bitter gourd relish and pulse rate measurement.

Bitter gourd relish and Pulse rate relationship (Table 1)

Yes	81.39±10.72
80.39 ± 11.97	81.39±10.72

* $p < 0.05$

No recent studies based on questionnaire were done related to our topic [7-17].

Conclusion

The present study concluded that p-value (0.55) of our project was greater than significant (0.05) value. So, no relationship was found between the Bitter gourd relish and Pulse rate measurement.

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