

# Intake of Balanced Diet among Dental Students –An In Campus Survey

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## Abstract

**Aim and objective:** To assess the balanced diet among students in a dental school .

**Background:** No single food contains all the nutrients to stay healthy. A balanced diet contain all the nutrients in proper proportions . A survey questionnaire comprises of diet related questions and is administered to students through a survey monkey link .

**Reason :** To increase awareness of balanced diet among student community and to execute a diet plan to decrease the intake of unhealthy foods and to improvise on balanced diet to maintain a healthy lifestyle.

**Result:** More than 85% of the students consume balanced diet among a dental school .

**Keywords :** balanced diet , metabolism,regulation,nutrition,health.

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## INTRODUCTION:

Balanced diet is the key factor to gain the right nutrients and energy to the body.(1) This means eating a wide variety of foods in the right proportions and consuming the right amount of food and drink to achieve and maintain a healthy body weight. (7)A healthy diet based on nutrients and vitamins which includes starchy foods such as potatoes, bread, rice etc., protein rich food such as beans, pulses, fish etc., and other proteins some milk and dairy alternatives.(5) Balanced diet provides essential nutrients to the body. The requirement for a healthy diet can be met from variety of plant based and animal based foods. This type of diet supports energy needs and provides for human nutrition without exposure to toxicity or excessive weight gain from consuming excessive amounts.(8) Consuming a balanced diet helps in improving the outlook and stabilises the energy.It is important to consume a balanced diet as all the organs need proper nutrition to work effectively. Vitamins and minerals in the diet are vital to boost up the immunity and healthy development.(4) A healthy diet can protect the human body against certain types of diseases, in particular non communicable diseases such as obesity, diabetes, and cardiovascular diseases. Hence, a healthy balanced diet helps to maintain a healthy body weight, provides energy and promotes a general feeling of well being.(7)

A balanced diet is one that provides an adequate intake of energy and nutrients for maintenance of the body and therefore good health. A diet can easily be adequate for normal bodily functioning, yet may not be a balanced diet.

(11)An ideal human diet contains fat, protein, carbohydrates, vitamins, minerals, water and fibre all in correct proportions. These proportions vary for each individual because everyone has different metabolic rates and levels of activity.(15)

Carbohydrates, fats and proteins provide energy. Proteins are a provider of energy in an emergency, but are primarily used as building blocks for growth and repair of many body tissues. We also need much smaller amounts of other nutrients, such as vitamins and minerals. Despite the small quantities needed these are essential to provide a healthy diet.

Within the cells of our body, the nutrients ingested are converted to other compounds, which are then used for metabolism and other cellular reactions. Starch, a major carbohydrate is converted to glucose which can be then synthesised into fat for storage, proteins are synthesised from amino acids, and phospholipids are made from glycerol and fatty acids.

Balanced diet with adequate greens can ease the stomach congestion. Moreover, green leaves provide diverse essential vitamins and antioxidants that promote proper physical development, strengthen immune system and against ageing.(9)

On top of this, employing healthy menu helps tackling the increasing obesity issue, which is related to many chronic diseases such as high blood pressure, diabetic and stroke. Besides, the problem is getting serious among young people with the affection of fast food culture. Through taking dietician's advice and regulating daily intake, the

risk of having such persistent disease would be greatly reduced.(6) However, it is not enough to stay healthy by adopting balanced diet alone.

Having regular exercise can not only helps burning excessive body fat but improving cardiovascular functionalities. Constructing proper sleep pattern is crucial to keep focus on daily activities.(10,12) In addition, often participating in social parties can contributes to mental health.

To sum up, a balanced diet is elemental to maintain health by providing sufficient nutrients, regulating body functions and proper amount of calories to human body and improves the metabolism of the body. (12)However, other factors are as important construct healthy habit as diet.

**MATERIALS AND METHODS :**

This study was conducted online through Surveymonkey link.

The survey consists of 18 multi-choice questions regarding uptake of a healthy diet including all the nutrients among dental students in a dental school .

Survey is known to be the field of applied statistics; survey methodology studies the sampling of individual units from a population and the associated survey data collection techniques, such as questionnaire construction and methods for improving the number and accuracy of responses to surveys.

A total of 100 respondents, 78 female and 22 male had completed this survey. The age of the respondents involved in this survey are in range between 18 years old to 38 years old.

**Survey questionnaire:**

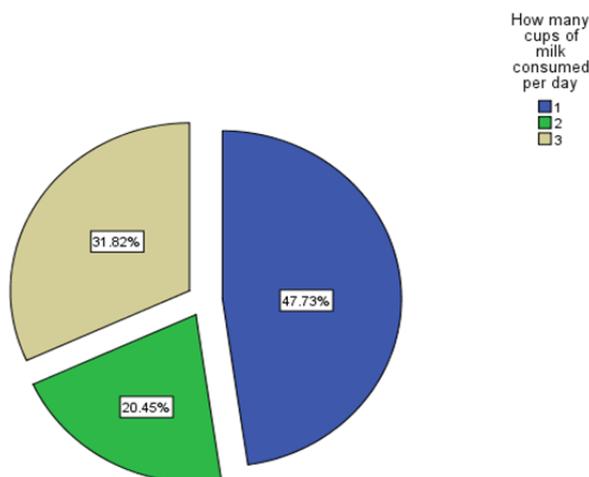
- 1.Are you male or female?
2. What is your age?
3. Do you take any nutritional supplements?
4. In a typical day, does your meals or snacks include vegetables?

5. In a typical day, does your meals or snacks include fruits?
6. How many serves of fruits you eat in a typical day? (a serve includes 2 pieces of fruit or 1 cup diced pieces)
7. How many serves of vegetables a day you eat? (a serve includes ½ cup cooked vegetables or 1 cup raw vegetables)
8. How many cups of milk you consume?
9. What type of milk you usually consume?
10. How often you take up carbohydrates? (potato, corn etc.)
11. How often you take proteins a day? (fish, dhal , channa etc )
12. How often you eat meat such as lamb or beef? (includes all steaks, chops, roasts, mince, fries, grilled)
13. How much quantity of sugar you take per day?(like in hotdrinks,beverages )
14. How often you take soft drinks, cordials, sport drinks or any beverages (includes caffeinated, drinks)
15. How many liters of water you consume per day? (1 litre---3 glasses of water)
16. What is the source of water?
17. How often you take junks like potato chips, fries and crisps etc.
18. How often you drink carbonated drinks per day?
19. Do you have the habit of eating take away foods or local fast foods? If yes how long you have the habit?
20. Do you have the habit of skipping breakfast or any lunch hours?

**STATISTICAL ANALYSIS :**

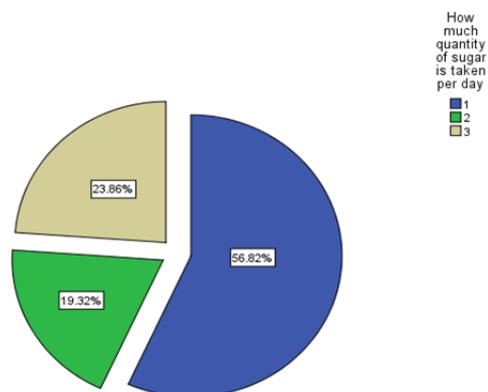
Based on the answers provided by the subjects, result was gained to the conclusion and statistical analysis was made by plotting pie charts for each and every questions. At last ,the frequency was calculated to gain an accurate cumulative frequency by using SPSS software.

**Consumption of milk per day**



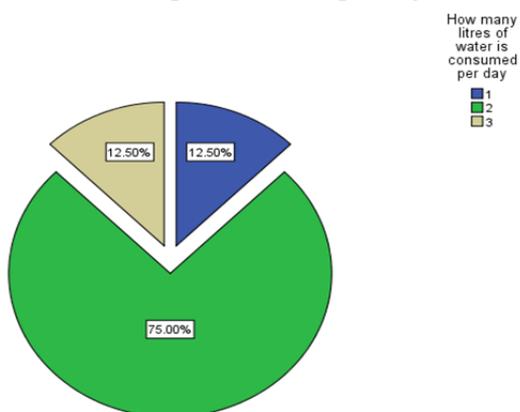
| How many cups of milk consumed per day |   |           |         |               |                    |
|--|---|-----------|---------|---------------|--------------------|
|  |   | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid                                  | 1 | 42        | 47.7    | 47.7          | 47.7               |
|  | 2 | 18        | 20.5    | 20.5          | 68.2               |
|  | 3 | 28        | 31.8    | 31.8          | 100.0              |
| Total                                  |   | 88        | 100.0   | 100.0         |                    |

**Consumption of sugar per day :**



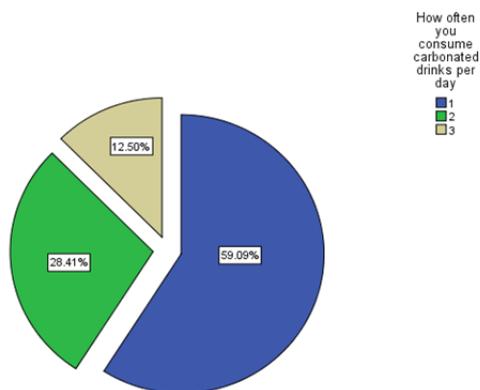
| How much quantity of sugar is taken per day |   |           |         |               |                    |
|---|---|-----------|---------|---------------|--------------------|
|   |   | Frequency | Percent | Valid Percent | Cumulative Percent |
| Valid                                       | 1 | 50        | 56.8    | 56.8          | 56.8               |
|   | 2 | 17        | 19.3    | 19.3          | 76.1               |
|   | 3 | 21        | 23.9    | 23.9          | 100.0              |
| Total                                       |   | 88        | 100.0   | 100.0         |                    |

**Consumption of water per day :**



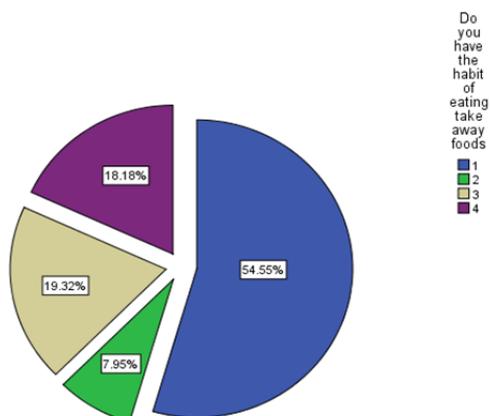
| How many litres of water is consumed per day |   |           |              |               |                    |
|--|---|-----------|--------------|---------------|--------------------|
|  |   | Frequency | Percent      | Valid Percent | Cumulative Percent |
| Valid  | 1 | 11        | 12.5         | 12.5          | 12.5               |
|  | 2 | 66        | 75.0         | 75.0          | 87.5               |
|  | 3 | 11        | 12.5         | 12.5          | 100.0              |
| <b>Total</b>                                 |   | <b>88</b> | <b>100.0</b> | <b>100.0</b>  |                    |

**Habit of consuming carbonated drinks :**



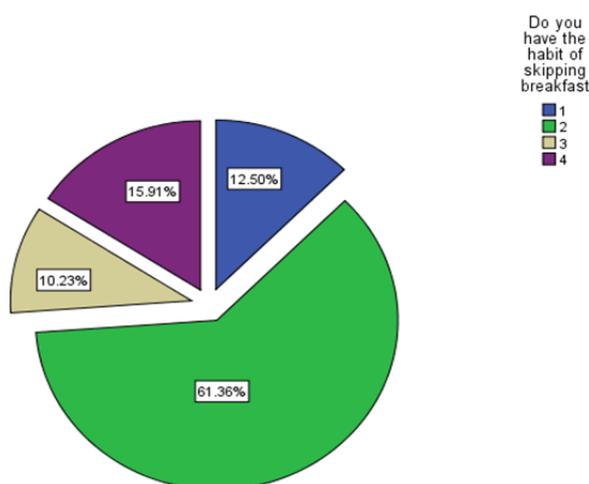
| How often you take soft drinks |    |           |              |               |                    |
|--------------------------------|----|-----------|--------------|---------------|--------------------|
|                                |    | Frequency | Percent      | Valid Percent | Cumulative Percent |
| Valid                          | 1  | 25        | 28.4         | 28.4          | 28.4               |
|                                | 2  | 30        | 34.1         | 34.1          | 62.5               |
|                                | 22 | 2         | 2.3          | 2.3           | 64.8               |
|                                | 3  | 31        | 35.2         | 35.2          | 100.0              |
| <b>Total</b>                   |    | <b>88</b> | <b>100.0</b> | <b>100.0</b>  |                    |

**Habit of consuming take away foods:**



| Do you have the habit of eating take away foods |   |           |              |               |                    |
|---|---|-----------|--------------|---------------|--------------------|
|   |   | Frequency | Percent      | Valid Percent | Cumulative Percent |
| Valid   | 1 | 48        | 54.5         | 54.5          | 54.5               |
|   | 2 | 7         | 8.0          | 8.0           | 62.5               |
|   | 3 | 17        | 19.3         | 19.3          | 81.8               |
|   | 4 | 16        | 18.2         | 18.2          | 100.0              |
| <b>Total</b>                                    |   | <b>88</b> | <b>100.0</b> | <b>100.0</b>  |                    |

Habit of skipping breakfast :



| Do you have the habit of skipping breakfast |   |           |              |               |                    |
|---|---|-----------|--------------|---------------|--------------------|
|   |   | Frequency | Percent      | Valid Percent | Cumulative Percent |
| Valid                                       | 1 | 11        | 12.5         | 12.5          | 12.5               |
|   | 2 | 54        | 61.4         | 61.4          | 73.9               |
|   | 3 | 9         | 10.2         | 10.2          | 84.1               |
|   | 4 | 14        | 15.9         | 15.9          | 100.0              |
| <b>Total</b>                                |   | <b>88</b> | <b>100.0</b> | <b>100.0</b>  |                    |

**RESULTS AND DISCUSSION:**

Based on the above questionnaire analysis, we can conclude that most of the respondents consume balanced diet . The distribution of age among the random sample was highly comparable .The frequency distribution according to the pie charts were considered to be appropriate since more than 75% take up more than 1 litre of water per day , 90% of the people consume all the basic nutritional components which includes carbohydrates ,proteins ,vitamins etc.From this we can conclude that more than 85% of the students consume balanced diet . Henceforth ,the result provided is highly significant

according to the frequency distribution table . Nutritionists have advised of eating a balanced diet. There are many advantages of balanced diet, which plays important role of healthy life. (14) Malnutrition results from an unbalanced diet, this can be due to an excess of some dietary components . An adequate diet provides sufficient energy for the performance of the body to function.(5) There are several significant advantages of eating a balanced diet. First of all, because this diet consists of the main nutrients, which are proteins, carbohydrates, fats, vitamins and minerals, the body can gain the whole needs

of them and support it to work properly. (11) This leads to have healthy nutritious organs and tissues. Secondly, due to the increase number of illnesses around the world, fully completed diet is able to protect the human body from the widespread diseases. Eventually, if a person strengthens his immune system from an early age by eating balanced diet every day, it is definitely difficult to be affected with these diseases or even the chronic pains. Therefore, there has been a strong connection between healthy life style and the balanced diet. (12)

It has been claimed that eating balanced diet is beneficial for living healthy. However, some individuals in our society could not stuck with only this limit because chocolate and candies, for example are the main part of their life, which make them extremely happily. (13) As a consequence, diet means for many kind of entertainment and happiness. Eventually, without specific food, they may feel tired and unhealthy. (11)

To conclude, the balanced diet has brought plenty of positives effects, so once the individual maintains on this nutritious diet, the potential cause of having any disorder would be rare. Nevertheless, those people, who are against eating balanced diets, might understand the value of this diet in future. (8)

#### CONCLUSION:

Overall, this study shows that intake of balanced diet among dental students of Dental school is very convincing. More than 85% of students consume healthy balanced diet which includes all the nutrients. Nevertheless, there is still a small group of respondents who lacks nutritional diet. Therefore, initiatives should be taken immediately to create awareness about the importance of consuming a balanced diet and their benefits in creating a healthy human life.

#### REFERENCES :

1. Nutbeam D and Harris E. *Theory in a Nutshell: A Practical Guide to Health Promotion*. Sydney: McGraw-Hill, 2004.
2. MacDowell W, Bonnell C and Davies M. *Health Promotion Practice*. Maidenhead: McGraw-Hill, 2006.
3. Bandura A. *Self-efficacy in Changing Societies*. New York: Cambridge University Press, 1995.
4. Allender S, Cowburn G, Foster C. Understanding Participation in Sport and Physical Activity Among Children and Adults: A Review of Qualitative Studies, *Health Education Research*, 2006, 21(6), 826-835.
5. Sallis JF, Cervero RB, Ascher W, Henderson KA, Kraft KM, Kerr J. An Ecological Approach to Creating Active Living Communities, *Annual Review of Public Health*, 2006, 27, 297-322.
6. Brug J. Determinantes of Healthy Eating: Motivation, Abilities and Environmental Opportunities, *Family Practice*, 2008, 25 (Supplement 1) i50-i55.
7. Shaw KA, O'Rourke P, Del Mar C, Kenardy J. Psychological Interventions for Overweight or Obesity, *Cochrane Database of Systematic Reviews*, 2005, Issue 2.
8. Roberts K. *Data Sources: Knowledge of an Attitudes to Healthy Eating and Physical Activity* Oxford: National Obesity Observatory, 2010
9. The Information Centre, *Health Survey for England 2007: Summary of key findings*. Leeds: The Information Centre, 2008.
10. Sallis JF, Cervero RB, Ascher W, Henderson, KA, Kraft, KM, Kerr, J. An Ecological Approach to Creating Active Living Communities, *Annual Review of Public Health*, 2006, 27, 297-322
11. National Institute for Health and Clinical Excellence. *Behaviour Change at Population, Community and Individual Levels*. London: Department of Health, 2007.
12. National Centre for Social Research and University College London. Department of Epidemiology and Public Health, *Health Survey for England, 2007* [computer file]. 2nd Edition. Colchester, Essex: UK Data Archive [distributor], April 2010. SN: 6112.
13. Sport England, *Active People Survey, 2007-2008* [computer file]. Colchester, Essex: UK Data Archive [distributor], December 2009. SN: 6347.
14. Communities and Local Government and Audit Commission, *Place Survey, 2008* [computer file]. Colchester, Essex: UK Data Archive [distributor], September 2010. SN: 6519.
15. *Ofsted Tell Us 3 National Report*. London: Department for Education and Skills.