

## Balanced Diet: Affects our Overall Health

**Dr. Ajay Krishna Tiwari<sup>1</sup>, Dr. Ayushi Tiwari<sup>2</sup>**

*<sup>1</sup>Teacher Educator & Economist, Sr. Lecturer of CTE / BTTC-  
G.V.M & Sr. H.O.D Department of Education.*

### Abstract

The purpose of this article is to understand the beliefs about healthy eating, learning is the process through which knowledge about a balanced diet is acquired and modified, for this the many functions our brain performs, our abilities, skills, knowledge, The most important thing is to learn about balanced diet as a result of the study, experience, reasoning, and observation of values and practices. Encouraging them to eat a well-balanced diet containing healthy food in high proportion. On the other hand, our diet plays an important role in these. Processes are affecting or benefiting from these, influencing our behavior, learning process and our health in general and our diet plays an important role in these.

**Keywords:** Balanced diet, Nutrition, learning, Neuroscience, Nutrients, Adolescence, Physical development, Hormonal changes, Changing lifestyle.



Balanced diet  
Nutrition  
learning



Adolescence  
Physical development  
Hormonal changes



Changing lifestyle  
Neuroscience  
Nutrients

## Introduction

Adolescence is the only time after infancy when the rate of physical development increases. This sudden increase is associated with the hormonal, cognitive, and emotional changes that occur in adolescence. We all know that adequate nutrition is an important issue, and studies over the years have always demonstrated the results: the importance of eating the right diet and having good health. A balanced diet and nutrition are essential for health. But are the specific requirements for the development and maintenance of other functions important in our body? There is a completely close relationship between these, the contribution of adequate nutritionally balanced diet and human learning process influencing their emotions. About the harmful effects of a balanced diet, nutritional counseling is more important. Adolescence is a time of changing lifestyle and eating habits that will help prevent junk food addiction and improve their nutritional status.

### **Nutritionist- You have to think about the nutrients which are interlinked**

Brains are made up of neurons, communicate with each other through these, called neurotransmitter chemicals, one of the most complex functions of neurotransmitters The brain, being able to receive information from the environment requires concentration and alertness. , analyze it and store it for use when needed. The right person can help you with this difficult task.

Nutritionist- You have to think about the nutrients that are interconnected. A nutrient linked to a direct function increases the speed and capacity of brain functions. There is a huge demand for calories and protein in adolescence.

### **Vitamins, mineral salts in a balanced diet: potassium, magnesium, omega 3, iron, protein plays an important role**

1. Vitamins of group B: We can find them in fruits, vegetables and -vegetables.
2. Vitamin E: It is fat-soluble and found in cereals and nuts such as Walnuts, Hazelnuts, and Almonds.
3. Mineral salts: potassium, magnesium (fruits and vegetables), and zinc (cereals and Red meat)
4. Trace elements: lithium, silicon, selenium, and chromium (fruits and vegetables, blue fish such as tuna, chickpeas, and anchovies).
5. Vitamin A: Beta carotene (pumpkin, carrot, cantaloupe, and papaya).
6. Vitamin C: Antioxidant. Protects the brain from the oxidative stress associated with age. Increases serotonin levels thereby improving our mood and humor. (Strawberries, broccoli, pineapple, capsicum, tomato, orange, and green vegetables)
7. Vitamin K: Increases the speed of brain functions and cognitive ability. (Asparagus, parsley, celery, green leafy vegetables, and fermented foods) Broccoli stands out for its excellence in vitamin K content.
8. Omega 3 Acids: Our body does not produce these and must be consumed from external resources (salmon, sardines, tuna, and anchovies). They play a major role in cognitive

development. They protect the brain from cognitive decline, improve brain plasticity and prevent Alzheimer's.

9. Water: The vital fluid quintessence for our body. 85% of the weight of our brain is made up of water. It is very important to keep it hydrated
10. Iron: People with iron deficiency show difficulty in paying attention and concentration (meat and green leafy vegetables like spinach)

### **Application of knowledge in the learning process**

Studies by experts in education and psychology have proven that the concept of mechanical repetition is a non-functional technique because the results of the research carried out do not contribute to mechanical memorization in the learning process as it facilitates the process of reflection and discovery. Prevents and application of knowledge. They emphasize that mechanistic recall and the use of learning memory are two completely different concepts. To expand a bit further on this we should note that memory is an important part of the process of learning. It allows us to register, fix, restore and rebuild. It is not part of an isolated ability, but part of a system that includes other learning processes such as thinking, imagining, hundreds, and emotions.

### **Meaningful learning and comprehensive memory are related to each other**

Through the relationships in the things learned, the connections between them, meaning, and learning experiences. Education today focuses on the acquisition of competencies and skills by studying so that the student directs and optimizes his learning. As Marina explains Vazquez from the Conifer Neuroscience Center, “When we are not ingesting the nutrients and vitamins that our brain needs, we often find ourselves low of energy, tired and irritable...” (2).

We know today, through research results, that an adequate diet can prevent neurodegenerative disease. The benefits of a balanced diet are reflected in the performance of a balanced brain as it is an organ that requires constant energy.

### **Investigation and study of neurosurgeon's research results**

According to the research results of Dr. Russell Blaylock, neurosurgeon, researcher, and professor at the Medical University of South Carolina (3), food has a direct effect on behavior and primarily brain function. The results of this research make special mention of the importance of dietary modification from childhood - the brain is always active and alert, it continues to function without stopping connection processes, energy recovery, and optimization of functions, saving information and forming new neural links. However, it metabolizes the nutrients quickly and begins to produce large amounts of free radicals. With this amount of free radicals, they begin to oxidize different parts of the brain, which is harmful. They are Alzheimer's, Parkinson's, and Lou Grid's disease that accompanies this process of deterioration of the brain (4). When the brain lacks components that are strictly necessary to maintain optimal functions, it begins to change its structure too quickly so that it begins to function deficient. This leads to a series of

failures in processes in which the brain has an active role such as behavior, learning, language, writing, and the functions of our bodies in general.

In 1910, Dr. George Glued noted the relationship that exists between eating habits and behavior, so we are not talking about a new topic (5). In 1935, it was discovered that low blood sugar levels could cause a person to manifest symptoms of neurological and psychological conditions such as anxiety, neurasthenia, hysteria, and psychosis (6). The last among the studies found that 60% of families with children were hyperactive, diabetic, obese, or alcoholic.

This is directly related not only to the habits of the parents of these children, but also to the lifestyle habits but, there are still a large number of studies, research and results that confirm this issue and the question is whether we can really In this issue, we are aware of the importance of functional and structured human beings.

The V Nestle Observatory researched habits of nutrition and family lifestyle. This investigation found a direct correlation between food and school performance, the result of which was the percentage of "excellent" students who maintained a balanced diet and it was established that this was 14% higher than those who followed a balanced diet. Not Taken. In addition, he showed up to be much more satisfied with his homework and his grades. 84% did not feel like going to class (7). Overall this study concludes that, if the student has a healthy diet that contributes to cognitive processes, increased ability, concentration, and attention or memory serve the same purpose: to learn fluently without drawbacks (8).

The Oklahoma Juvenile Detention Center studies its inmates. He turned to junk diets, candy machines, and sodas for a nutritionally balanced one. All of its dietary components eliminate sugary and high-fat foods. With this reduction the results he achieved were astonishing. 43% reduction in serious crimes and 61% reduction in anti-social behavior over one year. They further observed that even nutritional deficiencies that we think are of little importance led to the rise of criminal behavior in the population studied.

## **Sugars and Carbohydrates**

Nutritionists establish that there is a limit to daily sugar intake—ten teaspoons teens consume the equivalent of 54 teaspoons of sugar contained in soft drinks, junk food, sweets, and others (10). By the 1900s, sugar consumption in the general population hovered around 4 pounds per year (0.33 pounds per month). Today, that figure is a yearly 129 pounds (10.8. lbs.) per month. With excess sugar in the blood, epinephrine is released and norepinephrine, two hormones that make neurotransmitters function. When with epinephrine, heart rate. Norepinephrine, known as the stress hormone, affects parts of the brain such as the amygdala, where attention and responses are controlled, therefore, it affects learning. When consumed in excess sugar free radicals are produced in the brain and this produces "cross-linking" of the proteins of the cells which increases the harmful effects at the brain level. This causes cells, including brain cells, to age faster. Studies have confirmed that people who consume a lot of calories and high content of sugar are potentially 6 times more likely to have degenerative diseases than the rest produces.

## Selenium

A theme that has been heard again in recent years is the importance of selenium. Low levels of selenium are directly associated with periods of depression and confusion. When selenium levels are at their optimum levels we can see an improvement in the individual's mood.

## What Science Shows

Science has tirelessly studied the actions and behavior of humans over the centuries, and many valuable findings have emerged from it. However, the results are replicated with each study. An unbalanced diet can have negative effects on the body and intellectual skills. Studies have suggested that students of any age who usually attend classes without having had a balanced breakfast first, according to some experts at the University of Wales, a good breakfast increases the level of glucose in the bloodstream, and This allows acetylcholine, a transmitter in the brain, to activate it to have better memory capacity.

## Conclusions

Nutrients have a specific function in each body. We know that students do not meet daily food needs, therefore creating awareness about the importance of these is a priority and one of our important tasks is proper nutrition. A public health problem that is not completely unknown and its effect is more harmful is usually not seen short-term in its simplest form, but is seen with the passage. Actually, after 40+ years serious problems start appearing. Begin and continue the importance of a healthy diet from childhood, will certainly not only contribute to proper development but will have a positive impact on our cognitive behavior, our actions. It is not just limited to good average or excellent performance. Academically, thinking and building a lifestyle of what is healthy will surely allow us to live longer and better.

## References

1. AB Harries and G.V. Robbins, "Nutrition in Catering"; William Hangman Publishers, London, page no; 173-175.
2. Agarwal T. "Prevalence of obesity and overweight in adolescents" from Ludhiana Punjab Jul 18, 2007, Journal of Indian Pediatrics; 45:500-502.
3. Afghani S, Nazi B, Sarrafzadegan N, Parakhideh S, Saborio S, Esmailzadeh A, et al. Evaluation of fatty acid content of some Iranian Fast food with an emphasis on Tran's fatty acids. Asia Pac J Clin Nutr. 2009; 18:187-92.
4. Banding LG, Via D, Mesta A, Cyr H, Goldberg A, Dietz WH. Comparing consumption of high-calorie, less nutrient-dense food Fat and no fat teens. Obese Res 1999; 7:438-43.
5. Baronovsky T. Family and health action. Handbook of health behavior research, personal and social determinants. Detailed meeting Press, New York 1997; 179-205.

6. Baylor SA, Manchuria R, Farrington SJ, Sammy BH, Strickland NC. Proof that a portion of maternal junk food. Diet during pregnancy and Lactation may reduce muscle strength in the offspring. *Euro J nutria* 2009; 48: 62-5.
7. Brendan O'Neill. Do you call this junk food? [Internet] 2006 [Last updated: Thursday, 30 November 2006, 18:48 GMT] Available from://news.bbc.co.uk/2/en/uk\_news/magazine/6187234.stm).
8. Charles' "Teenagers eat more fast food, but lean teens consume less" *Journal of American Medical Association* 2004, 20:47.
9. Children and Junk Food <http://www.indiaparenting.com/food-and-Nutrition/561186/child-and-Junk-Food-HTML-45:500-502>.
10. Dorothy Jagannathan, Mira Marie Mathew, prof; Department of Food Service Management and Dietetics Avinashilingam Institute of Home Science and Higher Education for Women, Coimbatore 641 043, 2 Ph.D. Research Scholars, Department of Food Service Management and Dietetics Avinashilingam Institute of Home Science and Higher Education for Women, Coimbatore.
11. Gomati R and John S (2008) Measuring psychosocial, environmental and behavioral factors influencing fruit and vegetable Teenage consumption. *J Indy Diet Asoka* 33(2):26-37.
12. Goyal RK, Shah VN, Saba BD, Pathak SR, Shah NN, Mohali MC, Rawer lobs, Patel SS. prevalence of overweight and obesity Indian adolescent school children: socioeconomic status and its relationship with associated lifestyle factors. *Jay asset doctor India*. 2010; 58:151-8.
13. Hovenkamp E, Demonte I, Platt J, Lütjohan D, men sink RP, TrautweinEA. Biological effects of oxidized phytosterols: a review *Current knowledge. Prog Lipid Res* 2008; 47:37-49.
14. Joliffe DB (1966) *Assessing community nutrition. World Health Organization Monograph Series No. 53, Geneva: 50-84.*
15. John Bingham, "Teenagers who watch the most television 'eat more junk food than adults'" Published: 30 January 2009.
16. *Journal of Food and Nutrition*, "Poor Eating Habits Article on Children and Junk Food", 2008.
17. Kathrine. W. Bauer, "Socio-environmental personal and behavioral predictors of fast food among adolescents".
18. Khadilkar VV, Khadilkar AV. The prevalence of obesity among affluent schoolboys. *Indian Pediatrics* 2004; 41:857-8.
19. Lakshmaiah A, Angela B, Vijayaraghavan K, Nair M. Factors influencing the prevalence of overweight in 12- to 17-year-old urban Teenagers in Hyderabad, India. *Obesity (Silver Spring)*. 2007; 15(6): 1384-90.