NUTRITIONAL PRACTICES FOR HEALTH PROMOTION AND DISEASE PREVENTION AMONG MEMBERS OF UNIVERSITY COMMUNITIES

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Abstract
The increasing prevalence of chronic diseases and the impact of unhealthy eating habits on human health is becoming a subject of public health concern. Every year, chronic diseases contribute immensely to the prevalence of death and disability worldwide. It therefore becomes crucial to understand the role of nutrition and healthy eating practices in preventing diseases and maintaining good health. This review was therefore aimed at exploring the importance of nutritional practices in promoting health and preventing diseases among members of university communities whose nature of work exerts a lot of pressure on the brain, mind and body. A comprehensive review of literature was carried out to identify healthy eating practices that contribute positively to health promotion and disease prevention so as to provide valuable insights and recommendations for members of the university community to adopt healthier eating habits. Some of the nutritional strategies identified in the literature for health promotion and diseases prevention include but are not limited to: regular breakfast intake, adequate consumption of fruits and vegetables, adequate intake of water, use of healthy oils and regular physical activity. It is therefore recommended that nutrition education should be intensified among members of university communities to facilitate voluntary adoption of these healthy practices for disease prevention and health promotion.

Keywords: Nutrition, Strategies, Disease Prevention, Health Promotion, Nutrition Education, University Communities

Introduction

The importance of good nutrition for health promotion and disease prevention among members of the university community cannot be over-emphasized. The university community is such that is characterized by rigorous academic and administrative activities which exert a lot of pressure on the brain, mind and the entire bodies of individuals who are either enrolled as students or employed as staff members in such community. It is therefore important to provide an insight into the ways by which these categories of people could be nourished to prevent physical and mental breakdown, promote optimum health and enhance productivity.

One of the ways for achieving optimum health among members of the university community is through good nutrition, which can only be achieved by adopting healthy nutritional practices. This provides the body with the nutrients it needs to maintain normal bodily functions, strengthen bones, improve mood, increase productivity, supply phytochemicals that scavenge free

radicals that cause disease, prevent chronic non-communicable diseases like diabetes, cancer, and cardiovascular diseases (World Health Organization (WHO), 2024a; Marengo, 2023). Research has shown that good nutrition provides adequate energy to fuel cognitive function and mental health, thereby enhancing academic performance, improved memory, focus, mood, and healthy sleeping habits.

Healthy nutritional practices for health promotion and disease prevention among members of the university community include: regular intake of balanced diet, breakfast intake, consumption of healthy oils, regular and adequate intake of fruits and vegetables, consumption of whole grains, water intake and exercise. These practices will be discussed further below.

Regular intake of balanced/adequate diet: The importance of regular intake of balanced diet for all and sundry, including members of the university community, cannot be over-emphasized. It reduces the body's susceptibility to diseases, infection, fatigue and it improves performance (Johnson & Kraus, 2023). Balanced diet consists of a variety of foods from different food groups in the correct proportion to satisfy the body's daily needs for calories, proteins, minerals, vitamins, and other nutrients while leaving a small reserve of nutrients for the short period of leanness (Sophia & Suryawanshi, 2022). A balanced diet supplies the body with an adequate amount of the necessary macro and micro nutrients required to maintain good health, prevent disease and work effectively. To obtain an adequate diet, members of the university community must ensure that their daily meals are made up of a variety of foods including fruits, vegetables, whole grains, protein foods, and healthy fats. What counts as adequate differs for each individual, influenced by age, sex, physical activity, and health status.

Regular breakfast intake: Breakfast is the first and most important meal of the day. Starting the day with a nutritious meal provides the body with essential nutrients and energy. Breakfast eaters have a higher intake of daily recommended intakes for most nutrients when compared with those who do not eat breakfast (Liu et al, 2020). Regular breakfast consumption is considered a component of a healthy lifestyle which has been reported to contribute positively to an individual's overall diet (Julia et al, 2018), and also positively associated with the learning capacity and academic achievements (O'Neil et al, 2014). Eating a balanced breakfast that includes a variety of food groups has been shown to reduce cravings for snacks throughout the day. It has been reported that students who do not eat breakfast may experience headache, lose concentration and motivation in class as a result of hunger, thereby reducing their ability to learn in class. In addition to losing concentration, skipping breakfast has also been reported to be associated with erratic eating, snacking on "empty calorie" foods thereby resulting in excessive weight gain. For health promotion, disease prevention and improved productivity, members of the university community are encouraged to adopt the lifestyle of daily and timely breakfast intake.

Meals taken for breakfast could be light nutritious meals such as bread and egg/fish stew with low fat milk beverage, rice with stew, some vegetables and fish/meat/egg, yam with fish sauce/egg/garden egg sauce. Also, attention should be given to the fact that breakfast should be taken between 7am and 9am to get the best out of this important meal.

Regular and adequate intake of fruits and vegetables: To achieve optimal health, members of university communities need to engage in a daily intake of an adequate amount of fruits and vegetables. Fresh fruits and vegetables are major components of a healthy diet. Fruits and vegetables are loaded with vitamins and antioxidants that promote health and immune the body against diseases (ECO gardener, 2025). Adding fresh fruits and vegetables to the daily meals is the best way to boost health and prevent diseases. Both the staff and students of University communities can benefit from fruits such as apple, orange, pineapple, watermelon, African df star apples, grapes, pawpaw, tangerines, mango and vegetables such as spinach, carrot, okra, cabbage, lettuce, cucumber, spinach, pumpkin and other green leafy vegetables. Eating an adequate amount of fruits and vegetables supply the body with vitamins, minerals, dietary fibers and antioxidants which reduce the risk of chronic diseases such as hypertension, cardiovascular diseases, hypercholesterolemia, respiratory problems osteoporosis, pulmonary diseases, cancer and others (Pem & Jeewon, 2015, WHO, 2023). Fruits and vegetables are rich in vitamins such as Vitamins A, C, E and folic acid, they are also rich in minerals such as magnesium, phosphorus and zinc (Better Health Channel, 2021).

Eating adequate amount of fruits and vegetables reduces the risk, and are used in the dietary management of chronic diseases such as obesity, heart diseases, diabetes, stroke and other chronic diseases (WHO, 2023). To benefit maximally from fruits and vegetables, attention must be focused on variety, colour, serving sizes, quality, preparation and availability. Vegetables and fruits come in different varieties and contain somewhat varied amounts of nutrients. Similar-colored fruits typically have similar protective compounds. For the full spectrum of health advantages, it is crucial to consume a rainbow of colorful fruits and vegetables each day. Additionally, people can benefit from in-season fruits and vegetables. This would enable individuals to benefit from the abundance of these fruits and vegetables and lower their cost of purchase. In choosing fruits and vegetables, attention should also be given to freshness and quality. It is advantageous to choose fresh unbruised, firm textured, bright colour fruits and vegetables (Belcher, 2023).

Members of the university community can combine different types of fruits and vegetables at a sitting so as to complement the deficiency in one by the availability in the other. However, care should be taken to obtain the daily recommended serving of fruits and vegetables. For example, the daily serving of fruits is 3 to 5 times a day while the serving for vegetables is 2-3 times a day. A serving for a medium-sized fruit such as orange, apple, grape is one, while a serving for cherry, tangerine, banana is two,

while a serving for watermelon and pawpaw is a thin slice.

One of the ways by which members of University communities can have easy access to fresh vegetables, is through home gardening. This is the process of cultivating plants on land areas surrounding the house for personal and other purposes (Lam & Duong, 2017). Home gardening serves as a source of edible, medicinal and useful plants especially fresh fruits and vegetables which contribute to food security, food diversity and more importantly, adequate supply of micronutrients.

Consumption of whole grains: Whole grains are plant foods which have all parts of the plant's whole seed, or the kernel, in its natural form. A lot of potential health benefits have been associated with a regular intake of whole grains. These include: lowering of blood cholesterol, blood pressure, and aiding digestion (Barnes, 2023). In addition, the bran part of whole grains supplies the body with dietary fiber, nutrients such as Iron, Magnesium, B Vitamins, Copper, Phosphorus, Potassium, Magnesium, Antioxidants, and Phyto-chemicals (Barnes, E. 2023). Whole grains, due to its high dietary fiber content, also helps in diabetes and weight management. Whole grains encompass a variety of foods, including cornmeal, oatmeal, whole wheat, sorghum, millet, and acha. Dietary guidelines recommend that at least half of an individual's total grain intake come from whole grains (U.S. Department of Agriculture & U.S. Department of Health and Human Services, 2020).

Consumption of healthy oils/fats: Healthy oils are such that mostly contain unsaturated fatty acids which have a great benefit on the cardiovascular system (Orsavova et al. 2015). These include oils such as sunflower, soybean, groundnut, and olive oil, among others. They are rich in mono- and polyunsaturated fatty acids, which support heart health, and contain lower amounts of saturated fats, which are less beneficial for the heart. For health promotion and disease prevention, it is important for members of the university community to choose healthy cooking oils and limit saturated fats contained in palm oil, animal fat, butter and lard. Furthermore, for optimal health, it is important to use oil in moderation, avoid reusing oil, limit fried foods, and choose butter alternatives such as margarine containing little or no saturated fat.

Adequate water intake: Water, an essential nutrient required for almost all body functions, is the most abundant component of the human body (Salas et al, 2020). Water is required in the body to maintain the health and integrity of body cells, helps to keep the blood liquid enough to ensure free flow, eliminates waste product of metabolism, prevents dehydration, and regulates body temperature and so on. As important as water is to the body, the body cannot store water hence fresh supply of water is required every day to make up for the body's daily requirement (Better Health Channel, 2023). It has been reported that adults who ensure proper hydration daily, stay healthier and develop fewer chronic conditions than those who do not maintain proper hydration (Dimitrevia et al, 2023). To ensure overall health and maintain proper body functions, it is important for members of the

university community to stay hydrated every day. To ensure proper hydration, it is recommended that adults take at least 8 cups of water daily. Although the importance of water is widely recognized, many individuals still fail to meet the recommended intake. The use of reminders or visual cues such as placing water bottles in conspicuous places, may be helpful for an individual to achieve the recommended daily amounts of water. Also, intake of water should be emphasized and encouraged above all other drinks.

Regular physical exercise: Regular physical activity is essential for preserving a healthy weight, enhancing cardiovascular health, and lowering the risk of chronic illnesses (CDC, 2023). Thirty minutes of moderate physical exercise such as brisk walking, dancing, gardening in a day for at least five times in a week will go a long way to promote the health of members of university communities.

In addition to the afore-mentioned nutritional related practices for health promotion and diseases prevention, members of the university community are also to avoid some nutrition related practices that are detrimental to health. These practices include:

Reduced intake of "empty calorie" or "junk" foods: Foods often labeled as "junk foods" are highly processed products that provide energy but offer little to no nutritional value. They often contain more sugar, salt and saturated fats. Examples of junks include: cakes, candies, sweet, chewing gums, fried chips, pastries, carbonated and sugary drinks etc. The high sugar content of junk foods makes them a risk factor for diabetes, dental caries and other chronic diseases. The high salt and saturated fat content of junk foods, makes them a risk factor for high blood pressure and other cardiovascular health problems. Limiting the consumption of unhealthy snacks and processed foods helps maintain a balanced diet and reduces the risk of chronic diseases (Health direct 2024).

Reduced intake of salt: Excessive salt consumption can lead to health issues, so it is important to moderate salt intake. **The health problems associated with high salt intake include: raised blood pressure, increased risk of cardiovascular diseases, gastric cancer, obesity, osteoporosis, and kidney disease (WHO, 2024b).** The recommended daily salt intake for health promotion and disease prevention is less than 5g of salt per day (less than 2000mg of sodium) which is equivalent to about one table spoon of salt per day. To limit salt intake, WHO (2024b) recommends that individuals should: eat mostly fresh foods, reduce the intake of processed foods, cook with little or no added sodium/salt, use herbs and spices to flavour food rather than salt, limit the use of instant or microwaveable food products. Also, the use of bouillon cubes and condiments should be reduced to the barest minimum. It is also important to note that to get the best out of salt and preserve its iodine content, it is important to use iodized salt that is constantly stored in a cool dry place.

Reduced intake of added sugar: Added sugars are sugars that are either added to already prepared foods or food products that are being

manufactured in order to improve taste, flavour or shelf life (Havard Health Publishing, 2024). Consuming too much added sugar can result in raised high blood pressure, increase chronic inflammation, heart disease, diabetes, dental caries, excessive weight gain and other chronic health problems. To avoid the health effects of too much of added sugar, the Institute of Medicine recommends the daily intake of not more than 9 teaspoons of added sugar. To limit the consumption of added sugar, members of the university community should take note to reduce the consumption of the following food items: fruit drinks, sodas or sugar sweetened beverages or juices, carbonated drinks, sweets, honey, cakes, ready to eat cereals, table sugar, desserts among others. These foods should be consumed occasionally because frequent consumption is not beneficial for good health.

Conclusion

Based on the review of literature, it can be concluded that adopting healthy practices including regular breakfast intake, adequate and frequent intake of fruits and vegetables, adequate intake of water, use of healthy oils, regular physical exercise, reduced intake of junks, salt and added sugar will go a long way in preventing diseases and promoting the health status of members of University communities.

Recommendations

Based on the review of literature (Crustolo et al. 2005; Jasaitis, 1997; Evert et al., 2019; Lam & Duong, 2017) and the authors' reflections, the following recommendations are made to university communities:

i. Equipping the school clinic with at least a Registered Dietitian who could help with creating nutrition related educational materials for staff and students and also provide medical nutrition therapy for students and staff members with nutrition related chronic diseases such as Diabetes, Hypertension and Chronic Kidney Disease.
ii. Provision of continual nutrition education and support through collaboration between nutrition department, school clinic Registered Dietitian, and other health care professionals in the campus community to promote healthy eating and physical exercises among members of university communities. Furthermore, sending out consistent nutrition tips for diseases prevention and health promotion as text messages, emails or newsletters to all University Students and Staff.
iii. Ensuring that the campus environment is "healthy eating" friendly by ensuring that there are multiple campus markets/supermarkets/snack stations with healthy food choices that are accessible to the campus community. Furthermore, provision of discounts or coupons by the University management to staff and students for the purchase of healthy foods such as fruits, vegetables, whole grains etc. Furthermore, water stations can be installed throughout campus to encourage increased water intake.

iv. Incorporation of nutrition courses in the university curriculum especially for all new students, irrespective of their department to teach them the basics of healthy eating and making good food choices.
v. Encouraging the practice of home gardening among members of the university community to improve their access to fresh fruits and vegetables. Guidance, resources and materials needed to start home gardens can be provided freely or subsidized among university Staff.
vi. Physical activity can be encouraged by provision of University gyms or recreation centers to promote increased physical activity among students and staff. Incorporation of wellness or fitness programs may be incorporated in the university activities.

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