



Defense Health Agency (DHA) Clinical Communities Speaker Series

OCT 2023 CCSS: Collaborative Best Practices in Military Health Care

S05: The Role of Nutrition in Health and Human Performance: A Healthcare Leader's Perspective

Resource List

The [U.S. Food and Drug Administration \(FDA\)](#) (2023) is prioritizing its nutrition initiatives to ensure people in the United States have greater access to healthier foods and nutrition information we can all use to identify healthier choices more easily. Increasing the availability of healthier foods could improve eating patterns and, as a result, improve everyone's health and wellness. The U.S. faces an ever-growing epidemic of diet-related chronic diseases such as cardiovascular disease, diabetes, and obesity. Poor nutrition plays a key role in chronic but preventable diseases, which are leading causes of death and disability in the U.S. Racial and ethnic minority groups, those with lower socioeconomic status and those living in rural areas disproportionately experience these diet-related chronic diseases. Additionally, the pandemic made it very clear that we need to improve nutrition, given that people with obesity, diabetes, and other chronic diseases have an increased risk of severe symptoms and death from COVID-19.

The [World Health Organization \(WHO\)](#) (2023) has updated its guidance on total fat, saturated and trans-fat and carbohydrates, based on the latest scientific evidence. The three new guidelines on Saturated fatty acid and trans-fatty acid intake for adults and children, Total fat intake for the prevention of unhealthy weight gain in adults and children, and Carbohydrate intake for adults and children, contain recommendations that aim to reduce the risk of unhealthy weight gain and diet-related noncommunicable diseases, such as type 2 diabetes, cardiovascular disease, and certain types of cancer.

According to the authors of [Adherence to a Mediterranean diet and cognitive function in the age-related eye disease studies 1 & 2](#) (2020), adherence to the Mediterranean diet – high in vegetables, whole grains, fish, and olive oil – correlates with higher cognitive function. Dietary factors also seem to play a role in slowing cognitive decline. Researchers at the National Eye Institute (NEI), part of the National Institutes of Health, led the analysis of data from the Age-Related Eye Disease Study (AREDS) and AREDS2. Participants with the greatest adherence to the Mediterranean diet had the lowest risk of cognitive impairment. High fish and vegetable consumption appeared to have the greatest protective effect. At 10 years, AREDS2 participants with the highest fish consumption had the slowest rate of cognitive decline. The researchers also found that participants with the ApoE gene, which puts them at high risk for Alzheimer's disease. The benefits of close adherence to a Mediterranean diet were similar for people with and without the ApoE gene, meaning that the effects of diet on cognition are independent of genetic risk for Alzheimer's disease.

The article, [Do food and nutrition have therapeutic value for disorders of mood and cognition?](#) (2022), indicates the significant role of diet not only in promoting positive mental well-being, but also in treatment of mental illness. Most of the mental illnesses are due to neurotransmitter disturbances/deficits, which are synthesized primarily by amino acids. Brain gray matter consists of 50% fatty acid, which is polyunsaturated. Of which, around 33% belong to the family of omega-3 fatty acid, which is found abundant in whole fish. Diet rich in omega-3 fatty acid is a conducive resource for neurogenerative process and mental well-being. Omega-3 fatty acids, vitamin Bs, minerals, and neurotransmitter precursor amino acids (tryptophan, tyrosine, phenylalanine, methionine) have been found to reduce incidence of mental illnesses and is helpful in the treatment of mood disorder and depression. A high fish diet that is rich in omega-3 fatty acid is psycho-protective.



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References

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