Unit 6 Assignment – Nutrition and Dietary Supplements in Complementary and Integrative Medicine (CIM)

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Nutrition and Dietary Supplements in Complementary and Integrative Medicine (CIM)

I developed a lecture on the role of nutrition and dietary supplements in CIM that explores how these tools have been used traditionally and migrated into modern healthcare. The lecture also includes critical research findings to corroborate the value of nutrition and supplements in promoting health. If we utilize healthcare research to guide what we do in health and wellness, we need to ensure that we rely on sound research that will not harm those we serve.

Introduction (10 minutes)

Overview of CIM:

Complementary and Integrative Medicine (CIM) is a term that designates the different types of health practices outside of standard medical care but is used alongside or integrated with conventional care (e.g., acupuncture, yoga, nutritional therapies, etc.). CIM focuses on treating the whole person, mind, body, and spirit, as opposed to the conventional focus on the disease. National Center for Complementary and Integrative Health [NCCIH]. 2022 Complementary and Integrative Health: What is in a Name? (accessed 1/11/22).

Introduction to Nutrition and Dietary Supplements:

Nutrition utilizes nutrients derived from food for growth, reproduction, and health. Dietary supplements are orally consumed products that contain one or more nutritional ingredients such as vitamins, minerals, amino acids, and other dietary substances. They are intended to supplement the diet and provide nutrients that may otherwise not be consumed by the diet (Office of Dietary Supplements [ODS], 2021). Because of increased health awareness, dietary supplements are becoming increasingly popular, and CIM practitioners need to have a general understanding of the role of dietary supplementation in CIM for proper guidance of patients (NCCIH, 2022).

Main Content (60 minutes)

Traditional Use of Nutrition and Supplements:

Nutrition’s role in keeping healthy has long been recognized. Ancient peoples were aware that diet could profoundly affect wellbeing: the Greek physician Hippocrates (father of modern medicine) declared: ‘Let food be thy medicine and medicine be thy food’ (Hughes, 2008). Systems of medicine such as Ayurveda and TCM (Traditional et al.) have long used food and herbal supplements as the core of prevention and curative therapy (Sarris & Wardle, 2014).

Integration into Modern Medicine:

Then, after the essential vitamins were discovered in the early 20th century, scientists developed the first synthetic supplements. Vitamin pills helped eradicate scurvy and rickets and improved public health. Nutrition science has moved on since then. New studies now clearly highlight how diet can either help to prevent or precipitate chronic diseases, such as heart disease and diabetes.

Current Research

Efficacy of Dietary Supplements:

Thorough scientific studies back some supplements. Vitamins D and B12, for example, are essential for bone and immunity health. Research has suggested that the recommended vitamin D levels can reduce osteoporosis, depression, and autoimmune diseases. Omega-3 fatty acids, most notably the type found in fish oil, have been found to have anti-inflammatory effects and significantly boost cardiovascular health. Probiotics are live bacteria that promote gut health. Studies have associated their use with reduced gastrointestinal disorders and improved immune function.

Safety Concerns:

This is because the supplement industry is largely unregulated, and consumers may need to learn what is in their products. Dietary supplements are not tested as rigorously as drugs before they are sold to the public, putting consumers at risk (Geller et al. 15). Too much Vitamin A is toxic. Some herbal companies use ingredients where high doses can be harmful, and some herbs interact with drugs, causing adverse side effects.

Controversies in the Field:

In the dietary balance between nutrients obtained from whole foods compared with supplements, the ‘food first’ school of thought maintains that because whole foods contain a complex ‘matrix’ of multiple interacting nutrients, they are the best source of nutrients for health (Jacobs et al., 2009). Sometimes, however, supplements are the only way to access adequate nutritional levels, such as for pregnant women who cannot meet a fetus’s nutrient needs with diet alone or in the case of those who restrict their food intake (Biesalski, 2016).

Application in Health and Wellness

Practical Application in CIM:

Take a female patient, say, 55 years old, at risk of osteopenia. An integrative approach to care would include dietary changes to improve calcium and Vitamin D intakes, including fortified foods and supplements (if needed), weight-bearing exercise, and stress management through yoga. This is evidence-informed, tailored medicine at its best.

Empowering Clients:

Clients should be educated about their use. They should be urged to read labels more closely, understand their consumption, and know how their supplements may interact with other medications (ODS, 2021). A ‘food first’ approach, while mindful of the opportunities for supplementing wisely, can help optimize health outcomes (Jacobs et al., 2009).

Conclusion (10 minutes)

Recap Key Points:

Many practices associated with Complementary and Integrative Medicine involve nutrition and dietary supplementation. While many of these agents can be helpful in health promotion and the prevention and treatment of disease, they must be used judiciously and with scientific support (NCCIH, 2022).

Encouragement for Further Learning:

I encourage students to continue to track new research in this rapidly growing area, consider the ethical issues in supplement use, and incorporate this knowledge into their work with clients to optimize health. Sarris and Wardle, 2014

Q&A Session: Allow time at the end for students to ask questions about what has been discussed, to clarify and push back on ideas they heard during the lecture.

Handout Content

Research Highlights:

1. Vitamin D and Bone Health: A recent meta-analysis found that Vitamin D supplementation effectively enhances bone mineral density in people over 50 and, as such, helps prevent fracture (Holick, 2017).
2. Omega-3 and cardiovascular disease: It has been confirmed that omega-3 fatty acids are very effective at lowering the risk of heart attack and, as such, make a handy addition to cardiovascular health (Mozaffarian Wu, 2011).
3. From probiotics and gut health to stress and sleep, we have looked at the evidence to explore whether specific probiotic strains improve outcomes in IBS patients and, if so, whether these supplements might help manage digestive health (Sanders et al., 2019).

Safety Guidelines:

On the other hand, Recommended Daily Allowances (RDAs): This table shows the RDAs of key nutrients such as Vitamin D, Calcium, omega-3 fatty acids, and B12. Having this table will help avoid side effects (ODS, 2021).

Interactions and Contraindications: Vitamin K can interact with Warfarin and other drugs, bringing up the value of consulting with a healthcare provider before initiating any supplement.

When selecting supplements, consumers should look for third-party testing, avoid frivolous fillers and binders, and adhere to dosing recommendations.

Practical Applications:

Nutrition in Action: This sample daily meal plan encourages the consumption of nutrient-dense foods and offers recommendations for where supplements might be useful (Mozaffarian, 2016).

Checklist for Supplement Use: Can you use it or not? Here is how to evaluate supplement needs based on diet, health conditions, and lifestyle. They are published by the Office of Dietary Supplements (ODS) at the USA National Institutes of Health. 2021.

Further Reading:

Courtesy of Amazon Here are a few books for reference: The New Encyclopedia of Vitamins, Minerals, and Supplements. However, it is essential to note that evidence does not support many of these claims—integrative Nutrition by Joshua Rosenthal.

Websites: National Institutes of Health (NIH) Office of Dietary Supplements, American Nutrition Association.

Journals: Journal of Dietary Supplements, American Journal of Clinical Nutrition.

References

Biesalski, H K. Micronutrients in the prevention of diseases. Nutrition and health (3rd ed., pp 311–320). Springer, 2016.

Combs, G. F. (2012). The vitamins: Fundamental aspects in nutrition and health. Academic Press.

Geller, A I; Shehab, N; Weidle, N J; Lovegrove, M C; Wolpert, B J; Timbo, B B; Mozersky, R ]P; Budnitz, D S 2015 Emergency department visits for adverse events related to dietary supplements. The New England Journal of Medicine, 373(16):1531–40. 10.1056/NEJMsa1504267.

Vitamin D is Not as Toxic as was Once Thought: A Historical and an Up-to-Date Perspective M F Holick ⁎ ⁎ ⁎ ⁎ (Mayo et al.., 2015;90:561-4. https://doi.org/10.1016/j.mayocp.2014.12.023) ⁎ Mayo Clinic, Rochester, MN 55905, USA Correspondence to: M F Holick, Mayo Clinic, Rochester, MN 55905, USA ⁎ M F Holick ([email protected]). Received 2014 November 23; Accepted 2015 January 8.

Hughes, J. D. (2008). Hippocrates: Father of medicine. Bloomsbury Publishing.

D R Jacobs, M D Gross, and L C Tapsell Food synergy: An operational concept for understanding nutrition The American Journal of Clinical Nutrition, 89(5) (2009), 1543S-1548S. 10.3945/ajcn.2009.26736B

Mozaffarian D (2016). Dietary and policy priorities for cardiovascular disease, diabetes, and obesity: A comprehensive review. Circulation 133(2): 187–225. doi:10.1161/CIRCULATIONAHA.115.018585

Mozaffarian D, Wu JH. Omega-3 fatty acids and cardiovascular disease: effects on risk factors, molecular pathways, and clinical events. J Am Coll Cardiol. 2011;58(20):2047-67. doi:10.1016/j.jacc.2011.06.063

National Center for Complementary and Integrative Health. Complementary, alternative, or integrative health: What is in a name, 2022. https://nccih.nih.gov/health/integrative-health

Office of Dietary Supplements.