

PRESCRIPTION

LATEST NEWS AND UPDATES FROM THE FACULTY OF PHARMACY



IN THIS ISSUE

"A HOLISTIC APPROACH TO HEALTH AND WELLNESS THROUGH NUTRACEUTICALS IN PHARMACY"

The role of food in health, is more than just calories. Food has always been important for human survival, but its values go beyond just keeping us alive. The nutrients we consume have an extensive impact on our body's ability to function optimally. Macronutrients like carbohydrates, proteins, and fats provide the energy needed for daily activities, while micronutrients such as vitamins and minerals play crucial roles in metabolic pathways, immune function, and cellular repair.

In the 21st century, lifestyle diseases like obesity, cardiovascular diseases, diabetes, and cancer have reached epidemic proportions. Many of these conditions have strong dietary correlations. For instance, high intake of processed and sugary foods is linked to diabetes and hypertension, and diets low in fibre to gastrointestinal issues and certain types of cancer. The relationship between diet and disease has made it evident that food should not only nourish but also heal.

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The World Health Organization (WHO) highlights that an unhealthy diet is one of the major risk factors for chronic diseases, which are responsible for approximately 71% of deaths globally (1). This statistic emphasises the importance of shifting focus from treating symptoms to addressing underlying causes, often found in poor dietary habits. This will also contribute to the economic impact, which in Malaysia, for Budget 2024, Ministry of Health has been allocated RM41.2 billion, a significant increase of 13.5 percent from the previous year. Of this total, 13.34 percent were directed towards the procurement of medicine, vaccines, and essential consumables. It is also noteworthy that at least 130 million was allocated to health screenings and disease prevention activities (2-5).

The ancient saying, "Let food be thy medicine and medicine be thy food," attributed to Hippocrates, remains highly relevant today. As more people depend on pharmaceuticals, increasing research supports the idea that nutrition plays a critical role in disease prevention, management, and even treating diseases. This concept forms the foundation of nutraceuticals, a field that bridges the gap between nutrition and pharmaceuticals. For pharmacists, understanding nutraceuticals offers an opportunity to enhance patient care by integrating diet-based recommendations with pharmaceutical interventions. In this article, we explore the role of food in health, the rise of nutraceuticals, and how pharmacists can contribute to a holistic approach to health.

Is nutraceuticals the intersection of nutrition and pharmaceuticals? The term "nutraceutical" combined the words "nutrition" and "pharmaceutical." Nutraceuticals refer to products derived from food sources that provide health benefits beyond basic nutrition. They are found in a variety of forms, including dietary supplements, functional foods, and fortified foods. WHO focuses on functional foods, dietary supplements, and food fortification when discussing similar concepts (6). WHO emphasises that while these products can have health benefits, they should be properly regulated and researched for evidence-based use, and highlights the importance of a balanced diet as the primary means of maintaining good health.

Nutraceuticals can be classified into different categories:

1. Dietary supplements: These are products taken orally that contain one or more ingredients, such as vitamins, minerals, amino acids, herbs, or other botanicals, intended to supplement the diet.
2. Functional foods: These are foods that have been enhanced with additional ingredients to provide health benefits, such as probiotics in yogurt or omega-3 fatty acids in fortified eggs.
3. Medicinal foods: These are foods formulated to be consumed or administered under the supervision of a physician for the dietary management of specific diseases or conditions.
4. Herbal products: These include a variety of plant-derived substances that have medicinal properties, such as ginseng or turmeric.

Nutraceuticals are increasingly popular as consumers look for more natural ways to manage their health. The global nutraceutical market is expected to reach \$722.5 billion by 2027, reflecting the growing demand for products that can improve health without the side effects often associated with conventional medications (7).

In Malaysia, National Pharmaceutical Regulatory Agency (NPRA) under MOH regulates nutraceuticals under a broader category of health supplements which must comply with specific guidelines to be legally marketed. A health supplement refers to any product used to supplement a diet and to maintain, enhance, and improve the health function of human body. These include small unit dosage forms in solid and liquid forms but not sterile preparations such as injectables and eyedrops (8).

Nutraceuticals play a significant role in both the prevention and management of various diseases. Research has shown that certain nutraceuticals can modulate physiological functions, including immune response, oxidative stress, inflammation, and hormonal balance. This makes them particularly useful in preventing lifestyle-related diseases (9-11).

Pharmacists are often the most accessible healthcare professionals, playing a crucial role in advising patients on the safe and effective use of nutraceuticals. Given their comprehensive understanding of pharmacology, pharmacists can help ensure that patients use nutraceuticals in a manner that complements their conventional medications.

However, the use of nutraceuticals is not without challenges. Nutraceuticals, like pharmaceuticals, can interact with prescription medications, leading to adverse effects. Moreover, the regulation of nutraceuticals is often less stringent than that of pharmaceuticals, leading to concerns about product quality, efficacy, and safety (12, 13). Pharmacists can play a critical role in educating patients about these risks, helping them choose high-quality products from reputable manufacturers. They can also help prevent potential interactions and reduce risks associated with overclaiming the benefits of nutraceuticals in treatment, ensuring the patients have realistic expectations about their use.

Despite the potential benefits, several challenges must be addressed to fully integrate nutraceuticals into modern healthcare. One major challenge is the lack of standardisation in nutraceutical products. Unlike pharmaceuticals, nutraceuticals do not undergo strict testing by regulatory agencies such as the U.S. Food and Drug Administration (FDA) or the European Medicines Agency (EMA). As a result, the potency and purity of these products can vary widely between brands (12).

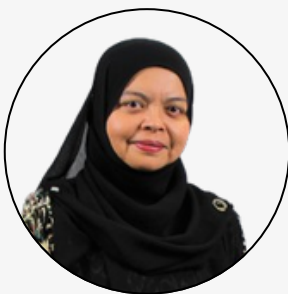
Another challenge is the lack of comprehensive clinical data on the long-term safety and efficacy of many nutraceuticals. While some nutraceuticals, such as omega-3 fatty acids and probiotics, have been well-studied, others have limited scientific evidence supporting their use (12).

Despite these challenges, nutraceuticals present a unique opportunity for pharmacists to contribute to a more holistic approach to healthcare. By incorporating nutraceuticals into their practice, pharmacists can offer patients a wider range of treatment options, allowing them to take a more proactive approach to their health. Additionally, educating the public and patients on mindful eating habits and dietary control is essential in addressing health issues at their root. Furthermore, the budget allocated for the MOH in 2024, which includes provisions for health screenings and disease prevention activities, can potentially be used to fund public education programs focused on preventing non-communicable disease (NCDs). These initiatives would help raise awareness about the importance of lifestyle changes and early intervention in curbing the rise of NCDs, making health education a crucial element of disease prevention efforts. The 'War on Sugar' paired with the Strategic Plan to Reduce Sugar among Malaysians 2024-2030 has been developed and launched by the MOH on June 29, 2024, represents a promising beginning in the nationwide effort (14).

In conclusion, as healthcare continues to shift towards a more patient-centred approach, nutraceuticals represent a promising method for improving health outcomes through dietary interventions. While nutraceuticals and food alone cannot fully replace pharmaceuticals, they play a significant role in disease prevention and management. For pharmacists, understanding nutraceuticals is essential in providing holistic and comprehensive care that addresses both the symptoms and root causes of disease. By embracing the philosophy of "Let food be thy medicine," the pharmacy profession can help patients achieve better health through both medicinal and nutritional interventions.

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ABOUT THE AUTHOR

Assoc. Prof. Dr. Nor Amlizan Ramli teaches various subjects particularly pharmaceuticals which include nutraceuticals and cosmetic sciences at the Faculty of Pharmacy, UiTM. Having a special interest in pharmaceuticals, her research focuses on wound healing and drug delivery systems of topical and transdermal dosage forms. Being a registered pharmacist, her research interests also extend to pharmacy education and she becomes a Certified Disability Management Professional (CDMP). She graduated with a Bachelor's degree of pharmacy from Universiti Sains Malaysia in 2001, MSc. Pharmaceutical Technology from King's College, London in 2004, and PhD (Pharmaceuticals) from UiTM in 2014.

Questions

Let's dive deeper into the article and evaluate your comprehension. We have three questions for you here.

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Editorial Advisor:

Prof. Dato' Dr. Abu Bakar Abdul Majeed

Authors:

Associate Prof. Dr. Nor Amlizan binti Ramli, Dr. Nur Syamimi Ariffin, Mdm. Nur Syazwani Taridi, Dr. Gurmeet Kaur Surindar Singh, Mdm. Nik Ateerah Rasheeda Mohd Rocky, Dr. Aisyah Hasyila Jahidin, Ms. Zakiah Mohd Noordin, Dr. Fazleen Haslinda Mohd Hatta, Ms. Nurul Alyaa Ibrahim, Dr. Mohd Nazri Mohd Najib, Dr. Maziana Mahamood, Mr. Mohd Shah Rezan bin Hamzah, Prof. Dr. Mizaton Hazizul Hassan, Dr. Nur Suraya Adina Suratman

Editors:


Assoc. Prof. Dr. Mahmathi Karuppanan
Dr. Gurmeet Kaur Surindar Singh

Illustrator:


Mdm. Nurul Izzati Ismail

PRESCRIPTION


Faculty of Pharmacy,
Universiti Teknologi MARA,
Kampus Puncak Alam,
42300 Bandar Puncak Alam, Selangor.

 @pharmacyuitm




 @pharmacy_uitm




 Faculty of Pharmacy UiTM



 <https://pharmacy.uitm.edu.my/>



 +603-3258 4645

 korporatff@uitm.edu.my