

Functional foods for fighting Adolescent Hypertension and Obesity in ASEAN



Overview of adolescent health problem



- More than 1.1 million adolescents aged 10-19 years died in 2016, over 3000 every day, mostly from preventable or treatable causes.
- Road traffic injuries were the leading cause of death among adolescents in 2016. Other major causes of adolescent deaths include suicide, interpersonal violence, HIV/AIDS and diarrhoeal diseases.

Source: (WHO, 2018)

Overview of adolescent health problem



- Half of all mental health disorders in adulthood start by age 14, but most cases are undetected and untreated.
- Globally, there are 44 births per 1000 to girls aged 15 to 19 per year.

Source: (WHO, 2018)

Overview of adolescent health problem



- The number of adolescents who are overweight or obese **is increasing in low-, middle- and high-income countries.**
- Globally, in 2016, **over one in six adolescents aged 10–19 years was overweight.**
- Prevalence varied across WHO regions, from lower than 10% in the WHO South-East Asia region to over 30% in the WHO Region of the Americas.

Source: (WHO, 2018)

Overview of adolescent health problem



Physical activity

- WHO recommends for adolescents to accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity daily.
- Globally, only 1 in 5 adolescents are estimated to meet these guidelines.
- Prevalence of inactivity is high across all WHO regions, and higher in female adolescents as compared to male adolescents.

Source: (WHO, 2018)

Adolescent hypertension and obesity



World will have more obese children and adolescents than underweight by 2022

- The number of obese children and adolescents (aged five to 19 years) worldwide has risen tenfold in the past four decades.
- If current trends continue, more children and adolescents will be obese than moderately or severely underweight by 2022.

Source: Ezzati et al. (2018) Lancet.

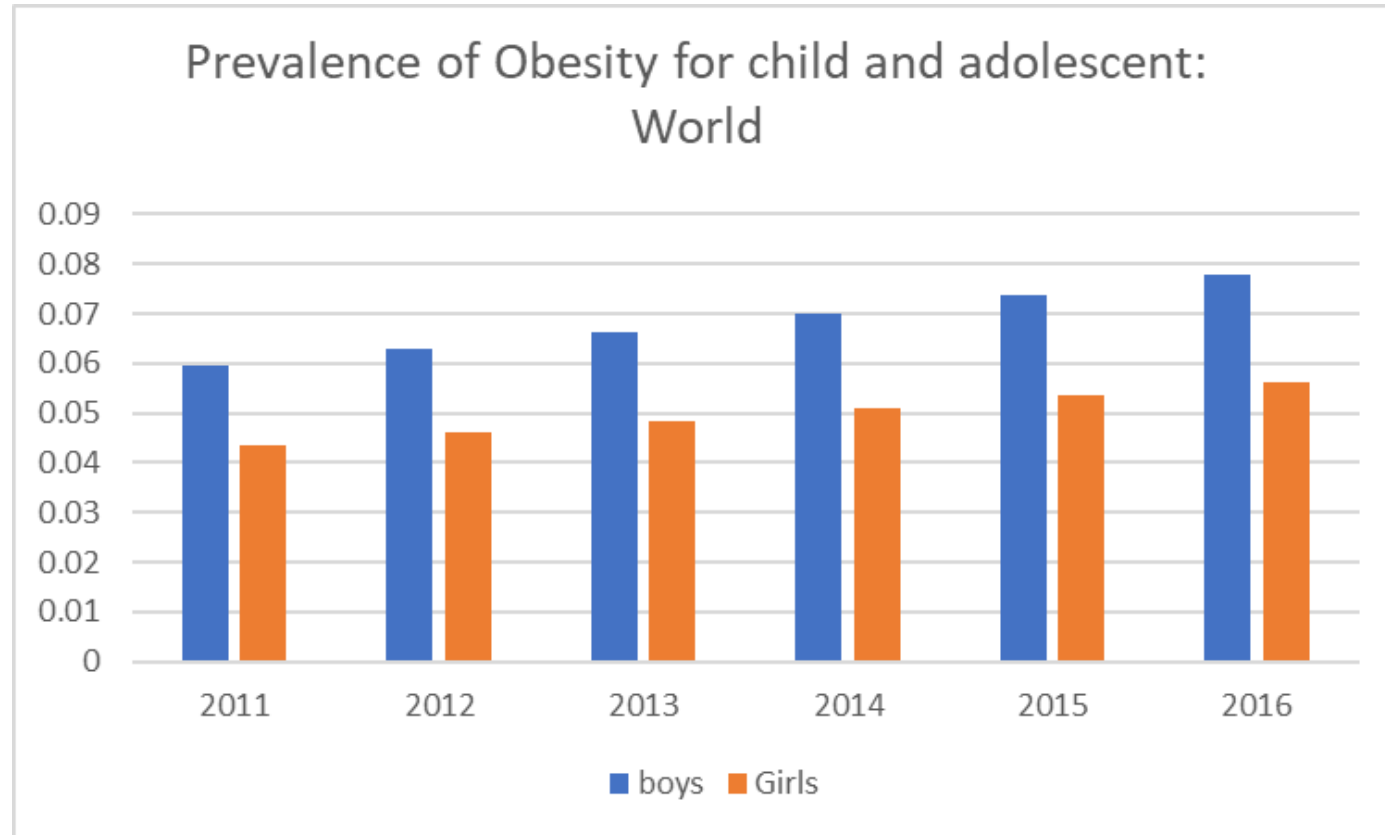
Adolescent hypertension and obesity



Children and adolescents have rapidly transitioned from mostly underweight to mostly overweight in many middle-income countries, including in East Asia.

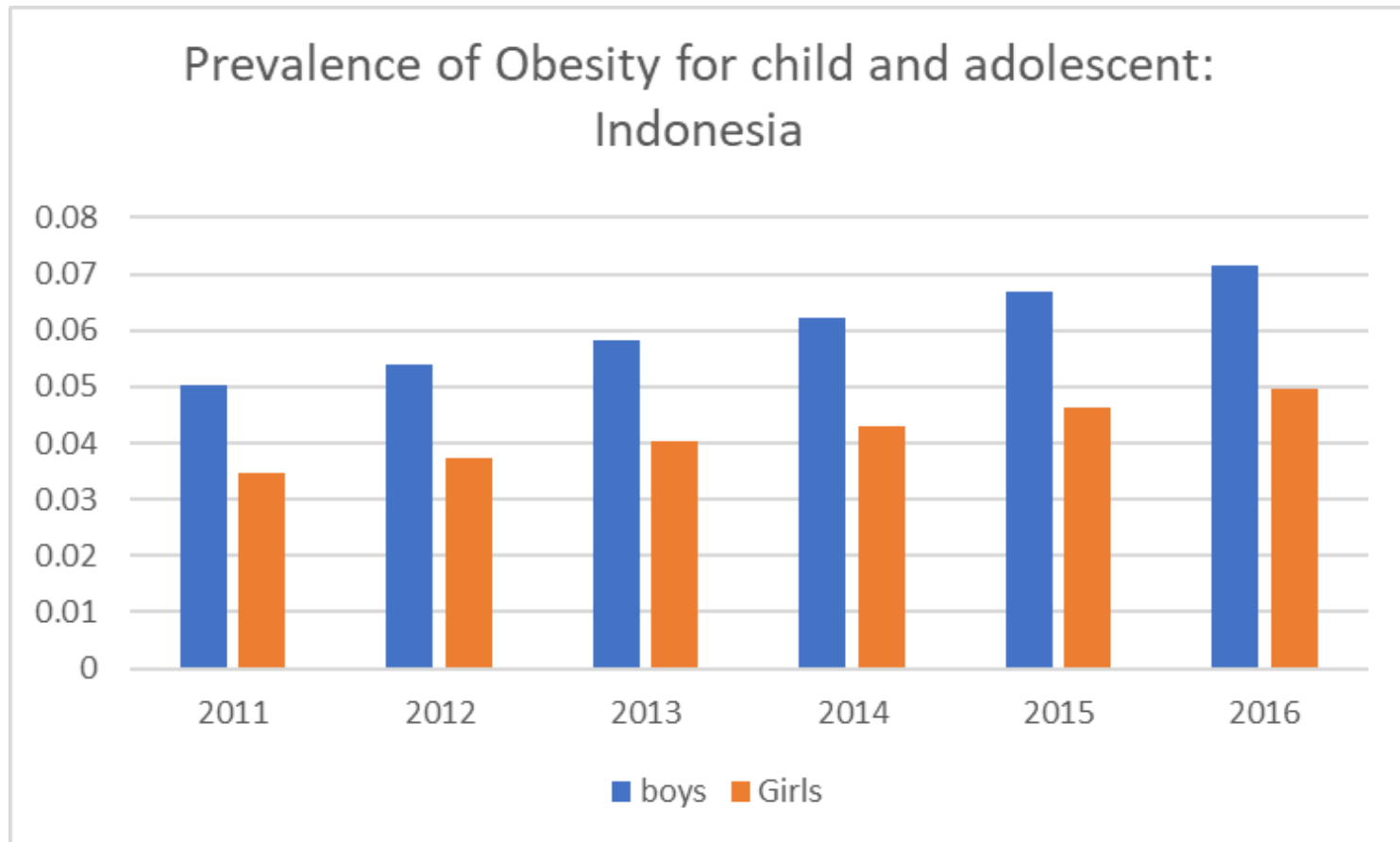
Source: Ezzati et al. (2018) Lancet.

Adolescent hypertension and obesity



Source: NCD Risk (2017)

Adolescent hypertension and obesity



Source: NCD Risk (2017)

Adolescent hypertension and obesity



- Hypertension has been demonstrated in several populations to have a **positive correlation with obesity**.
- Persistent hypertension in adolescents is often predictive of future hypertension in adults, cardiovascular disease and early death.



Functional foods



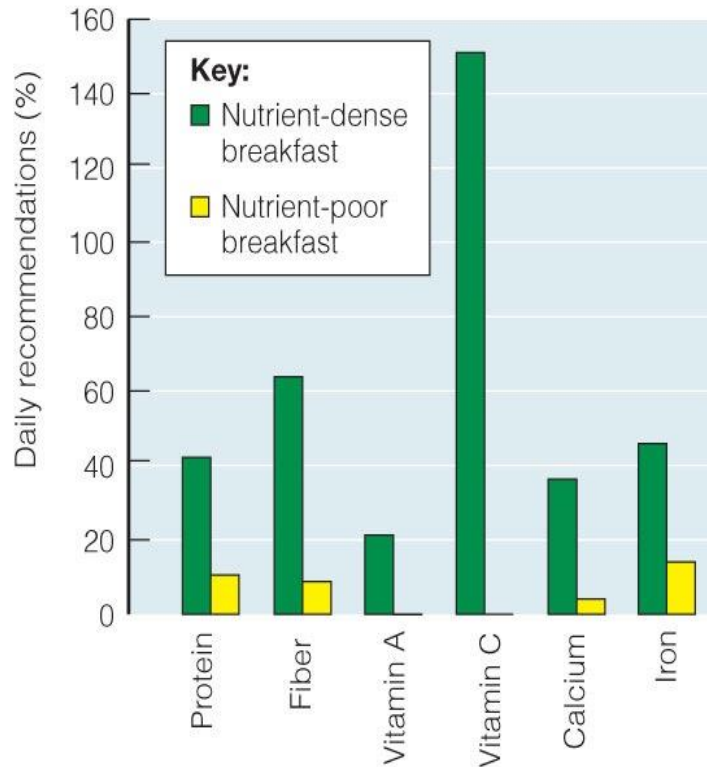
Principles and Guidelines



Nutrient Density



Nutrient-dense breakfast



Nutrient-poor breakfast

Objectives



- **What are functional foods?**
- **Connections science has confirmed between some foods and health benefits.**
- **Specific nutrients and non-nutrients found in functional foods thought to be of benefit to overall wellness.**
- **The importance of a balanced diet and plenty of physical activity.**

Functional Foods



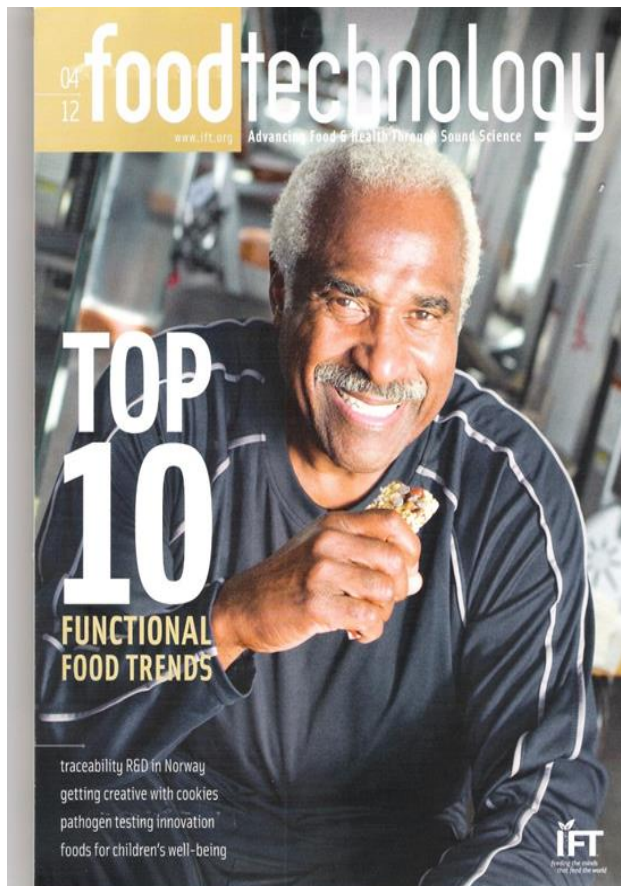
“**Functional foods**, are foods including whole foods and fortified, enriched, or enhanced foods or dietary components that may reduce the risk of chronic disease and provide a health and physiological benefit beyond the traditional nutrients it contains ”

The Institute of Medicines’s Food and Nutrition Board

Examples of Functional Foods



Functional Foods



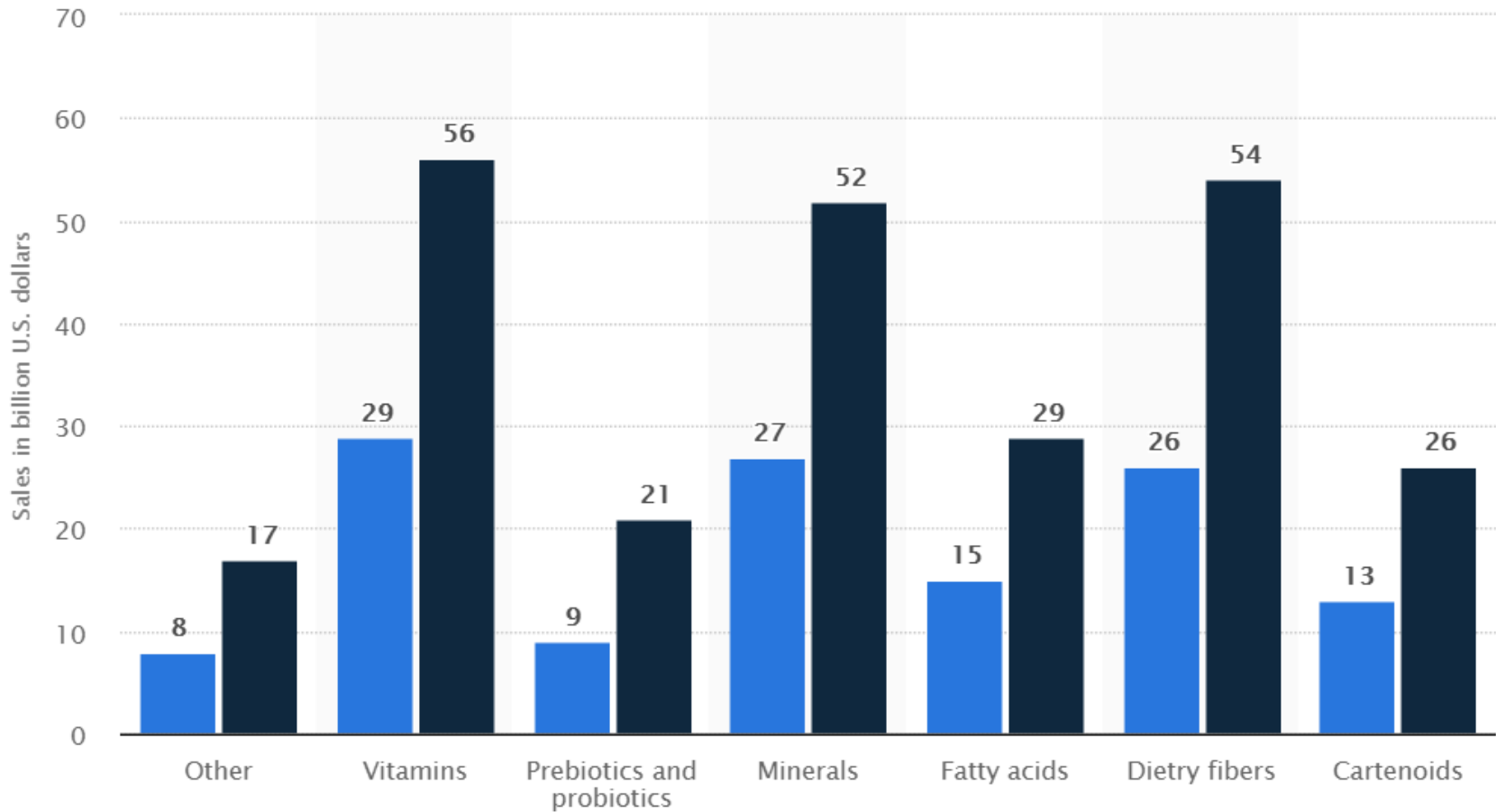
Key Trends in Functional Foods Products

- Digestive Health
- Health benefit/convenience
- Feel the benefit
- Energy
- “Superfruit”
- Antioxidants
- Weight management
- Healthy snacking
- Packaging innovation
- Bones and movement
- Real food nutrition
- Mini-managers
- Bioavailability
- Protein power
- Plant-based diets
- Gourmet nutrition
- Risk awareness
- Liquidation

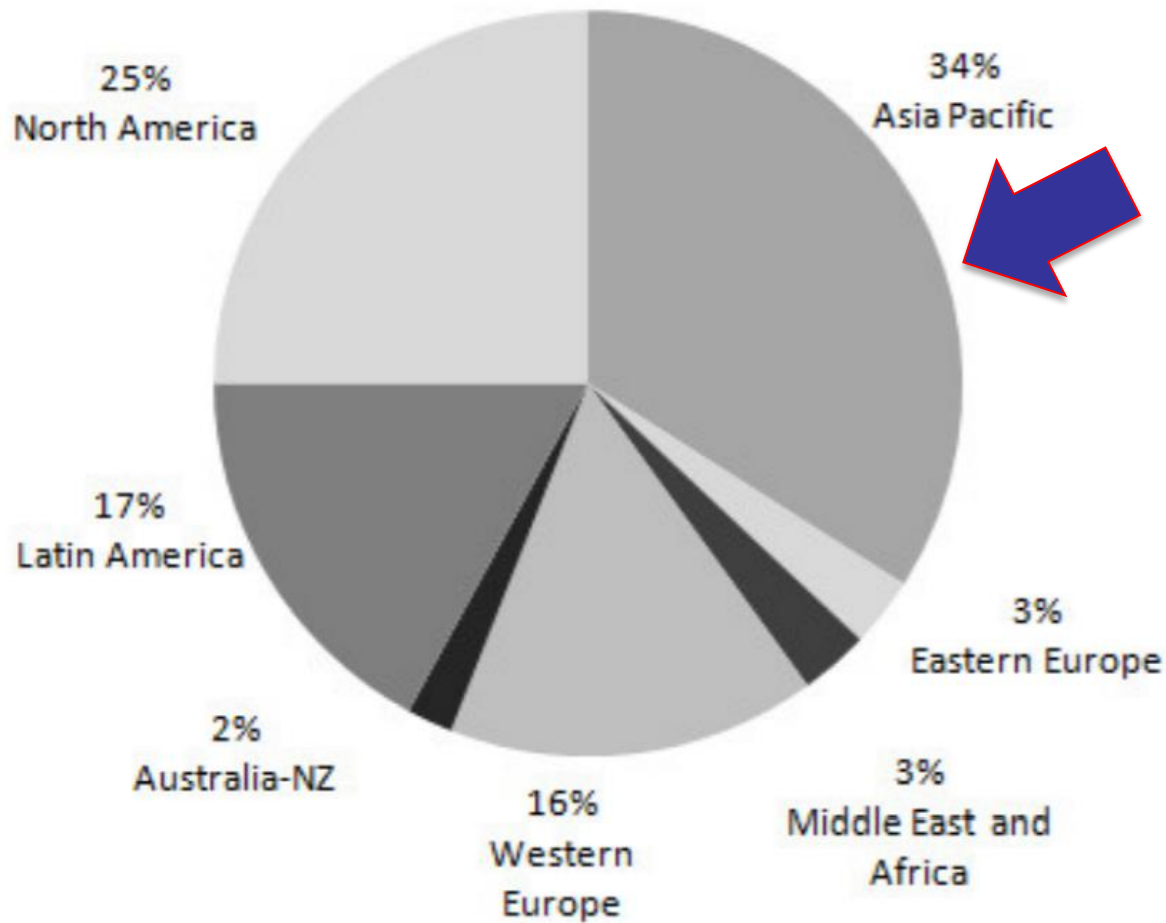
Functional Foods are Booming



- Sales of Functional foods and beverages were estimated at Billions.
- 42% are concerned about the nutrient content of foods they buy.
- Self-treatment of minor ailments, and interest in alternative therapies is at an all time high.



Sales of functional foods worldwide in 2015 and 2024, by product type (in billion U.S. dollars)

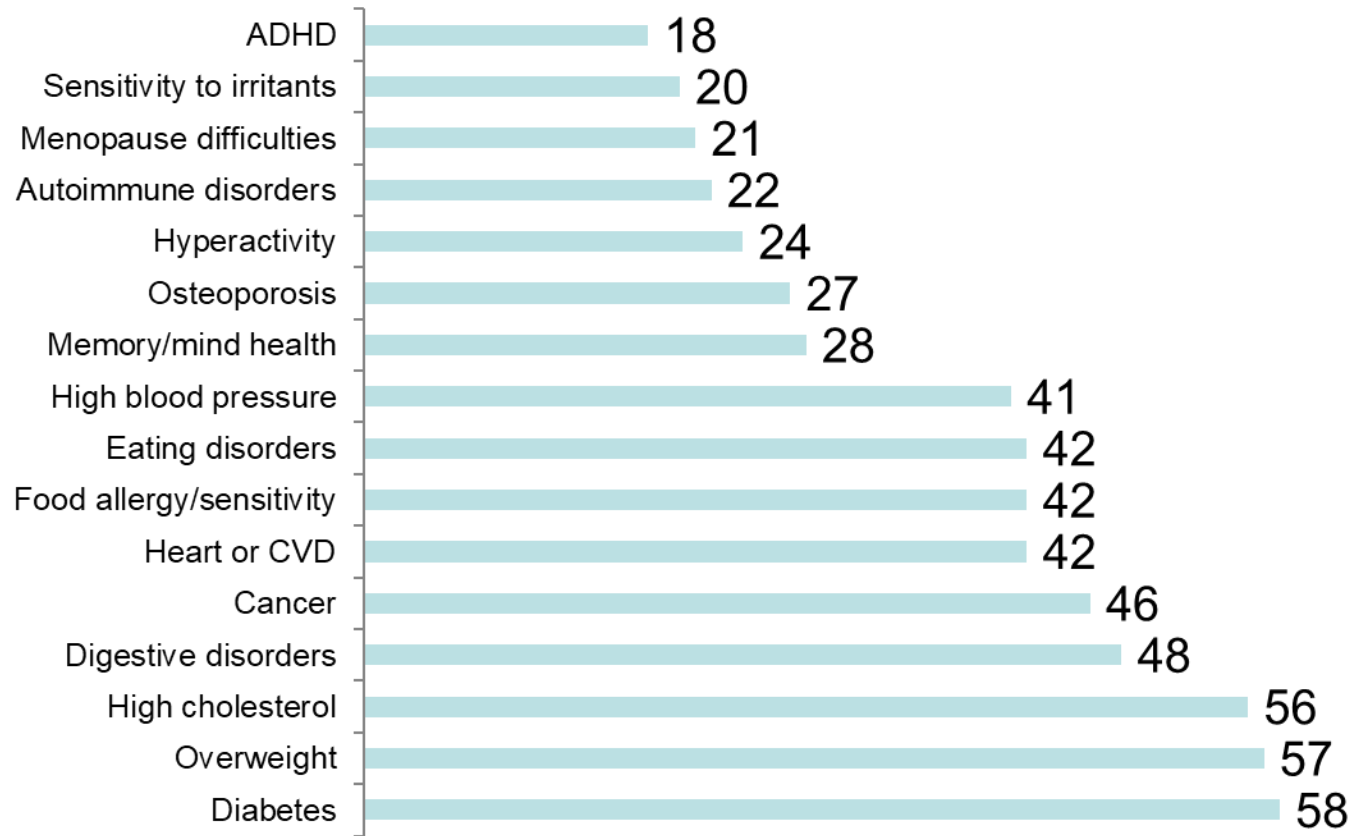


Percentage breakdown of total revenue worldwide: market for functional food (Vicentini et al. 2016).

Functional foods for fighting Adolescent Hypertension and Obesity



% of Consumers



Consumers Reporting Using Functional Food to Prevent Specific Conditions (Hartman group, 2015)

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ASEAN market demand is driven not only by the greater prevalence of chronic illness, but growing affluence as well — in countries such as Singapore, Indonesia and Thailand in particular, premium health food products have gained much popularity.

With non-communicable diseases (NCDs) expected to be responsible for over 70% of deaths in South East Asia by 2030, consumers, governments and organisations alike are seeking to reduce the incidence of chronic disease, resulting in greater interest in health and wellness.

Top Functional food in ASEAN



- Strongest phytochemical mass market ingredients include polyphenols (anthocyanins, procyanidins), resveratrol, and carotenoids.
- Herbal powders/product
- Seaweed
- High protein products
- Orange juice: one of most popular beverages purchased for nutritional benefits (Packaged Facts 2012)
- Antioxidant-rich tea



Role of Functional foods for in preventing Adolescent Hypertension and Obesity



- Research discussion-Link

Functional food Claims



- Ninety-five percent of functional foods haven't been clinically tested and are making claims unsupported by clinical data.
- Are functional foods safe? Do they deliver what they promise? You've got to evaluate each one on its own merits.

Functional food Claims



- We have to pay attention for information about how much beneficial ingredients does it contain.
 - Some food products contain only a fraction of the amount that may be beneficial.

Functional food Claims



- Concern the safety of functional food
 - Many herbs or other ingredients used in functional foods are not tested for governmental approval.
 - Meanwhile some of them may create several health problems.

Functional food Claims



- It is also very important to be sure that processed functional food is healthy.
- For instance a calcium-fortified functional food with sugar and water is less healthful because the additional nutrients found in orange juice are missing.

Functional food Claims



- During evaluation of functional food we have to check the information provided through nutritional labeling on food products, which may serve as useful guide in finding foods that have nutrient density and are healthful choices.
- Health claims may be placed on food labels only if they have been approved by the FDA and are supported by adequate scientific data.

Conclusion



- In conclusion, functional foods are foods that may provide a health benefit beyond basic nutrition by reducing the risk of certain diseases.
- The good news is that what you do eat may be more important for your health than what you don't eat.
- Functional foods are an important part of wellness that includes a balanced diet and plenty of exercise.

THANK YOU

