

The Reality of the Daily Diet

Nutrient Density + Nutrient Diversity = Optimal Nutrition + Vitality

“The greatest health challenge we face today is finding a way to increase levels of nutrients in our diet and broaden the variety of foods we eat each day — without increasing our calorie intake!” says Dr Fred Hooper of the GNLD Scientific Advisory Board. The ultimate goal of the diet is to provide an abundance and a wide variety of nutrients - that is, *nutrient density and nutrient diversity*. Diets without both can compromise vitality now and health later.

Nutrient Density

Ideally, our foods would be low in calories but high in nutrients. In reality, however, we get too many calories and too few nutrients. When we eat a food such as French fries, for example, we remove the nutrient-rich potato peel, leaving an almost pure-starch mass which is cut, fried, and salted. Such processed foods are nutrient-poor and calorie-rich, and they rarely provide the nutrient density of their whole-food parents.

Nutrient Diversity

The idea of getting a variety of nutrients is not new, but it has grown in importance. While one generation grew up thinking that diversity was “three square meals,” the following generation was told to eat from the “Four Basic Food Groups.” Later, to encourage dietary diversity, that recommendation was changed to advise picking foods from the “Food Pyramid.” In Australia, the first ‘dietary Guideline for Australians’ emphasises the need to ‘eat a wide variety of nutritious foods’. Likewise, the Japanese government recommends eating 30 *different* foods each day for optimal health.

Unfortunately, many of us engage in a practice called “channel eating,” where we eat the same rather small number of foods over and over (for example, eating the same breakfast cereal every day). This practice erodes diversity. It may also reduce the availability of certain nutrients, impacting the nutrient density of the diet as well.

People miss out on many important nutrients because their eating habits are exactly that - habits. For example, big portions of the population never get the antioxidant protection of berries because they never eat berries. The closest some people get to eating a berry is a little jam now and then. But berries are one of the richest sources of healthful plant nutrients called flavonoids, which research has shown may play a role in preventing heart disease, stroke, cancer, and other diseases. The same argument could be made for other beneficial nutrients which people miss out on when they consume only a narrow range of foods.

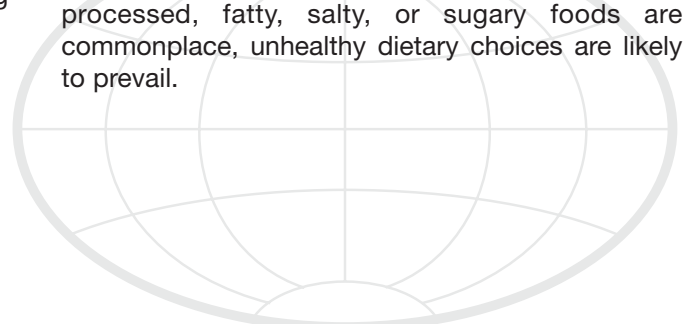
We Know Better, Yet We Still Make Poor Dietary Choices

“Do as I say, not as I do” could be the world’s dietary anthem. People everywhere know they should consume healthy foods. Yet, people everywhere often make poor food choices - despite the fact that they know better.

Polls show that most Australians, for instance, understand the dietary goals set in 1979 by the Commonwealth Department of Health.

- Reduce total fat intake.
- Reduce refined sugar consumption.
- Increase consumption of complex carbohydrates and dietary fibre (that is, wholegrain cereals, vegetables and fruits).
- Decrease alcohol consumption.
- Decrease salt consumption.
- Reduce the prevalence of obesity.
- Increase breastfeeding.
- Provide information about a balanced diet for all Australians.

But, despite growing nutritional awareness, the nutritional intake for many people has failed to improve. A dietary survey conducted in 1995 showed that the majority of Australians were grossly deficient in meeting their basic nutritional needs from fruits and vegetables alone! However, as more countries join the ranks of developed nations, where processed, fatty, salty, or sugary foods are commonplace, unhealthy dietary choices are likely to prevail.



Reality Check: What We Should Eat Versus What We Actually Do Eat

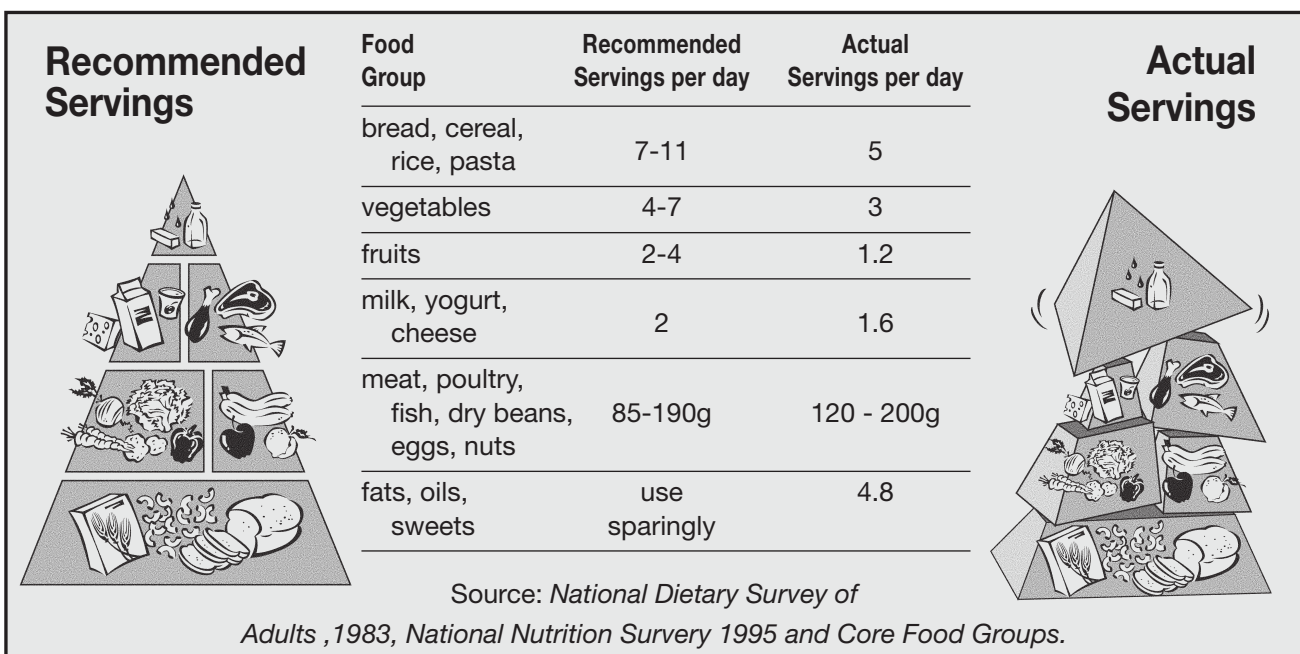
The link between diet and health is so well established that public health organisations of virtually every nation make dietary recommendations. In Australia, for instance, the National Health and Medical Research Council created the Core Food Groups, as a complement to the Dietary Guidelines, to recommend the daily intake for various kinds of foods. See below what Australians *should* eat, according to these guidelines, compared to what they actually *do* eat. Keep in mind that Australians are not unique in their poor eating habits: A similar pattern — too few plant and low-fat dairy foods and too many fats and sweets — exists in most other industrialised nations.

For fruits and vegetables, the consumption pattern is particularly alarming. Virtually all of the world's major public health organisations recommend consuming at least five servings of fruits and vegetables each day for optimal health. In Australia, for instance, the National Health and Medical Research Council recommends **6-7 servings of fruits and vegetables each day**. Fruits and vegetables contain vitamins, minerals, fibre, and other healthful phytonutrients (nutrients only available from plants — carotenoids, flavonoids, cruciferous compounds, etc). Numerous studies show that the gap between the dietary ideal and actual consumption is enormous:

- The average Australian eats *only 1/2* of the **minimum recommended amount of fruits and vegetables**.
- On any given day, between 30 - 60 percent of the Australian adult population ate **NO fruit!**

- On any given day, about 30 percent of the Australian adult population ate **NO vegetables!**
- We **should eat at least one serving of cruciferous vegetables a day**, yet on any given day, 75% of Australians do not eat cruciferous vegetables!
- We tend to believe we are already eating sufficient fruit and vegetables to stay healthy.
- We tend to overestimate the amount of good food we eat and underestimate the bad. Consumers in one study **overestimated the amounts of fruits and vegetables they ate by 33 percent**.
- Recommendations from the *National Nutrition Survey and Coles Fruit and Vegetable Index* included adults needing to at least double their fruit and vegetable intake.

Food is abundant and available in developed nations, so food scarcity is not the problem! Nonetheless, studies show that virtually none of us eat well enough to get the Recommended Dietary Intake (RDI) of many critical vitamins and minerals! The RDI is the amount of a vitamin or mineral necessary to prevent the appearance of deficiency symptoms in healthy people. Some people think it is okay not to consume RDI amounts of nutrients every day as long as they get all the nutrients they need over several days. Studies show that not only do the vast majority of us fail to get the RDI every day, but we don't get it over several days, either.



The RDI to Survive - but the ODI to Thrive!

The tragedy is that we are not even consuming amounts of nutrients that would prevent deficiency symptoms, let alone amounts that would take us a step closer to optimal health! You can survive with a poor diet, but you certainly won't thrive. While deficiency symptoms can be corrected by supplying the substance which is lacking, many scientists believe that optimal health results from vitamin and mineral consumption in amounts exceeding the RDI. According to Nobel laureate Linus Pauling: *"The RDA (RDI) for a vitamin is not the allowance that leads to the best health for most people. It is, instead, only the estimated amount that for most people would prevent death or serious illness from overt vitamin deficiency. Values of the daily intake of the various vitamins that lead to the best health for most people may well be several times as great, for the various vitamins, as the values of the RDA (RDI)".* A concept that is growing in acceptance among the scientific community is that of Optimal Daily Intake, or ODI, an idea GNLD scientists pioneered in the late 1970s.

Supplements: "Nutritional Insurance" When the Diet Is Poor

Nutrient density and *nutrient diversity* are two sides of the same coin. Research indicates that the reality of the daily diet is that you cannot get all the nutrients you need for optimal health and vitality from foods alone with population eating patterns. The next step will likely be government recommendations to consume both healthy foods and supplements. Don't wait for new government recommendations. Take charge of your health today by beginning to make better food choices. And to be certain the inevitable nutrient "gaps" won't threaten you, supplement to assure your best health.

The Evolution of the Human Diet: Our Ancestors Ate Better Than We Do!

The modern diet is a far cry from the foods that humans have consumed for two million years. Before humans took up agriculture 10,000 years ago, they were primarily hunter-gatherers, with dietary needs met primarily by fruits, vegetables, roots, nuts, seeds, legumes, fish and wild game. Scientists believe our ancestors ate about three times as much fruit and vegetables as we do, generally consumed within hours of being gathered, usually raw, with little or no processing. It is likely, therefore, that our ancestors had intakes of vitamins and minerals that exceeded the current RDIs (1.5 to 5 times higher), although they were by no means megadoses.¹ They also ate five times more fibre than we do. In many respects, the ancestral diet resembles the National Heart Foundation dietary recommendations, the traditional Mediterranean and East Asian diets, and semi-vegetarian eating practices. Our ancestors did not live long, but it was infection and accidents - not degenerative disease - that killed them.

Intake Levels for Various Nutrients

	Prehistoric Ancestors (estimated intake)	RDI (Recommended intake)	Modern Humans (current intake)
Vitamins, mg/d			
Riboflavin	5.01	1.0-1.7	1.34-2.08
Thiamin	3.07	0.7-1.2	1.08-1.75
Ascorbic Acid	439	30-75	77-109
Vitamin A ²	2,240	750-1200	1,170-1,414
Vitamin E, I.U.	28	7-12.5	7-10
Minerals, mg/d			
Iron	62.4	5-22	10-11
Zinc	33.4	12-18	10-15
Calcium	1,520	800-1,200	750
Sodium	604	920-2300	4,000
Potassium	6,970	1950-5460	2,500
Fibre, g/d	86	20-30	10-20

¹Adapted from: Eaton, S.B., Eaton III, S.B., Konner, M.J. and Shostak, M. *An Evolutionary Perspective Enhances Understanding of Human Nutritional Requirements*. *J. Nutr.* 126:1732-1740, 1996. ² Retinol equivalents.