



Get 2020 Vision for

FOOD & NUTRITION!

As we enter the next decade, let us take a moment to look back at some of the areas of food and nutritional science that have dominated the news in the last decade and are likely here to stay. Follow us on the path to a brighter and clearer vision as we help define optimum nutrition to help you be your best!

Growing Awareness of Nutritional Gaps!

At NeoLife we have long created awareness about the significance of “Nutritional Gaps.” When our Scientific Advisory Board designed and formulated NeoLife Pro Vitality, we considered the tremendous evidence from around the world which suggested that intakes of both nutrients and phytonutrients were far lower than optimal in most, if not all, regions of the world. Recently, in the Global Burden of Disease report, which tracked consumption trends of 15 dietary factors in 195 countries between 1990 and 2017, it was concluded that a massive one in five deaths are associated with poor diet.¹ In 2017, this figure equated to 11 million deaths! A suboptimal diet lacking in whole grains, vegetables, fruit, nuts and seeds, omega-3 fatty acids and containing too much salt is responsible for more deaths than any other risk factor (even smoking) on a worldwide level. As expected, high sugar beverage consumption was also implicated, as was the consumption of processed fats. Governments around the world have long since been addressing issues of high sugar, high salt and (processed) fat consumption. In the light of the evidence from the Global Burden of Disease report, it needs to be emphasised that **the focus may in the future shift towards promoting the increased intake of certain foods – such as whole grains, fruit, seeds and nuts, vegetables and omega-3 fatty acids.** The clear message is that nutritional gaps are real – we continue to miss out on these important whole food nutrients and phytonutrients!

Hidden Hunger and Classical Micronutrient Inadequacies

Micronutrient inadequacies remain widespread at the global level. In many parts of the world populations are still falling short of important micronutrients.² The term “Hidden Hunger” was used initially to describe inadequacies and

deficiencies of vital vitamins and minerals affecting primarily regions of the world affected by poor food availability.² More recently, the term hit the headlines in the U.S. when the Council for Responsible Nutrition educated and lobbied about the fact that many of us are falling short of even the classical micronutrients.³ **The top 11 nutrient inadequacies in the U.S. were listed as: potassium, choline, magnesium, calcium, folate, fibre, vitamins A, C, D, E and K.**

“ Today’s typical diet fails to provide the vitamins and essential minerals we need to live productively... The current food system is high in calories, but low in nutritional value, making it nearly impossible to get all the nutrients you need from food alone.”

*- Dr. Jeffrey Blumberg
Professor, Tufts University*

Even though we are sometimes eating a lot, the foods that we often choose tend to be energy-dense and nutrient poor, so we remain starved of nutrients even if consuming too many calories. These kinds of foods are referred to as being “obesogenic.” Officially, scientists have defined “obesogenic foods” as commercially available foods, usually highly processed, rich in sugar, high in poor quality fats, high in calories and generally poor in nutrients and phytonutrients.⁴ Our typical “obesogenic” environment with poor quality foods and a sedentary lifestyle continues to fuel the growing obesity epidemic around the world.⁴ In a 2018 report, North America was identified to be at the forefront of adult obesity, but regions like Africa and Asia were also found to be experiencing an upward trend that recognises more than one in eight

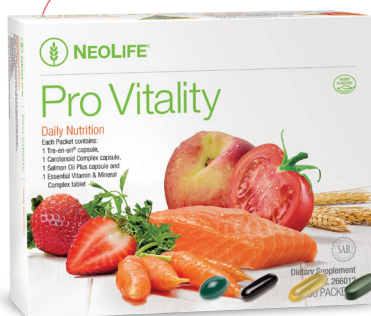
adults in the world as obese.⁵ This upward trend shows that more than 50% of adults may be obese by 2030.⁶

Over-Processing is Out. Real Foods & Whole Foods are In!

Over-processing of foods may be damaging our health. A recently published study has shown that a high proportion of ultra-processed foods in the diet was associated with a higher risk of type 2 diabetes.⁷ This adds to the already existing body of evidence linking highly processed food consumption to deaths from cardiovascular disease. NOVA, a food classification system that categorises food according to the extent of processing, defines the ultra-processed foods category as “formulations of food substances often modified by chemical processes and then assembled into ready-to-consume hyper-palatable food and drink products using flavours, colours, emulsifiers as well as other additives.”⁸ These foods include savory snacks, cookies, reconstituted meat products, pre-prepared frozen dishes and soft drinks. Definitions may change over time as we learn more about these foods and some research points to the fact that relying too much on these foods brings overall lower fibre intake and a higher sugar intake. The dietary advice is relatively straightforward: eat less ultra-processed food and more unprocessed or minimally processed food.

The trend is for a return to “real foods” or “minimally processed foods.” An unprocessed food is typically a food that is found in its whole form and sometimes, may be labelled as “real food” or may fall into the category of minimally processed, such as dried fruit for example.⁹ These types of minimal processing techniques are used for various reasons, such as improving stability of foods, safety from microbes, or simply preserving the nutritional value.⁹

At NeoLife we have always given due attention to minimal processing and whole food forms of nutrients. Think of our well established Protogard process for protecting the quality of proteins (NeoLifeShake - see page 8) and our decades long heritage of whole food-based supplements, produced using gentle extraction techniques to preserve the natural components.



Pro Vitality

#665 – 30 packets

Powerful Nutrients that Support:

- Abundant Energy
- Antioxidant Protection
- Heart Health
- Immune Strength
- Healthy Brain Function
- Youthful Skin, Hair & Nails
- Lifelong Cellular Health
- Natural Genetic Anti-Aging Function



Our Microbiome - Much More Than Digestive Wellness!

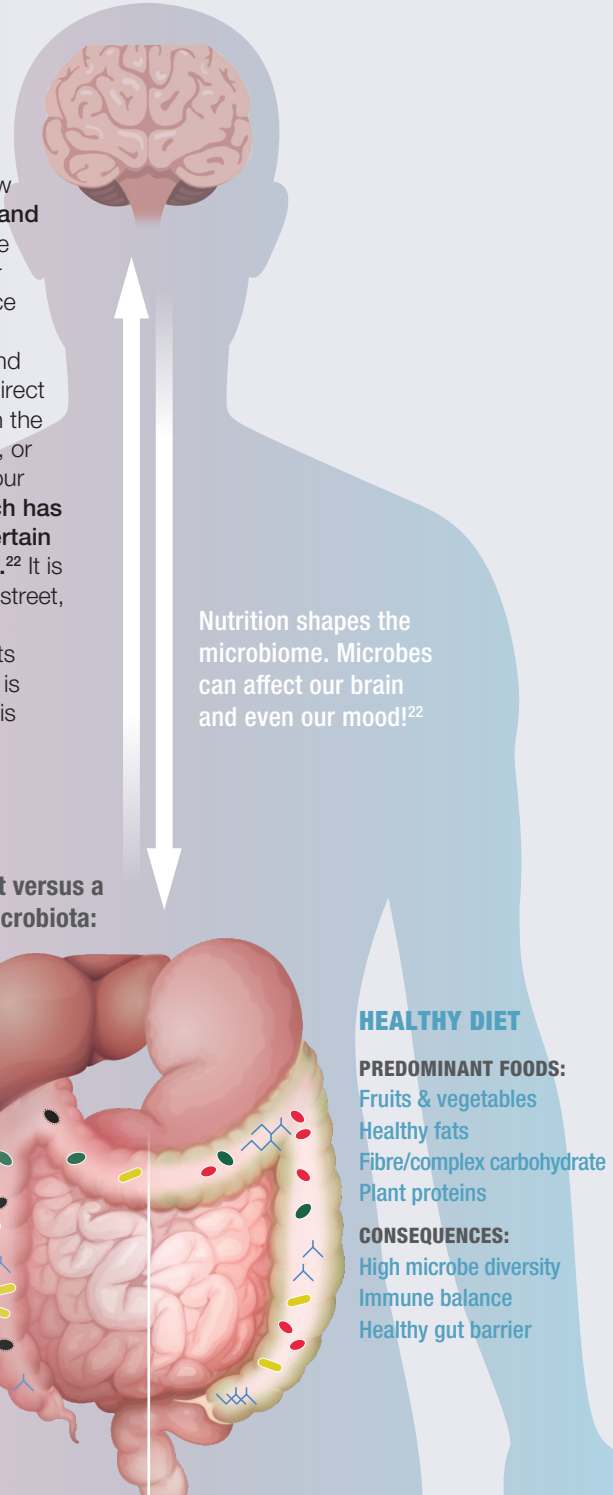
The last decade has seen an explosion of research interest in our “microbiota” - the trillions of microorganisms or microbes like bacteria, viruses, or fungi within and on our body and our microbiome (all the genes of our resident microbiota). There seems to be literally no aspect of our physiology that is not influenced by the balance and overall profile of the microbiota within our digestive tract. Well beyond the early research indicating that our resident “gut bugs” or microbiota determine important aspects of our digestive well-being and immune function, we are now understanding that they influence almost every aspect of our health.

In turn the quality of the food we eat and the diet pattern itself has the ability to shape our microbiome for the good.¹⁷ Diets containing an abundance of polyphenols, other phytonutrients, fibre and healthy fats are reflected in a more diverse profile of gut microbes which is generally considered to be a healthier profile.^{18,19}

Our resident microbes work for us in different ways and have the ability to transform the food we eat, yielding beneficial substances that may be used in our gut or absorbed into our body. For example, when microbes use dietary fibre they produce substances like the short chain fatty acid, butyrate, which is beneficial to us. Recent science has also shown that our microbes can also transform polyphenols to benefit our health.¹⁹ The health benefits of supplementing with specific types of bacteria, termed “probiotics” continue to be investigated in numerous large-scale clinical trials around the world.²⁰



Then, moving on to another area - how **microbes can even affect our brain and even our mood!** It seems that the type of microbes that live in the lining of our digestive tract (gut barrier) can influence our brain in different ways. There are various ways that the gut and brain communicate, such as direct nerve communication, through the production of neurotransmitters, or indirectly through modulation of our immune system!²¹ **Recent research has even associated the presence of certain bacteria with a more positive mood.**²² It is a fascinating two-way communication street, where what you consume affects your microbiome, but the microbiome affects you too. A lot of very positive research is emerging on these topics, so watch this space!



Nutrition shapes the microbiome. Microbes can affect our brain and even our mood!²²

Consequences of poor-quality diet versus a healthy diet on the gut and gut microbiota:

(Adapted from¹⁷)

POOR QUALITY DIET

PREDOMINANT FOODS:

- Processed meats
- Poor quality fats
- Refined grains
- Excess sugar

CONSEQUENCES:

- Reduced microbe diversity
- Increased inflammation
- Gut barrier breakdown

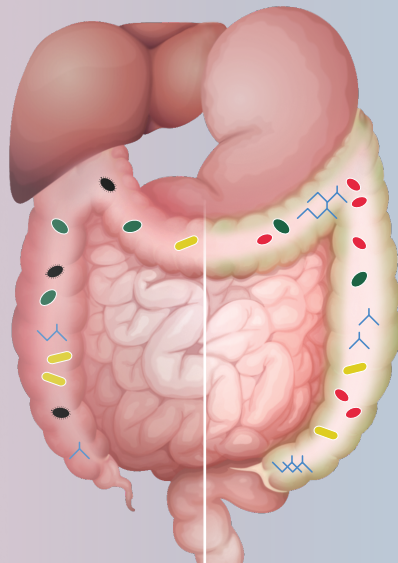
HEALTHY DIET

PREDOMINANT FOODS:

- Fruits & vegetables
- Healthy fats
- Fibre/complex carbohydrate
- Plant proteins

CONSEQUENCES:

- High microbe diversity
- Immune balance
- Healthy gut barrier



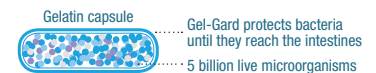
Acidophilus Plus

#646 – 60 capsules

Proprietary blend of five types of clinically proven probiotics:

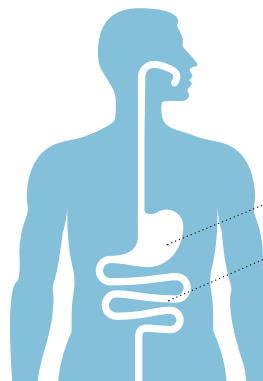
- *Lactobacillus acidophilus*
- *Bifidobacterium bifidum*
- *Lactobacillus bulgaricus*
- *Streptococcus thermophilus*
- *Lactobacillus casei*

EXCLUSIVE GEL-GARD ENTERIC PROTECTION SYSTEM



Protect live micro-flora through stomach acid

Gently releases high potency active cultures in the intestine to support digestive balance



The Rise and Rise of Plant-Based Nutrition

Several forces will converge encouraging the further rise of “plant-based” food and nutrition which has increased in popularity, a trend set to continue. These forces include environmental and ethical considerations as well as the many known health benefits of a predominantly plant-based diet. The last decade of research demonstrating the effects of plant nutrients like phytonutrients and dietary fibre has significantly aided our understanding in this area.

Vegetarians and vegans represent a relatively small percentage of the U.S. and global population. However, more than one in five Americans is now considered to be flexitarian, meaning they eat meatless meals some of the time.²³ Whether you are flexitarian, vegetarian or fully vegan you will be eating predominantly plant-based foods, which is generally considered a good thing for overall health. It should be emphasised though that avoiding meat and dairy in a fully vegan type diet increases the risks of certain nutrient inadequacies like vitamin B12, iron and vitamin D.²⁴

If you're vegetarian or vegan, you will definitely need to pay attention to combining different protein sources as many plant proteins are incomplete (they don't contain the full group of essential amino acids), have reduced digestibility (e.g. anti-nutrients: lectins, phytates, saponins) and have lower overall biological value.²⁴



NeolifeShake

- #690 – Creamy Vanilla
- #691 – Berries n' Cream
- #692 – Rich Chocolate

NeolifeShake packs a powerful protein punch. The amino acid profile includes dairy and plant protein, with overall balanced composition, 25 vitamins and minerals and satisfying fibre for satiety and digestive support.

Protein is Powerful and Quality Matters!

Here to stay as a hot topic for at least the next decade is powerful protein and quality certainly matters. Today, people of all ages have a positive attitude towards increased protein content in foods and associate protein with their active lifestyles.^{25,26} This is a trend that is set to continue.

Decades ago, Neolife was already a pioneer of protein-based products within a holistic approach to weight management.^{27,28} Since then, the various benefits of regular high-quality protein have clearly been demonstrated: increased satiety (feeling of fullness after a meal) and preservation of muscle during weight loss (whilst reducing fat) and also during the natural process of aging.²⁹

Nutrition Gets Personal!

It used to be thought that our genes are our destiny and that we could do little to prevent developing a specific disease if it was written in our genes. Then with all the knowledge gained from the sequencing of the human genome (the full set of information in the DNA that an individual inherits) two things became apparent:

- 1) There are many slight variations of specific genes within populations.
- 2) Environmental forces, such as the food and nutrients we eat, play a big role in determining how our genes are expressed. This sparked a radical change in thinking about nutrition's ability to determine health.



NeolifeBar

- #694 – Fruit & Nuts
- 15 individually wrapped bars

Natural, wholesome snackable nutrition

- Glycaemic response controlled to keep blood sugar levels normal and steady
- All 22 amino acids involved in human nutrition
- 10g protein, 5g fibre and 320mg omega-3s from flaxseed
- 173 calories (720 kJ)
- 17 vitamins and minerals



You may have heard of this described as “personalised nutrition” or “nutritional genomics,” but you may ask, what is this exactly?

Personalised nutrition tries to understand the impact

of how or what we eat affects our general health or disease development during the course of our life by influencing our genes in a positive or negative way.³⁰ In the last decade personalised nutrition has gained momentum fuelled by the availability of commercial kits to decode our own DNA and to relate this back to the nutrients we need or our sensitivity towards certain diet components. Currently there is still a need for validation of this approach and how to translate the information we receive into actionable changes to our eating patterns.

The Decade of Self-Diagnostics

With the rise in knowledge about our own individual DNA which defines us and the importance of nutrition and other powerful lifestyle influences, it is not surprising that we love learning more about ourselves and keeping track of what we do. Think about the health monitor you may wear around your wrist to calculate your steps - or for those who may have high blood pressure, using a blood pressure monitor to track any changes in blood pressure. With the rapid rate in technological advances we can all take more responsibility for our own health and receive active feedback from our monitoring devices, helping to motivate us



in our pursuit of a healthy lifestyle. Some monitoring systems can include scanning food images for food analysis to know how much you are eating, or even assessing stress levels - there are an extensive amount of consumer wearables to track your lifestyle.³¹

In the future, “self-diagnostic” tools and kits to measure our own blood biomarkers will advance in leaps and bounds helping us really take charge. With an abundance of testing options available, you’ll see more markers and monitoring systems to assess different aspects of your health: your gut, stress levels, eye health, brain health, vitamin/mineral status, inflammation, or even antioxidant potential in your body. Aside from that, you’ll also see convenience become a primary factor of some of these monitoring devices with minimally invasive procedures. Keep your eyes open for these new advancements to come!

Take Home Messages

Nutrition has taken on a much more powerful role during the last decade and the need for products you can trust, backed by solid science, has never been greater. At NeoLife we have long since anticipated this global need. Today nutritional gaps remain a reality and the trend of chronic lifestyle-related conditions looks set to continue to rise. Yet solutions are so simple.

Rapid advances have been made in the last decade towards the understanding of how nutrients influence our own genetic material and help shape the microbiome.

In turn, our resident microbes play a great role in determining our health and well-being. With the advent of personalised nutrition and self-diagnostics, we are in for a fascinating future. As part of the NeoLife family you will be able to remain well-informed and equipped with 20/20 vision to take responsibility and rise to the many challenges and opportunities of our fast-moving world!



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