

# **Current Market and Perspective of Dietary Supplements and Functional Foods in the USA**

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# Presentation Outline

## 1. Current Market Conditions for Nutraceuticals, Dietary Supplements (DS) and Functional Foods (FF) in the USA

## 2. Categories and Trends for Nutraceuticals, DS and FF in the USA

- Other Nutritional Trends to watch in the USA for DS and FF Markets
- Nutraceuticals and Preventive Healthcare
- Brain Health and Aging
- Digestive Health
- Heart Health
- Endocrine Health & Diabetes
- Diet and Health Management
- Major Health Issues in the USA
- Bioactive Nutrients DS
- FF and DS for Kids' Health
- Functional Foods (FF) Trends

## 3. The Future of FF and DS in the USA

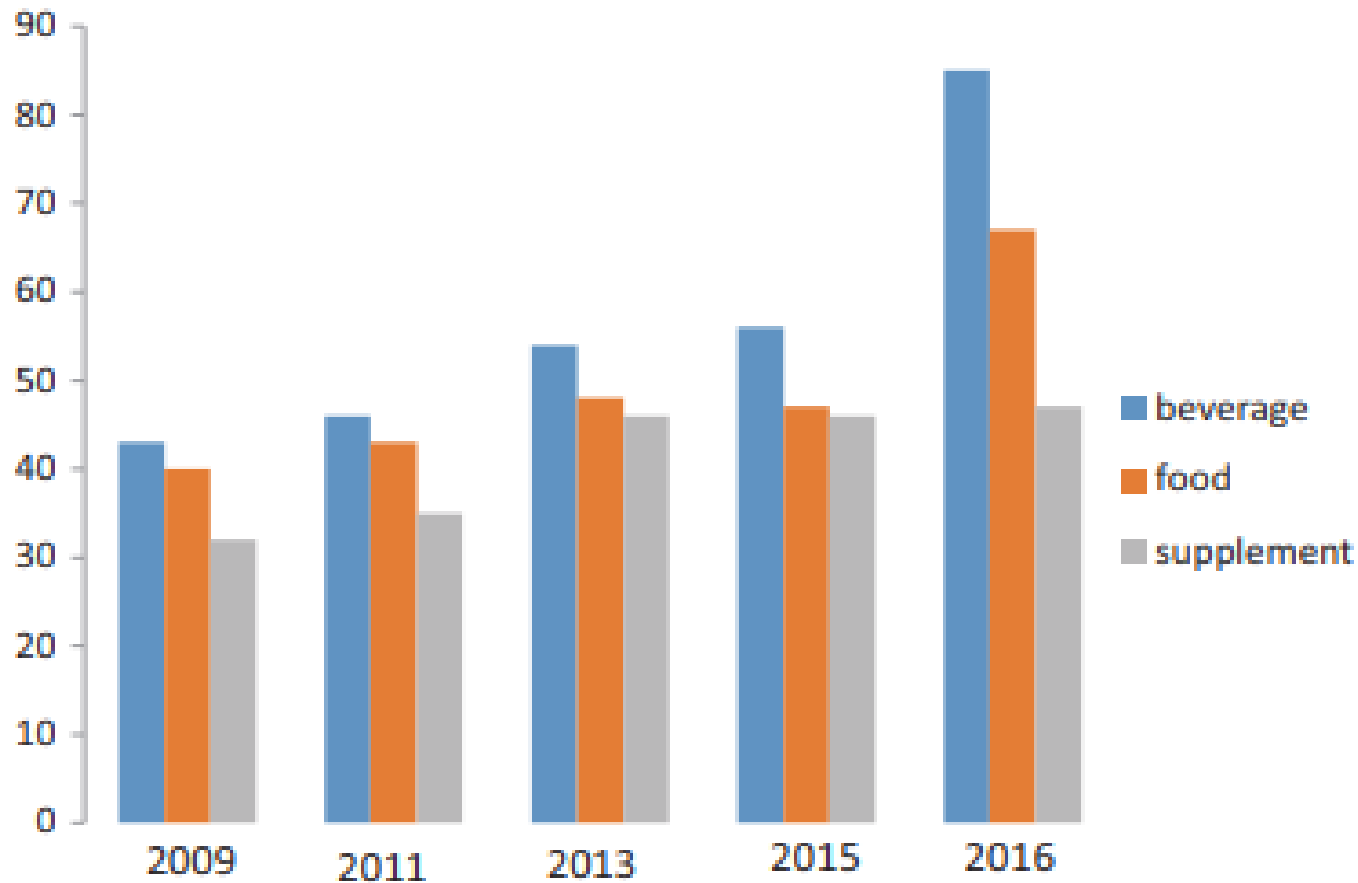
- Fresh, Natural and Organic
- Shift in Demographics
- Future FF, DS and Snack Trends
- Fit Consumers
- Functional Foods for Health
- Healthy Fats
- “Natural” and “Clean Label”
- Health Benefits of Functional Foods and Bioactive Compounds
- Nutraceutical Market Segmentation
- Future Markets--CBD and Hemp

## 4. Summary

# Current Market Conditions for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

- There is growing demand for functional foods (**FF**), functional beverages (FB) and Dietary Supplementns (**DS**) in the USA due to increasing awareness of their toward health benefits and an increase in disposable income
- The USA is the world's largest market for functional foods (FF); and is **expected to witness 21% growth** in the coming years-- owing to the growing demand for functional foods; and was expected to reach **\$8.62 billion USD** (by 2015)
- This growth is mainly driven by the continuously growing demand in the **functional beverage (FB) sector** for energy drinks and fortified dairy products (e.g. probiotics)

# FF, FB and DS Global Market



**Fig. 3** Global nutraceutical market—foods, beverages, and supplements, 2009–2016 (\$ MIL-LIONS). *Source:* Euromonitor, March 2012 and BCC Research (2011)

# Current Market Conditions for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

- Factors driving the USA nutraceuticals market include:
  - North America stood as a leader in terms of market share in 2017 due to significant adoption of nutraceutical products across the USA.
  - The USA is expected to continue as the growth leader through 2023
  - Key factors contributing to the growth include:
    - Rising awareness levels among the U.S. citizens about healthy food
    - Rising awareness of hazardous lifestyle diseases from eating poorly
    - A continually growing number of health-conscious people in North America among the younger Millennial; and aging Baby Boomer generations
  - New Trends:
    - Plant-Based Materials (meat replacers/non-animal)
    - Personalization and Semi-Personalization of Nutrition and Supplements (**Nutragenomics** and **Microbiome** research for tailored-made individualized nutrition)
    - Physical and Mental Performance Enhancers (Joint and Brain Health) 5  
(Source: GIA, 2019)

# USA has a 30% Share of the \$250 Billion (USD) Global Nutraceuticals Market

Nutraceuticals: The Future of Intelligent Food | 7

Global nutraceuticals market by country/regional share



The annual global nutraceuticals market is expected to be worth US\$250 billion by 2018

(Source: KMPG, 2015)

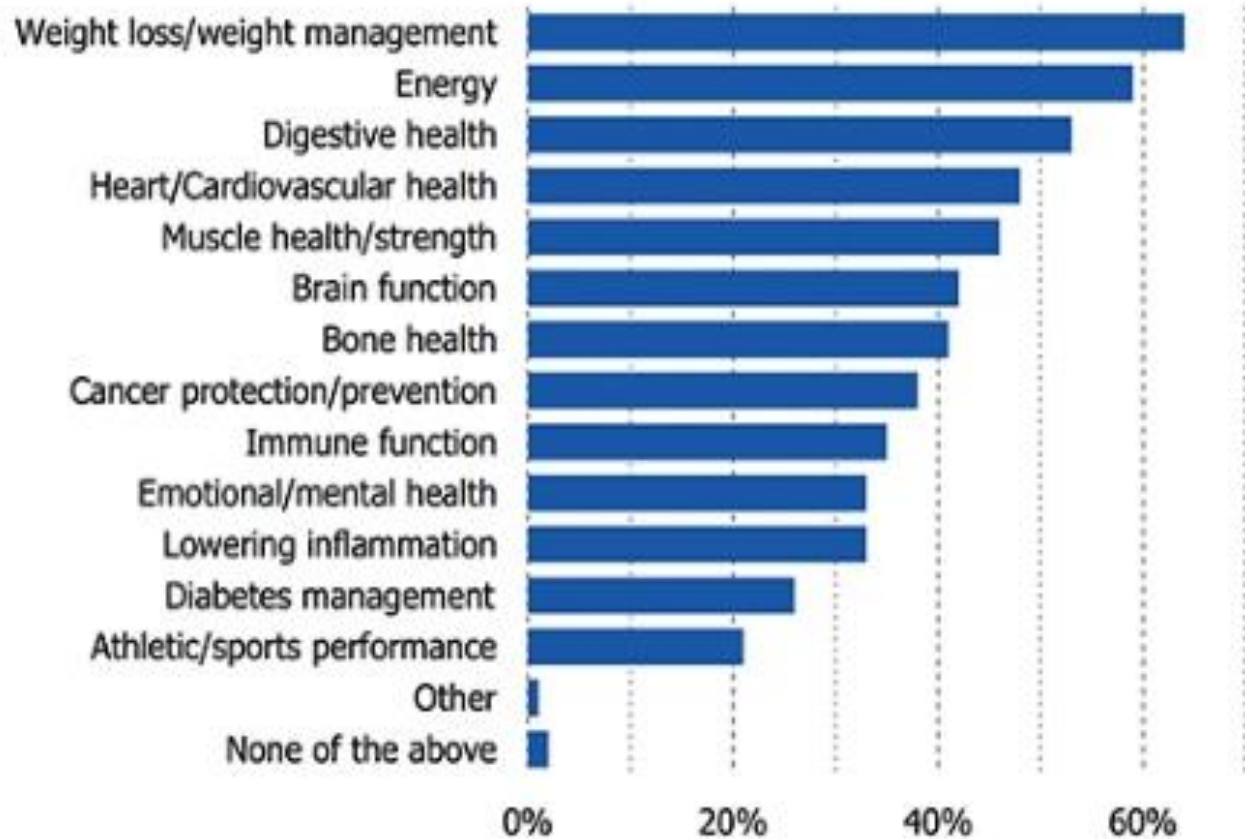
# Categories and Trends for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

## Major Categories of interest/growth in the USA:

- Gut Health
- Bone Health
- Boosting Immunity Levels
- Joint and Eye Health
- Oral/Dental Health
- Physical Performance Enhancers
- Brain Health/Mental Performance Enhancers
- Sports and Energy Drinks in Functional Foods and Beverages

FIGURE 4: Most Sought After Health Benefits from Food

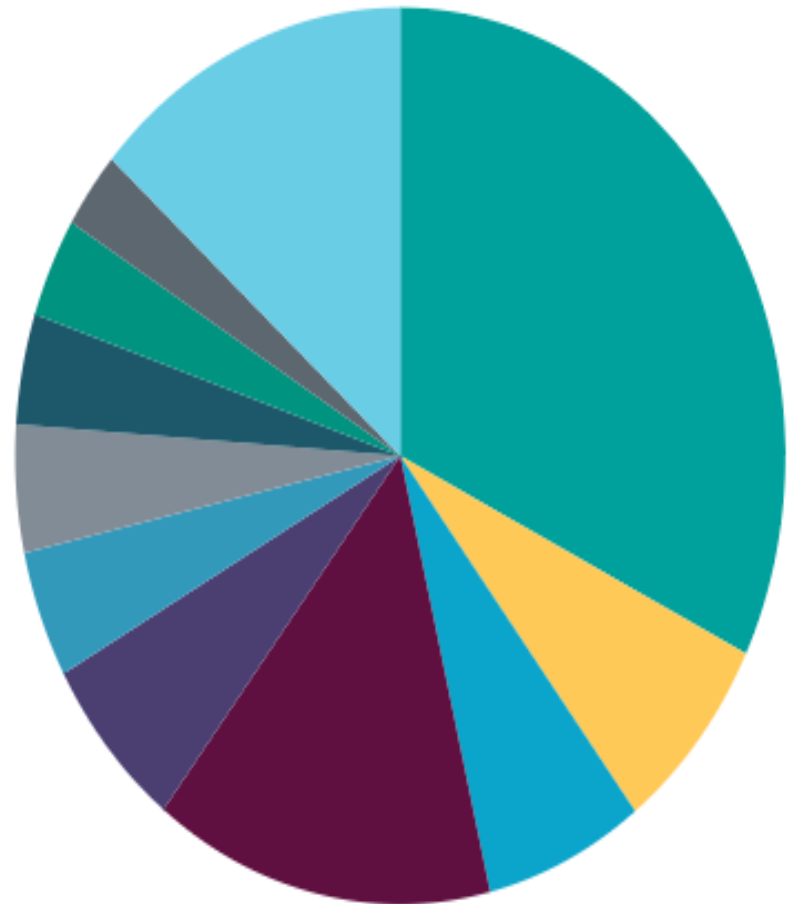
## Top Sought After Health Benefits *(Of those who seek health benefits from foods)*



Source: International Food Information Council, 2019

# Market Share of Top Conditions 2018

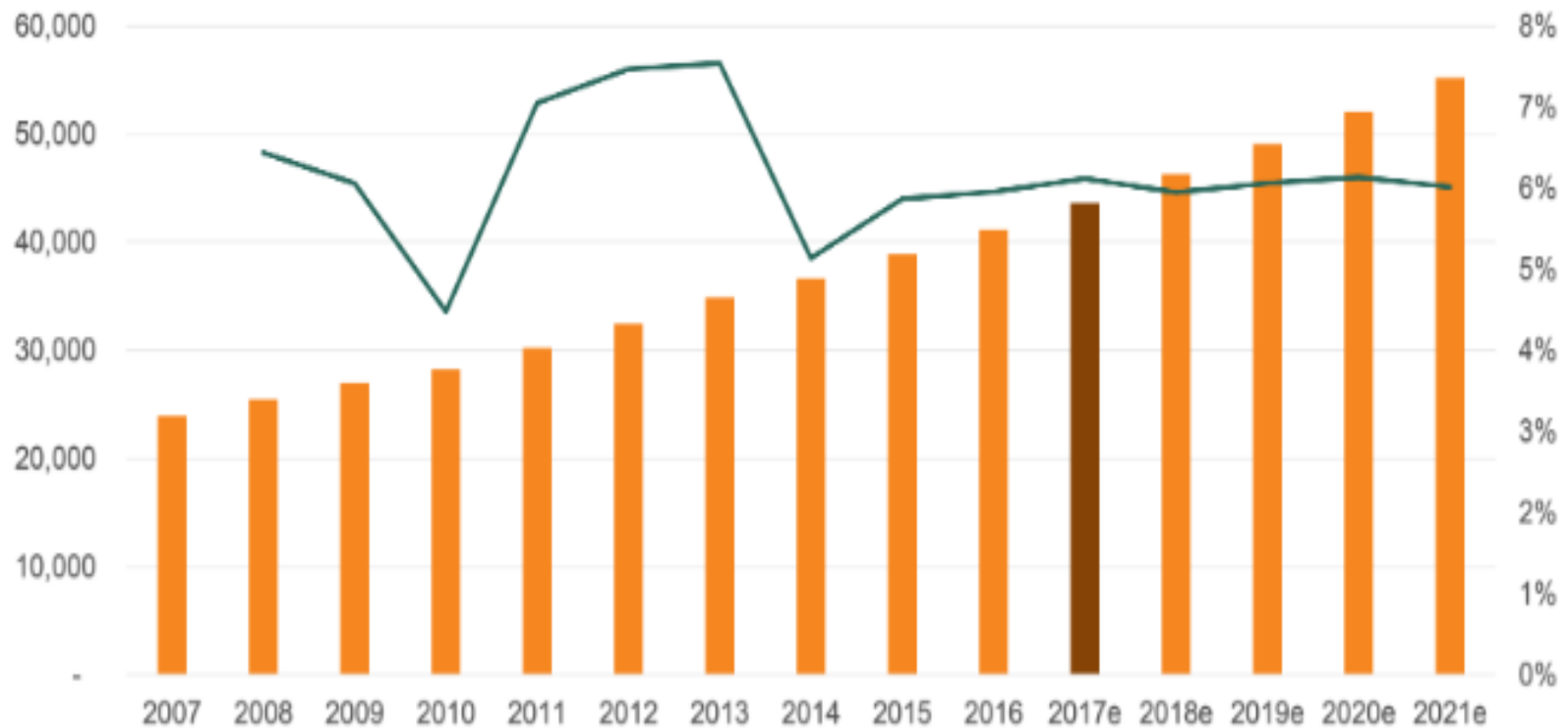
- Sports, Energy & Weight Management
- Cold, Flu & Immunity
- Gastrointestinal Health
- General Health (inc. Men's, Women's and Children's)
- Heart Health
- Joint Health & Inflammation
- Bone Health
- Diabetes
- Cancer Prevention
- Beauty from Within
- All Other



Source: *Nutrition Business Journal*

# Supplements growth remains steady

U.S. Supplement sales grew 6.1% to \$44B in 2017, buoyed by herbs & botanicals, sports nutrition and specialty products such as collagen



Source: *Nutrition Business Journal* (2017 preliminary estimates; \$mil, consumer sales)

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# Categories and Trends for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

## Major Demand Drivers of DS growth in the USA:

- Elderly and Young Population: Focus on marketing DS that help to combat various diet-related health issues
- Popularity of sports nutrition supplements
- Social Media: Use of mobile technology in motivating Millennials and younger demography to stay healthy through supplementation and interactive apps
- Consumers showing increasing interest in supplementing vitamins and minerals to overcome deficiencies in their diets and lifestyles
- Increasing recognition by the general public of the benefits of DS enhancing health and well-being

# Categories and Trends for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

## Major Demand Drivers of DS growth in the USA:

–**Personalization and E-Commerce** trends—more people are buying Dietary Supplements and Vitamins/Minerals through online shopping markets (e.g. Amazon)

–Consumer perceptions that **expensive pharmaceutical approaches are ineffective** (e.g. antibiotics), shifting trends towards DS remedies

–**Continual demand** and strong growth in multivitamin and mineral DS products

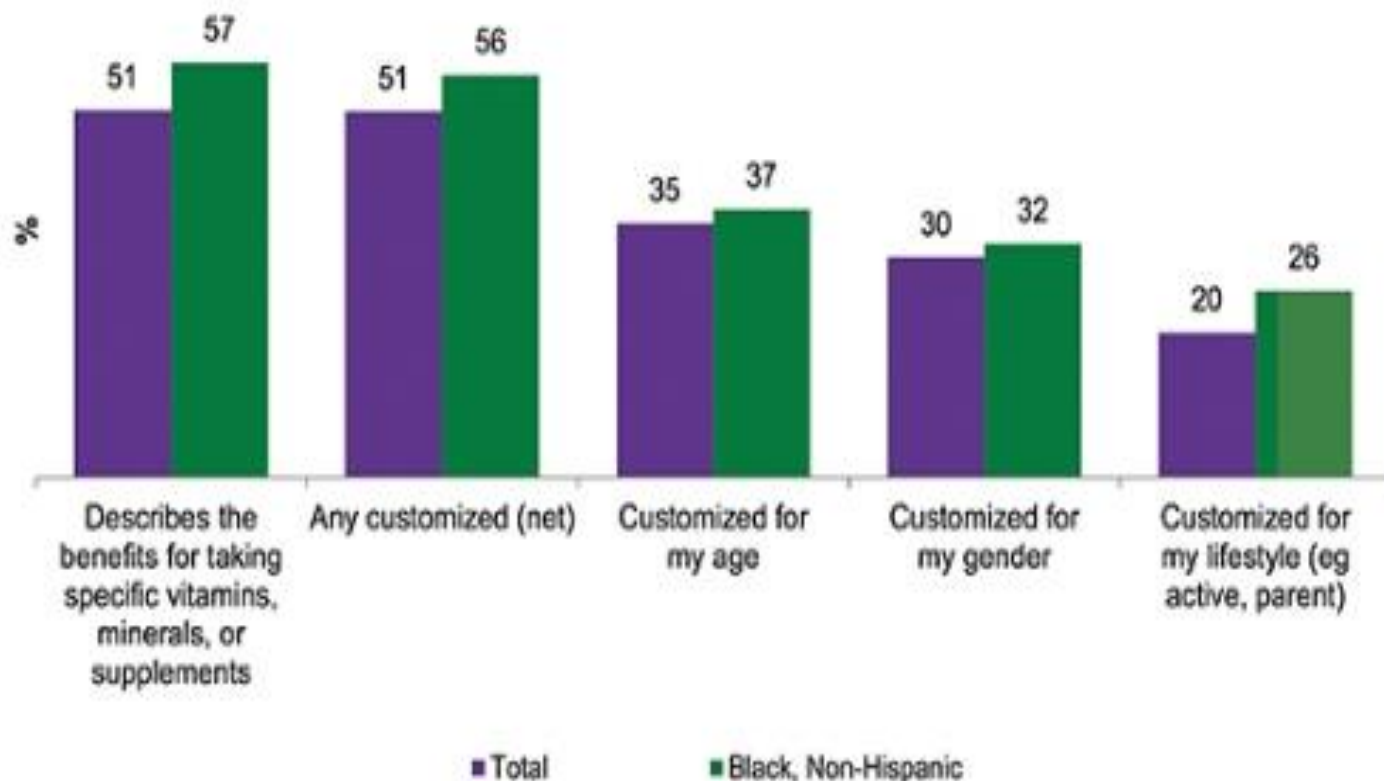
### –New trends on the horizon:

» Increasing interest in **Amino Acid**-based DS

» Growing Demand for **rapid response** DS (use of new delivery encapsulation technology for fast-acting bioactives)

## FIGURE 6: Product Factors when Buying a Supplement

*"Which of the following are important factors when purchasing vitamins, minerals, and supplements?"*



Base: 1,098 internet users aged 18+ who use vitamins, minerals, or supplements

Source: Lightspeed/Mintel

# Categories and Trends for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

## Aging Population-- Drivers of growth in the USA:

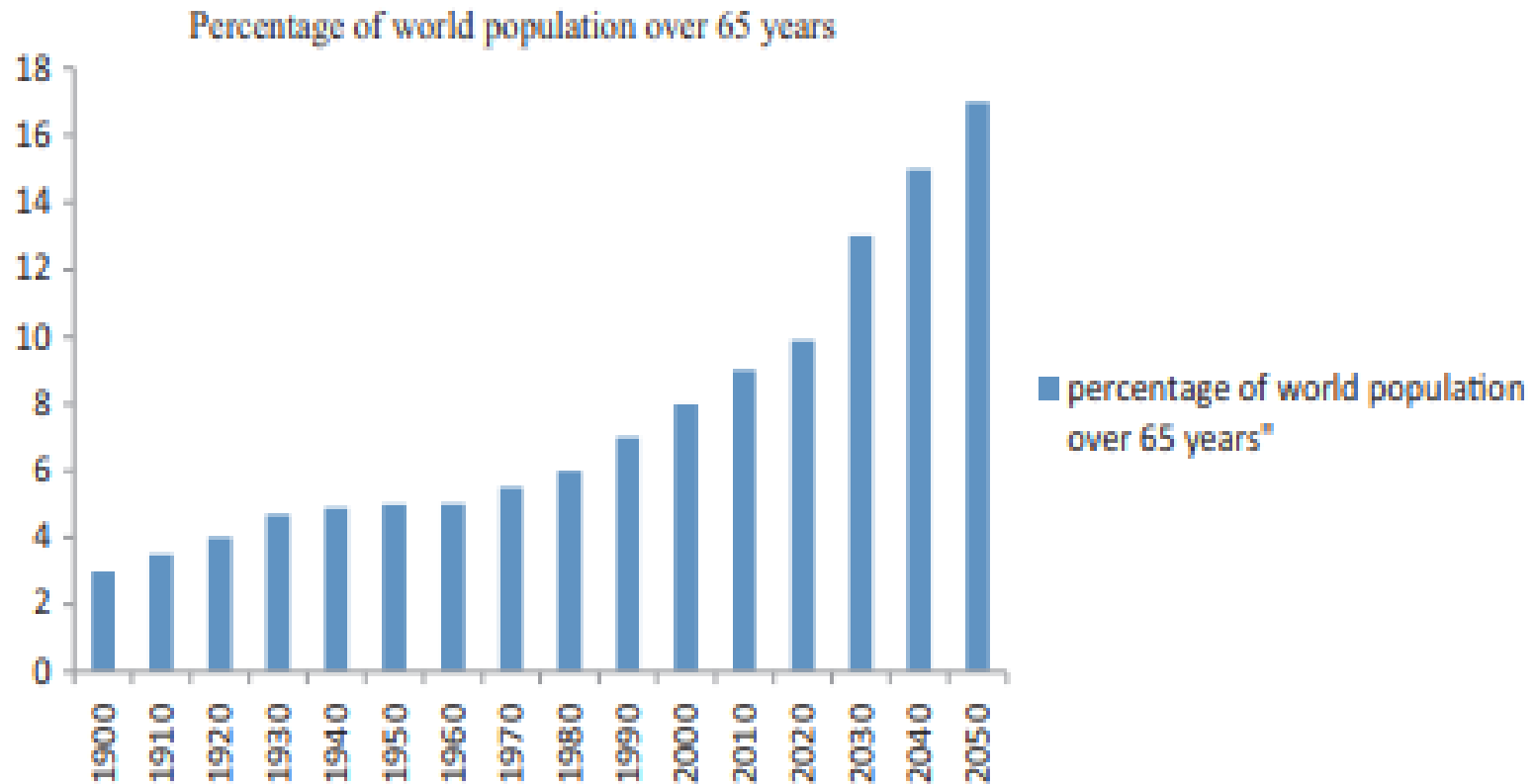
- Rising Interest by the Baby Boomer generation (born 1946-1964) in DS for:
  - » **Cognitive function** (Brain Health)
  - » **Mobility** (Joint Health)
  - » **Cardiovascular** (Heart Health)
  - » **Gastrointestinal** health (Probiotics, Microbiome/Gut flora health)

## Women's Health-- Drivers of growth in the USA:

- Healthier living with increasing spending power and delaying motherhood
- Adoption of fitness DS and wearable technology (eg. Fit Bit) **my Millennial women**
- **Growing acceptance** of Nutraceuticals and DS among women
- **“Beauty from Within”** approaches (Hair, Skin, Nails)
- Women are the **key decision makers** and purchasers of DS for their families

(Source: GIA, 2019)

# An Aging Global Population



**Fig. 5** Percent of world population over 65 years. *Source:* U.S. State Department and United Nations Department of Economic and Social Affairs (<http://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeing2013>)

# Categories and Trends for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

## Chronic Diseases growth-- Drivers of growth in the USA:

- Cardiovascular Disease (CVD), Diabetes and Cancers are major concerns
- Nutraceuticals that help lower or control Cholesterol
- Nutraceutical that help lower or control Triglycerides
- Other Natural DS that facilitate Heart Health
- Diabetes Prevalence (Glucose Management)
- Use of Functional Foods and DS with bioactive compounds to help control Diabetes
- Increases in the incidence of Cancers and awareness of DS benefits (instant access on the internet and social media)
- Increasing healthcare costs to fight these chronic diseases—**focus on Prevention with DS**

# Categories and Trends for Nutraceuticals, Dietary Supplements and Functional Foods in the USA

## Weight Management -- Drivers of growth in the USA:

- Growing prominence and demand for Functional Foods and Dietary Supplements for Weight Management for general health and appearance
- Obesity Epidemic continues to rise in the USA, leading to an increased focus on weight loss and control due to poor diet choices and lifestyles

## Nutraceutical Ingredients driving FF and DS growth in the USA:

- The next two slides show examples of functional ingredients found in natural food sources to help combat chronic diseases and enhance wellness
- These dietary ingredients can be concentrated into nutraceuticals for traditional DS; or used as components of FF (see next two slides of a few examples):

**Table 1** Some functional foods, their active ingredients, and potential benefits

Functional components	Source	Potential benefits
<b>Carotenoids</b>		
Alpha-carotene/Beta-carotene	Carrots, Fruits, Vegetables	Neutralize free radicals, which may cause damage to cells
Lutein	Green vegetables	Reduce the risk of macular degeneration
Lycopene	Tomato products (ketchup, sauces)	Reduce the risk of prostate cancer
<b>Dietary fiber</b>		
Insoluble fiber	Wheat Bran	Reduce risk of breast or colon cancer
Beta-glucan	Oats, barley	Reduce risk of cardiovascular disease. Protect against heart disease and some cancers; lower LDL and total cholesterol
Soluble fiber	Psyllium	Reduce risk of cardiovascular disease. Protect against heart disease and some cancers; lower LDL and total cholesterol
<b>Fatty acids</b>		
Long-chain omega-3 fatty acids—DHA/EPA	Salmon and other fish oils	Reduce risk of cardiovascular disease. Improve mental, visual functions
Conjugated linoleic acid (CLA)	Cheese, meat products	Improve body composition. Decrease risk of certain cancers
<b>Phenolics</b>		
Anthocyanidins	Fruits	Neutralize free radicals; reduce risk of cancer
Catechins	Tea	Neutralize free radicals; reduce risk of cancer
Flavonones	Citrus	Neutralize free radicals; reduce risk of cancer
Flavones	Fruits/vegetables	Neutralize free radicals; reduce risk of cancer
Lignans	Flax, rye, vegetables	Prevention of cancer, renal failure
Tannins (proanthocyanidins)	Cranberries, cranberry products, cocoa, chocolate	Improve urinary tract health. Reduce risk of cardiovascular disease
<b>Plant sterols</b>		
Stanol ester	Corn, soy, wheat, wood oils	Lower blood cholesterol levels by inhibiting cholesterol absorption

(Source: Daliri E.BM., Lee B.H.,2015)

● Prebiotics/probiotics		
Fructo-oligosaccharides (FOS)	Jerusalem artichokes, shallots, onion powder	Improve quality of intestinal microflora; gastrointestinal health
Lactobacillus	Yogurt, Other dairy	Improve quality of intestinal microflora; gastrointestinal health
Soy phytoestrogens		
Isoflavones: Daidzein Genistein	Soybeans and soy-based foods	Reduce menopause symptoms, such as hot flashes. Protect against heart disease and some cancers; lower LDL and total cholesterol

Source: International Food Information council (IFIC, [www.ific.org](http://www.ific.org), 2009)

# Other Nutritional Trends to watch in the USA for DS and FF Markets

- **L-Arginine** for Heart Health; **Turmeric and Curcumin** for Brain Health
- Supplements for Sleep Disorders (eg. **Melatonin**)
- Demand for **B-Complex** Vitamins
- Growing Significance of **Vitamin D** (continued clinical benefits)
- DS formats for Children/Millennials (**gummies**, drinks, chews)
- Continual popularity for **Antioxidants** and “**Superfoods**”
- DS and FF to maintain a **balanced body** (weight management)
- '**Free-from**' and '**Clean Label**' Trends for both FF and DS

# Other Nutritional Trends to watch in the USA for DS and FF Markets

## Millennials: The Fastest Growing Consumer Category

- Food Choices of Millennials in the USA vary vs. the older Baby Boomer generation with **more focus on healthy eating and prevention**
- Interest in plant-based diets, natural, and GMO-free, clean label
- Awareness of high pharmaceutical/medical costs and the need for self-medication and preventive healthcare

## Continued Concerns of Baby Boomers: Nutraceutical Solutions for Joint Health

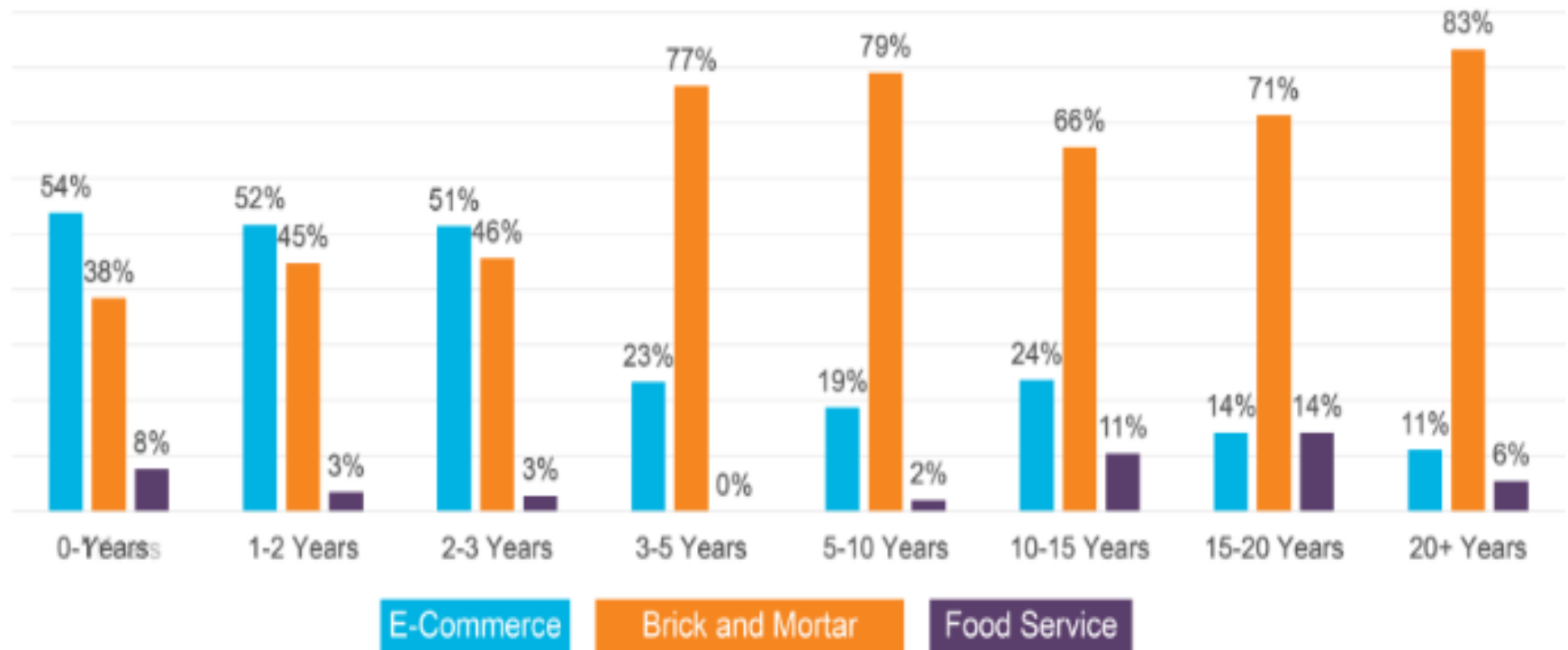
- Self-treatment of joint pain drive the USA Glucosamine DS Market

# Nutraceuticals and Preventive Healthcare

- The ageing Baby Boomer population is about 76 Million in the USA.
- Millennials (born 1981-1996) are expected to surpass the Baby Boomers population this year
- The **older Millennials are now reaching the age of 40** when chronic diseases start to show up—so they are focused on prevention
- There is a rise in lifestyle-related diseases, whose impact can be lessened by making healthier choices earlier in life
- There is a sharper focus by both Baby Boomers and Millennials such as shopping at natural foods stores and consuming health-promoting diets (“super foods”)
- Use of technology (mobile apps) that remind and incentivize people to make better dietary choices and promote exercise could invigorate demand for new DS and FF that promote wellness

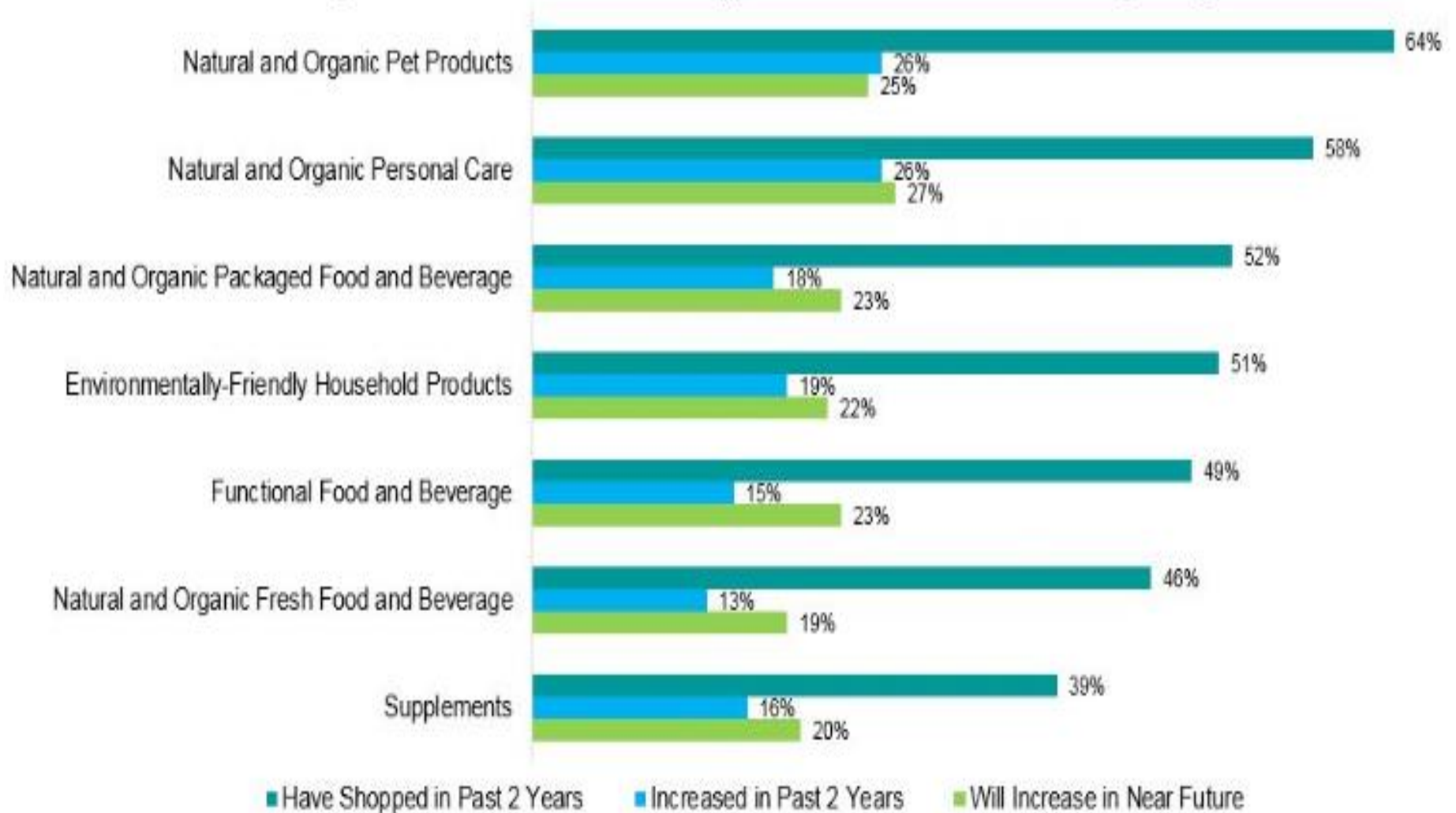
# Over half of 0-3-year-old companies launched online

Survey question: "Through which channel(s) did your company's product(s) launch?"



Source: New Hope Network survey conducted Q1 2018, All Manufacturer Results. Survey question: "Through which channel(s) did your company's product(s) launch?"

## Percentage of Consumers Who Have Shopped E-Commerce in the Following Categories



Source: New Hope Disruptive Retail Study, Q1 2018

# Brain Health and Aging

- The World Health Organization (WHO) predicts:
  - by 2020 over 65 million people will have **dementia**
  - populations are living longer with medical treatments, furthering prevalence of other **neurodegenerative brain diseases**, like Alzheimer's
- There are a range of products in the pipeline that attempt to improve cognitive function
- Enhancing brain glucose metabolism to **delay cognitive decline** and enhance normal brain function are a focus for the pharma industry
- As adults become more aware of cognitive disease, there will be a **greater market for preventative treatments** (Omega-3's, CoQ10, etc)

# Digestive Health

- Gut health issues, from indigestion through to more serious conditions like celiac disease motivate consumers to look to over-the-counter symptom relief
- Estimations are that over **100 million people globally** are effected by 'gut health' problems and the prevalence is rising
- **Probiotics** in dairy products (eg. Yakult, Actimel) help to provide some symptom relief.
- Understanding the **Microbiome and Microflora** in the human intestine (known as gut flora) has lead to probiotic DS and FF that help address poor eating habits and unhealthy lifestyles
- **Gluten and Lactose intolerance** by self diagnosis is driving growth in grain-free and non-dairy plant-based diets (eg. almond milk), claiming to have many other health benefits over cow's milk

# Heart Health

- The impact of cardiovascular disease (CVD) is significant and the number one cause of death globally
- The risk of contracting CVD is associated with lifestyle choices including a poor diet
- Three main opportunities for nutraceuticals in heart health:
  - **reduce cholesterol**
  - **reduce the circulation of free-radicals** (which contribute to plaque formation in arteries)
  - **Breaking down plaque** build up in arteries (fibrinolytic activity)
- Nutraceuticals and finished DS and FF that can demonstrate progress in these areas will have wide-reaching impacts on CVD
  - DS products that focus on cholesterol reduction (e.g. Vitamin E and Omega-3's).
  - DS and FF products which can demonstrate even a small health benefit in this area will prove to be successful

# Endocrine Health & Diabetes

- The WHO estimate that **347 million** people worldwide have diabetes
- Sustained exposure to high blood glucose is linked to the consumption of high fat and high sugar content foods
- Functional Foods which release sugars slowly enable better glucose control which can reduce the impact of diabetes and can also help to prevent the onset of type 2 diabetes
- **Low glycemic** (Low G.I.) sugar substitutes in FF for diabetics is a growing category
- The role of **soluble fibers** and gums in FF and DS that can re-sensitize the body to insulin are being promoted following recent successful clinical trial results

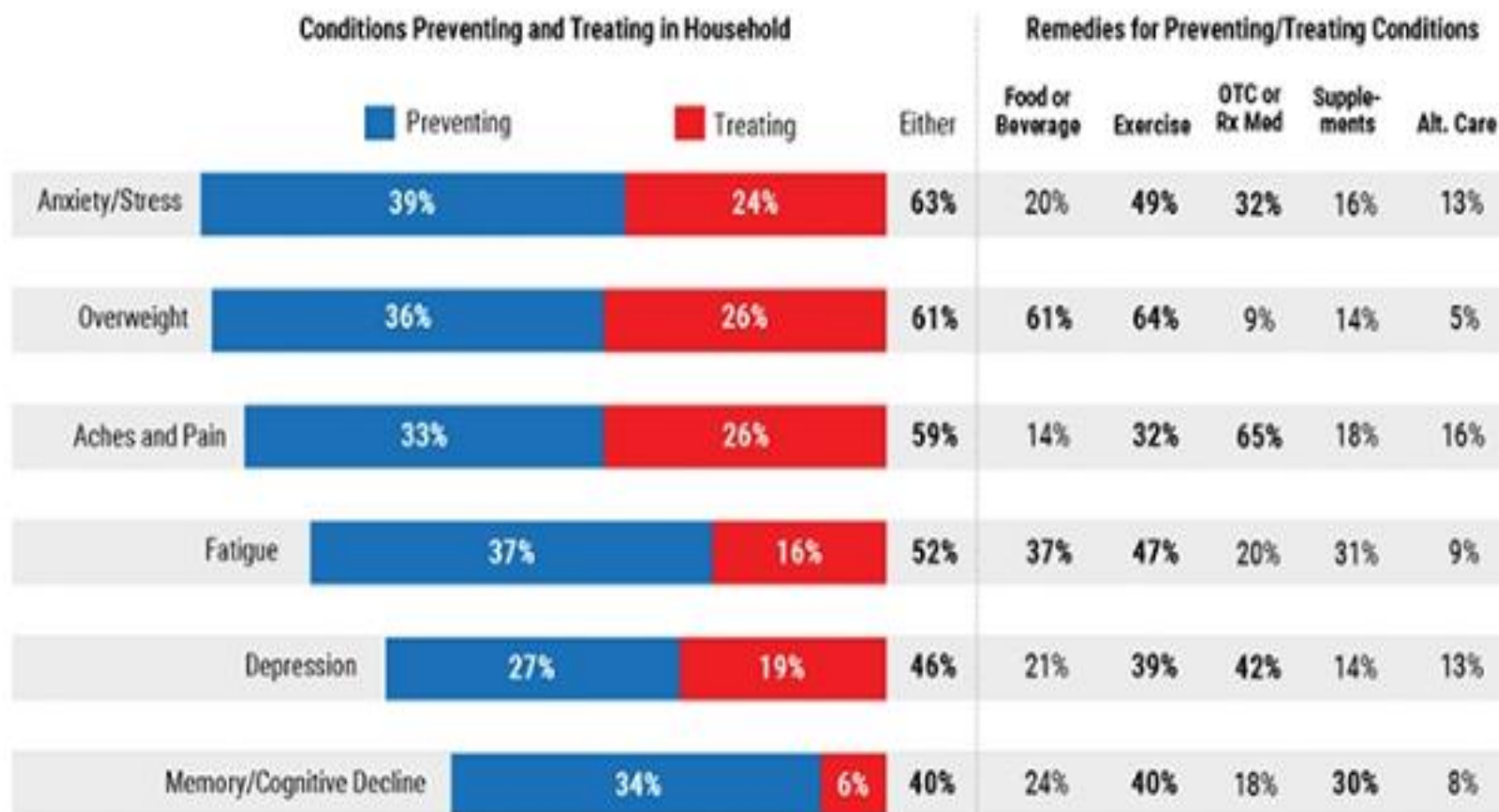
# Diet and Health Management

- **50% of Americans are watching their diet** (65% of those aged 65 and older versus 38% of those aged 18–34)
- **33% of adults** over age 45 tried to lose weight last year compared to 20% of those aged 35 or younger (Packaged Facts 2018)
- **Women focus watching their diet for fat intake, food allergies, gluten/lactose intolerance**, and wanting to lose weight
- **Seniors focus watching their diet for blood sugar control, diabetes, and weight maintenance** (Packaged Facts 2017)
- **16 million U.S. households who have a member who is diabetic are spending \$60 billion USD on food**

# Diet and Health Management

- 7.4 million households have someone who is lactose intolerant are spending \$28 billion USD
- 3.6 million households with gluten sensitivity are spending \$15 billion (Nielsen 2017)
- 69% (157 million) of U.S. adults, are overweight; 33% (82 million), are obese (AHA 2018)
- 42% of U.S. adults are watching calories, which remains the top diet/eating style (FMI 2016)
- 28% percent of U.S. consumers tried to lose weight by dieting in 2017 (Packaged Facts 2017)

# FIGURE 2: Conditions Americans are Trying to Prevent/Treat by Household



Source: Health + Wellness 2019: From Moderation to Mindfulness report, The Hartman Group

Source: The Hartman Group, Health + Wellness 2019: From Moderation to Mindfulness report

# Major Health Issues in the USA:

## Heart Health:

- 37% percent of U.S. adults have coronary vascular disease, and 34% have high blood pressure (AHA 2018)
- 95 million adults have cholesterol levels greater than 200 mg/dL, and 71 million have unsatisfactorily high LDL cholesterol levels (over 130 mg/ dL) (AHA 2018)

## Digestive Health:

- In 2017, 83% of consumers experienced some type of digestive issue –mainly in young adults (Mintel 2017)
- Digestive health is expected to be **the fastest-growing condition-specific supplement category through 2020** (NBJ 2018)

(Source: Food Technology, 2018)

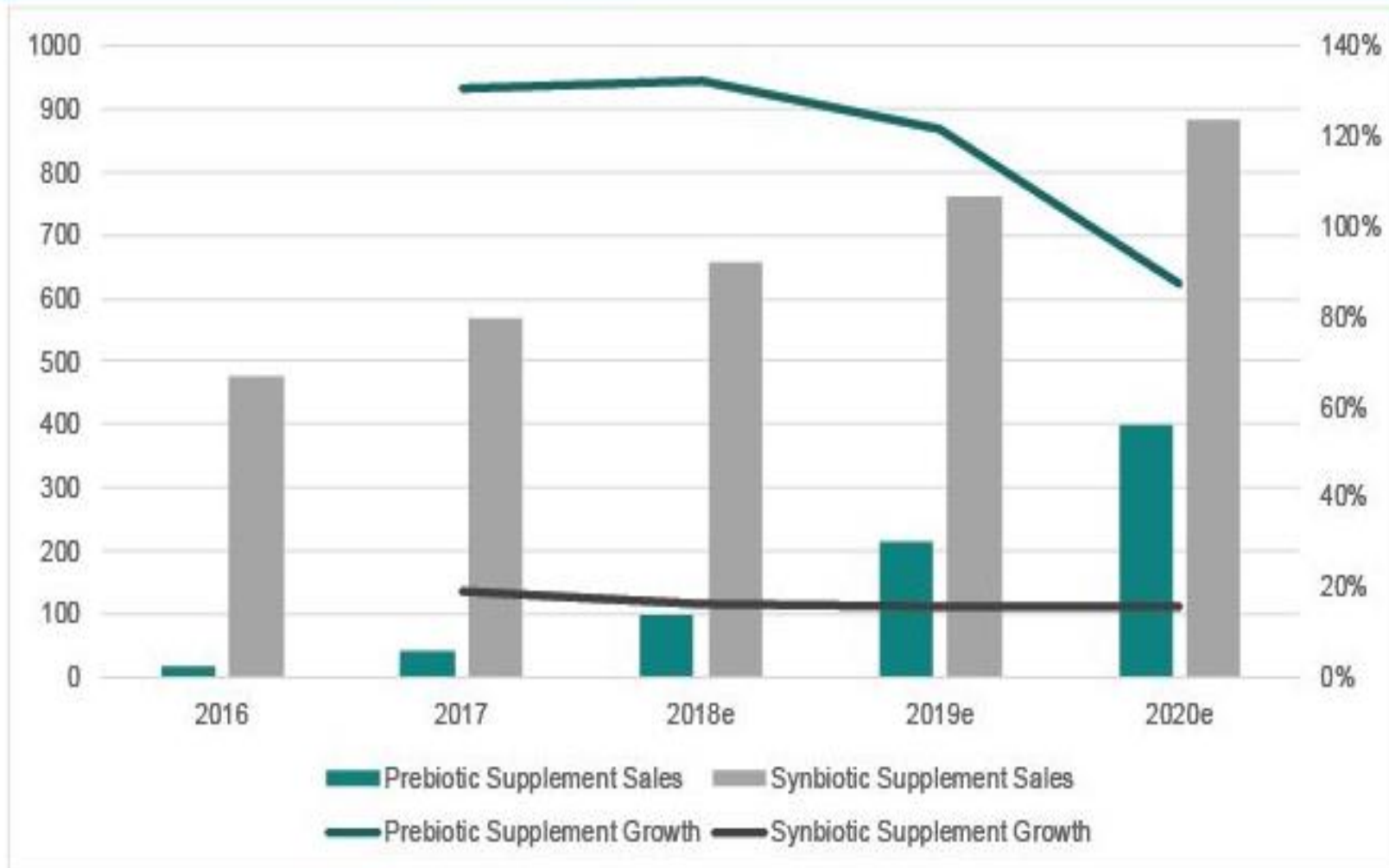
# Major Health Issues in the USA:

## Gut Health--Prebiotic/Probiotic

- **Prebiotic supplements** still represent a small category; they were at \$96.1 million in annual sales in 2018, compared with probiotic supplements at \$2 billion
- Prebiotics represent a huge growth opportunity, with three consecutive years of doubling sales and growth of more than 120 percent
- **Synbiotic supplements**, formulas containing a blend of prebiotics and probiotics, had estimated annual sales of \$658 million in 2018 and growth of 16.2 %
- With slowing growth of probiotics in 2017 and 2018, prebiotic and synbiotic supplements certainly represent the current opportunity in gut health

(Source: Food Technology, 2018)

## Prebiotic and Synbiotic Supplement Sales and Growth, 2016-2020e



Source: Nutrition Business Journal (\$mil., consumer sales)

# Major Health Issues in the USA:

## Glucose Management:

- With 1.5 million new cases per year, **diabetes** remains a growing health threat
- 30 million adults in the USA **have diabetes**, with 23 million doctor diagnosed and 7.2 million undiagnosed (CDC 2017)
- 33% of adults (82 million) have **pre-diabetes**
- New products being marketed in the USA, such as Glucose Health Diabetic-Friendly Iced Tea Mix, which is a **nutritional supplement** targeting diabetics that claims to help the body block absorption of dietary sugars and fats

# Major Health Issues in the USA:

## Muscle, Bone and Joint Health:

- 33% of women aged 55 and older take supplements for bone health
- Bone health supplement sales were projected to reach \$1.2 Billion USD in 2018 (CRN 2017, NBJ 2018)
- Osteoporosis is expected to rise in men aged 70 and older (NIH 2016)
- 75% of adults aged 50 and older are aware of losing muscle with age; 34% are extremely concerned
- Loss of mobility and strength are their top concerns about muscle loss (Abbott 2016)

# Major Health Issues in the USA:

## Muscle, Bone and Joint Health:

- In the USA, 45% of those over 65 years old already have **sarcopenia**, which is defined by low muscle mass and low muscle quality/function
- Only 17% of elderly adults meet the governmental (NIH) muscle strength guidelines
- 55% of those aged 50 and older have trouble rising from a chair (NIH 2016)
- 25% of adults have doctor-diagnosed **arthritis**; two-thirds of those with arthritis are under age 65 (AF 2017)
- 50% of all consumers suffer from **joint pain** (Packaged Facts 2017)
- 25% of those aged 55 and older take a supplement for joint health; this **market reached \$1.7 billion in 2017** (CRN 2017, NBJ 2018)

(Source: Food Technology, 2018)

# Major Health Issues in the USA:

## Eye Health and other Health Issues:

- Eye health is a missed opportunity for Functional Food marketers
- Bausch & Lomb's PreserVision remains the third best-selling multivitamin supplement in the USA (Chain Drug 2017)

## Other prevalent conditions of an aging population:

- **Stroke, circulation, mobility, diverticulitis, and regularity**
- **Non-alcoholic fatty liver** is another fast-emerging condition that affects all ages

# Bioactive Nutrients DS

- 20% of USA adults admit they don't think they get enough of their basic vitamins/minerals
- 30% of Millennials and 24% of adults overall—feel they don't get enough bioactive special nutrients (FMI 2017)
- **Specialty supplements** are the most used DS, taken by 38% of adults, followed by:
  - **herbals/ botanicals, sports nutrition supplements, and weight management supplements** (CRN 2017)
  - **Fiber** is the specialty supplement most **often used by Millennials**
  - Fiber is followed by **probiotics, digestive enzymes, collagen, and keratin** (CRN 2017)
  - Probiotics are projected to be the fastest-growing supplement/ specialty nutritional ingredient, reaching sales of \$2.4 billion in 2018
  - Omega-3s will grow from \$1.2 billion to \$1.4 billion

(Source: Food Technology, 2018)

# Bioactive Nutrients DS

- Plant-based forms of these ingredients are a hot new trend (NBJ 2018)
- **Vitamin D, turmeric, selenium, magnesium, chromium, zinc, bee products, melatonin, digestive enzymes, magnesium, and zinc** are also projected to enjoy explosive growth, along with **marine ingredients** (NBJ 2018)
- 38% of consumers are trying to get more probiotics in their diets in 2017
- Innovative marketers are incorporating probiotics into waters, frozen yogurt, cereals, breads, spreads, bars, and even coffee/tea (Packaged Facts 2017)
- High-fiber foods, powders, and drinks remain in high demand with claims for **heart and digestive health**, as well as **blood sugar** and **appetite control**
- Blueberries top the list of “superfoods” that consumers seek out when shopping for food, followed by **avocado, green tea, kale, cinnamon, coconut, ginger, quinoa, flax, and turmeric** (Label Insights 2017)
- **Turmeric, jackfruit, manuka honey, erythritol, arrowroot powder, cumin seeds, ginger, and flaxseed** were the most popular topics searched on Google among those inquiring about food with a function (Google 2017)

# Bioactive Nutrients DS

## Miscellaneous Bioactives and Herbals:

–Functional **mushrooms** (e.g., chaga, reishi, and cordyceps) are among the top trends Whole Foods (large natural grocery chain in the USA) has identified for 2018

–**Matcha, ginger, yerba mate, moringa, acerola, and MCTs** as a natural source of quick energy are growing in sales

–**Herbal/Botanical** supplements are projected to reach **\$8.3 billion USD in 2018**, up 6% versus 2017 (NBJ 2018)

–**Horehound, cranberry, echinacea, green tea, black cohosh, garcinia, flaxseed/flax oil, ginger, ivy leaf, and turmeric** are the best selling herbal supplements in mass channels; **turmeric, wheatgrass/ barley, flaxseed/flax oil, aloe, elderberry, milk thistle, maca, ashwanganda, echinacea, and saw palmetto** are best sellers in the natural channel (Smith 2017)

# Bioactive Nutrients DS

## Miscellaneous Bioactives and Herbals:

–Florals such as **lavender** are moving into the spotlight. **Ginger, honey, cinnamon, coconut, hibiscus, elderflower, mint, cardamom, and chamomile** are just a few of the botanicals being added to beverages for 2018 (Jacobson 2018)

–Interest grows in the USA for specific amino acids, especially **L-theanine and L-arginine**

–**Caffeine, green tea, carnitine, garcinia cambogia, and protease** are among the top weight loss ingredients for their thermogenic effects

–Metabolic enhancers (eg. thermogenics like caffeine, guarana, etc) once again appearing in functional foods (eg. SlimFast's Belly Busting Shakes)

# Health Benefits of Functional Foods and Bioactive Compounds

Table 3. Examples of Functional Foods, Bioactive Food Components, and Potential Health Effects

<b>Food</b>	<b>Bioactive Food Component/Class</b>	<b>Potential Health Effects</b>
Tomatoes	Carotenoids (e.g. lycopene, beta-carotene), vitamins C and A, and potassium	Supports cardiovascular health, may reduce the risk of certain cancers such as mouth, pharynx, larynx, prostate, and lung cancers
Blueberries	Flavonoids (e.g. anthocyanins, phenolic acids), pterostilbene, vitamins C and K, manganese, and dietary fiber	Supports cardiovascular, metabolic, and brain health, may reduce the risk of cancer such as mouth, pharynx, larynx, and lung cancers
Fermented milk/dairy	Bioactive peptides, probiotics, calcium, and protein	Supports gut, immune, cardiovascular and metabolic health
Walnuts	Ellagitannins, phenolic acids, omega-3 fatty acids (alpha-linolenic acid), phytosterols, melatonin, vitamin E, copper, manganese, and magnesium	Supports cardiovascular and brain health, may reduce the risk of certain cancers such as breast and prostate cancer
Broccoli and cruciferous vegetables	Glucosinolates, vitamins C and K, manganese, folate, potassium, fiber	May reduce the risk of certain cancers such as colorectal, mouth, pharynx, larynx, and lung cancer, cardio-protective, may improve antioxidant defenses
Salmon and other fatty fish	Omega-3 fatty acids	Supports eye, brain, and cardiovascular health
Whole grains	Flavonoids, saponins, lignans, resistant starch, B-vitamins, vitamin E, selenium, manganese, dietary fiber, and protein	Supports gut and cardiovascular health, may reduce the risk of colorectal cancer

# FF and DS for Kids' Health

- The market for products for babies, toddlers, and kids looks promising as Millennials continue to drive a new baby boom
- The number of children aged 1-3 years old is projected to **grow 6.7% from 2015 to 2020**; about **4 million babies** are being born in the United States every year (NCHS 2017)
- Infant formula remains the largest- and fastest-growing healthy food category in the world and is projected to grow at an annual rate of 9.5% from 2017 to 2027 (GIA 2018)
- Follow-on toddler milks are one of the fastest-growing sectors with such products as :
  - “Comforting **probiotics**” (L. reuteri) designed to ease colic, excessive crying, fussiness, and gas while providing complete nutrition
  - Human Milk **Oligosaccharides** is now available in ready-to-feed bottled formula (immune boosting)

# FF and DS for Kids' Health

- U.S. **baby food** sales reached **\$6.4 billion USD** in 2017 (IRI data- PG 2017)
- **Vitamin D, vitamin E, fiber, iron, and calcium** are the most common nutrient deficiencies found in young American children
- **Vitamins D, E, A, magnesium, and calcium** are most often deficient in teens
- For some kids, **protein, iron (for teen girls), and vitamin C** may also be a concern (USDA 2015)
- 33% of kids aged 2–19 are overweight; 12.5 million of them are obese (AHA 2018)
- While parents expect teens to eat what the rest of the household eats, kid-specific products are in high demand by parents of those aged 6–12 (Packaged Facts 2016)
- 49% of moms say that **nutrition is the top food selection factor**; 23% want foods with hidden vegetables (Packaged Facts 2016)

# Functional Foods (FF) Trends

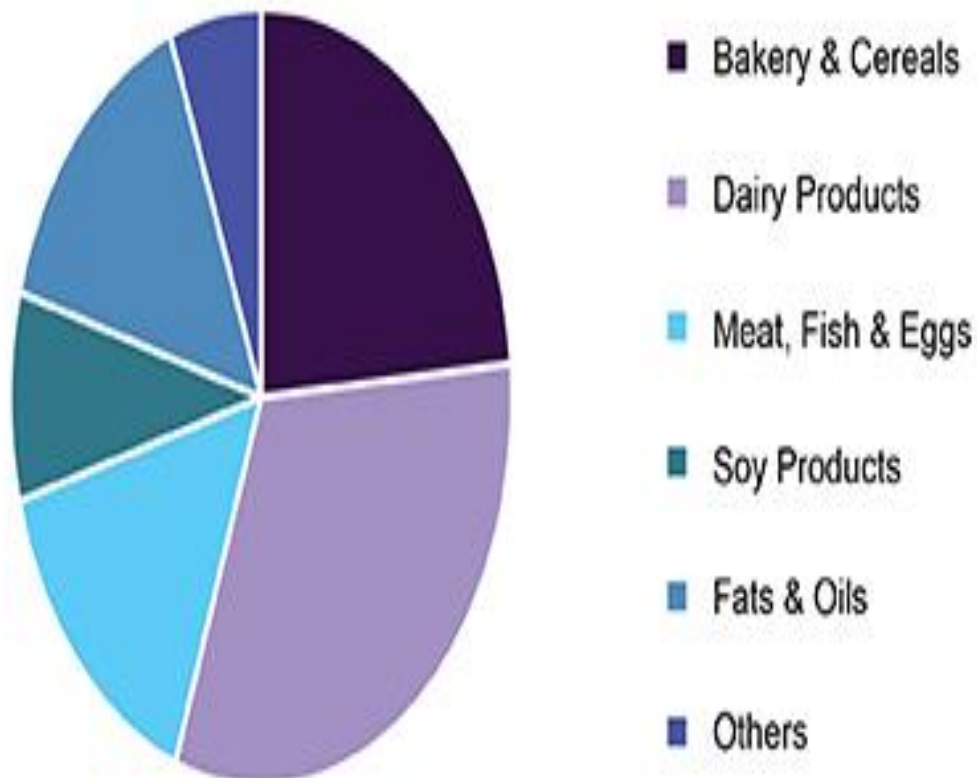
- Instant nutrition
- Everyday performance foods
- Health-enhancing food processing (eg. home-made “smoothies”)
- Worldwide sales of **naturally healthy foods reached \$253 billion USD**; and **functional/fortified foods totaled \$247 billion USD** in 2017 (Euromonitor 2018)
- Organic foods and beverages led global retail value growth with a compound annual growth rate (CAGR) of 7% from 2012–2017
- **“Free-from”** and **“Clean Label”** products had a CAGR at just over **6%**; naturally healthy, **3%** CAGR; and fortified/functional, **2%** CAGR

(Source: Food Technology, 2018)

# Functional Foods (FF) Trends

- The United States is the **largest functional food and beverage market**– but **Asia and Eastern Europe** are driving sales (Euromonitor 2018)
- **Better-for-you options**, however, posted slightly negative growth:
  - consumers continue to associate products formulated with reduced fat, sugar, salt, and caffeine with over-processed foods
  - In North America, sales of reduced-fat packaged foods and reduced-sugar soft drinks each **fell 5%** in 2017 (Euromonitor 2017)

## Global functional foods market share, by product, 2018 (%)



Source: [www.grandviewresearch.com](http://www.grandviewresearch.com)

# The Future of FF in the USA

- Nearly two-thirds of adults said that **healthfulness had a significant impact** on their food and beverage purchase decisions last year (IFIC 2017)
- **55% of adults** said they lived a healthier lifestyle last year
- **Feeling good** was the top motivation for living a healthier lifestyle (Mintel 2017)
- **70% of Millennials, 60% of Gen Xers and 64% of Baby Boomers** say they're taking a more holistic approach to their health (Wyatt and Levin 2018).

# FIGURE 7: Dietary Approaches by Age (Percent of Households Following Specific Diets)

Among all regular shoppers

**33%** of households say they have at least one member following at least one non-medically prescribed dietary approach (49% Gen Z, 38% Millennials)

Households with kids:  
5% vegan, 11% vegetarian



# The Future of FF in the USA

## How USA consumers define a “healthy food”:

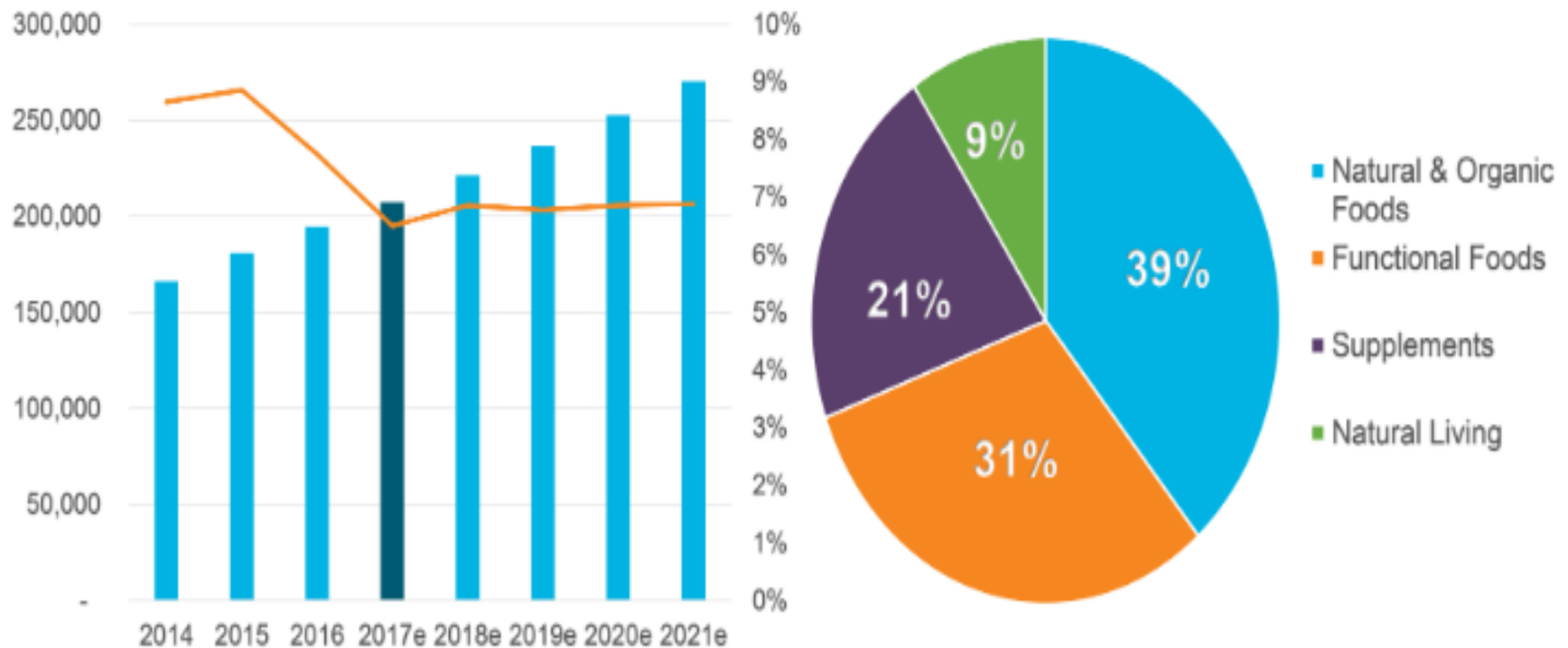
- **High in nutrients/healthy components**
- **“Free- from” artificial ingredients (IFIC 2017)**
- **80% are concerned about the nutritional content** of their food; 29% are very concerned (FMI 2017)
- **Drinking more water, eating more fruits and vegetables**, and making small dietary changes were the steps consumers took in 2017 to eat more healthfully.
- **Weight concerns** were the top reason they made dietary changes (IFIC 2017)

# Fresh, Natural and Organic

- 50% of USA consumers **bought more natural and organic foods** and beverages last year
- 50% of USA consumers prefer to eat foods that are “**free-from**” **artificial additives** (Packaged Facts 2018)
- 33% of adults **shopped in a natural food store** in 2017 (Packaged Facts 2017)
- Sales of foods and beverages (2017):
  - “nothing artificial” claim **rose 3.6%**
  - “all-natural” products **rose +7.8%**
  - “free of additives and artificial ingredients **rose +8%** (Nielsen 2017)
  - 33% of all U.S. foods and beverages and 25% of dairy offerings are now **clean label** (Nielsen 2018)

# U.S. NP industry passed \$200 billion in 2017

U.S. Natural and Organic Product Industry sales grew 6.5% to \$207B in 2017. Natural, organic and functional F&B sales = 70% of sales.



Source: *Nutrition Business Journal* (2017 preliminary estimates; \$mil, consumer sales)

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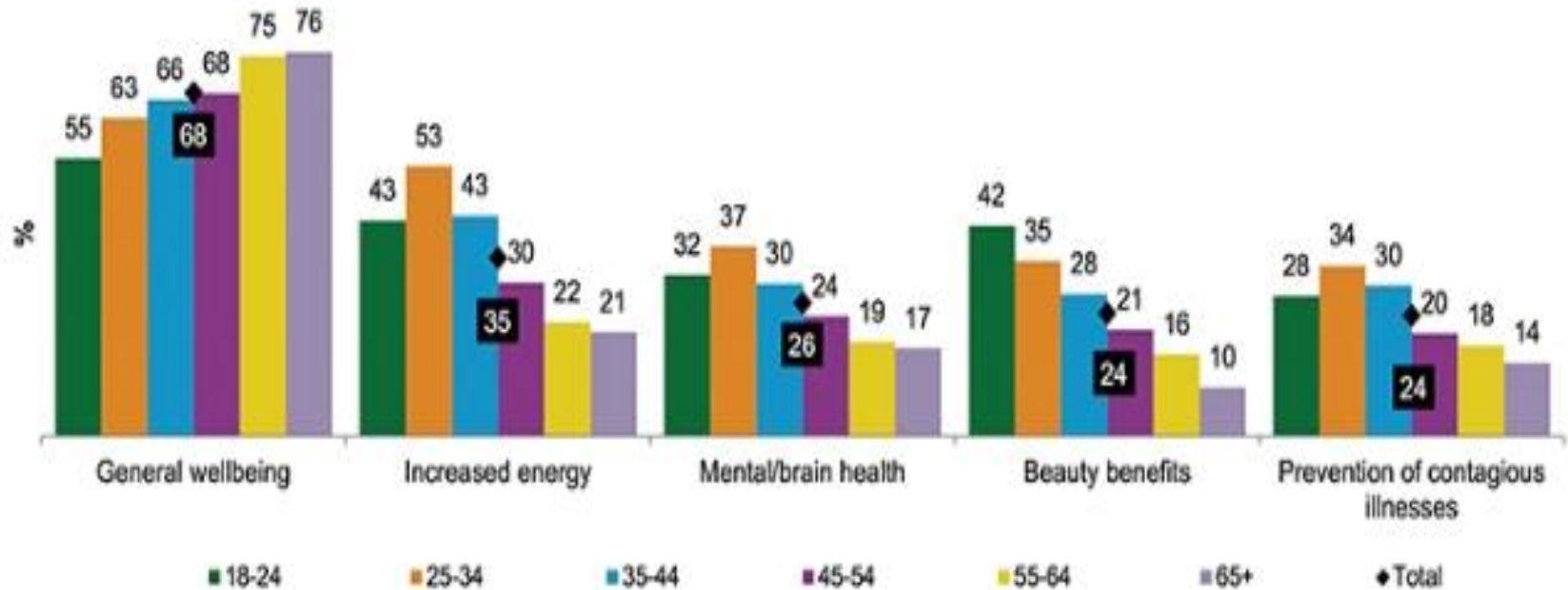


# Shift in Demographics

- The maturing Millennial generation are having children of their own
- About **45% of U.S. adults are aged 50 and older**, with the oldest Boomers aged 73
- This shift in demographics will **drive consumer emphasis towards fortified, functional foods (FF)** and naturally nutrient-dense foods.
- Concerns about **getting older, a new health condition, lack of energy, and having a baby** are among the top motivators for taking action for health (Hartman 2015)
- Americans have shifted their food buying decisions from one based primarily on form (e.g., water or coffee) to one based on **the product's benefits** (e.g., Cheerio's Protein)
- This allows marketers to increase potential revenue by **competing across multiple categories for the same benefit** (IRI 2017)

FIGURE 5: Reasons for Taking a Specific Type of Supplement by Age

"I take vitamins, minerals, or supplements for..."



Base: 1,698 internet users aged 18+ who use vitamins, minerals, or supplements

Source: Lightspeed/Mintel

Base: 1,698 internet users aged 18+ who use vitamins, minerals, or supplements

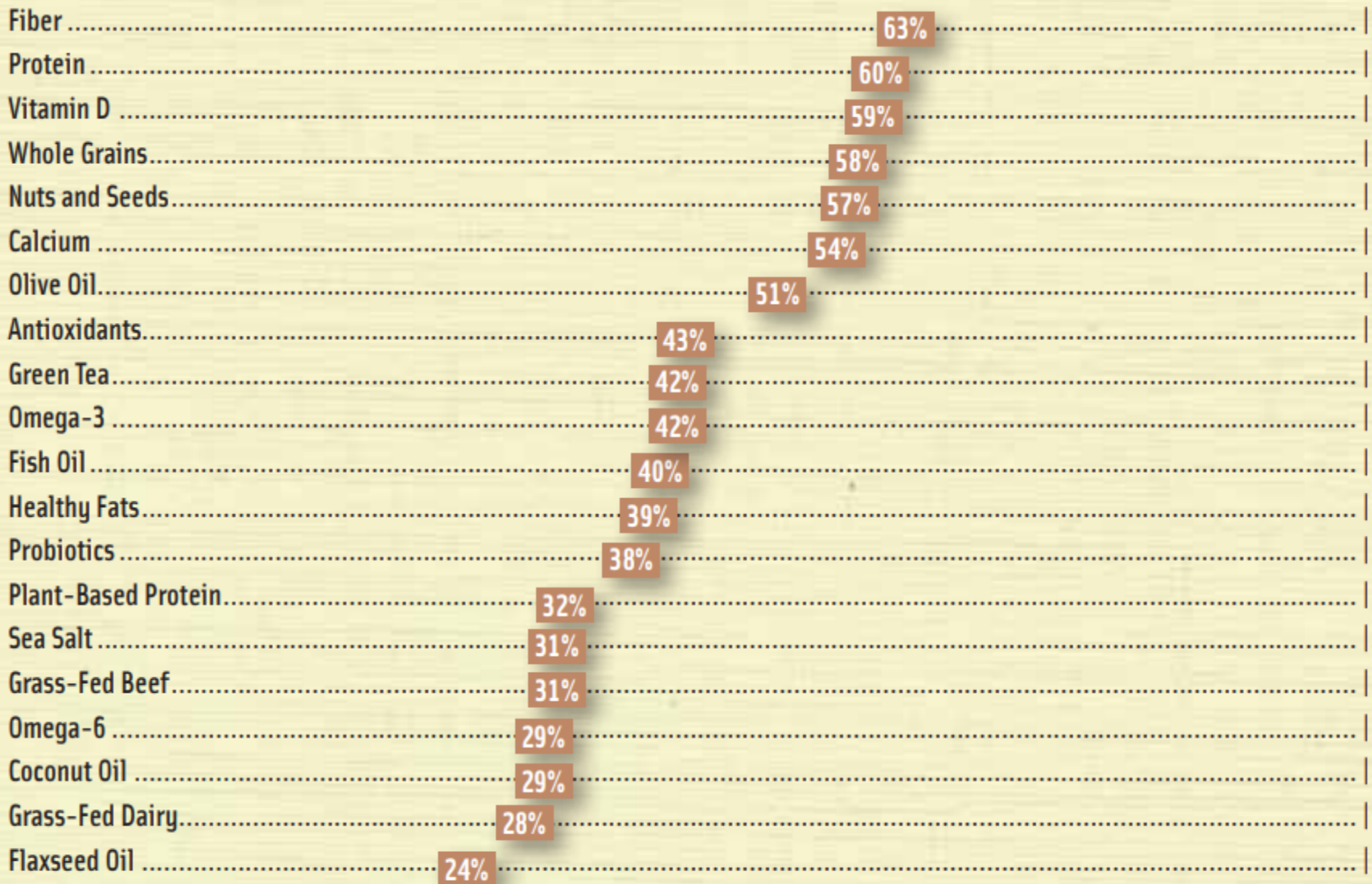
Source: Mintel, 2018

# Future FF Trends in the USA:

- Instant Nutrition
- Quick and easy ways to ensure a healthier lifestyle
- Highly fortified nutritionals
- Functional snacks, and naturally nutrient-dense munchies (e.g., nuts)
- USA consumers continue to try foods and beverages with added vitamins/minerals
- 63% percent tried to add more fiber, and 60% sought more protein (Hartman 2017—see next slide)

**Figure 1. The Top 20 Foods and Ingredients Americans Are Adding to Their Diets. (% of consumers who say they are trying to add)**

From The Hartman Group 2017



(Source: Food Technology, 2018)

# Future FF Trends in the USA:

- Dollar sales of **meal replacements** and liquid nutritionals jumped **9%** in mass channels in 2017 (IRI data)
- Aging Boomers: Sales of **adult nutritional products** (e.g., Ensure) climbed by **25%**; and **nutrition/health bars** were up **18%** (Chain Drug 2017)
- Dollar sales of Premier **Protein drinks for weight loss and for children** shot up **84%** (SlimFast, +51%; and PediaSure, +12%) (Chain Drug 2017).
- “Kind” brand Nuts & Spice **nutrition bars** led the bar category, with sales up **16%**; Think Thin bar sales were up **20%** (Johnson 2017)
- **Sports nutrition and protein powders** are projected to reach sales of **\$5.4 billion USD**, up **6.6%** in 2018 (NBJ 2018)

# Future FF Trends in the USA:

- **Functional Beverages** were the fastest-growing specialty food item over the past two years (SFA 2017):
  - 56% buy nutritional shakes for protein
  - 36% for weight loss
  - 23% for athletic performance
  - 21% for superfood ingredients
  - 16% for a specific health condition
  - 40% of adults skip breakfast in favor of drinking a meal replacement beverage
- **Nutrition Bars:**
  - 48% buy nutrition bars for protein
  - 26% for weight loss
  - 20% for athletic performance
  - 19% for superfood ingredients
  - 10% for a specific condition (Packaged Facts 2017)

(Source: Food Technology, 2018)

# Future DS Trends in the USA:

- 76% of adults used dietary supplements (DS), an all-time high (CRN 2017)
- DS sales reached \$49 billion, up 6.2%, driven by increased use among Millennials (NBJ 2018)
- 73% USA adults took a multivitamin (CRN 2017)
- Sales of functional snacks are projected to reach \$8.5 billion by 2020, up 11% per year (NBJ 2018)
- 60% of consumers want snacks that deliver health benefits beyond nutrition, up 8% over 2016; 59% want vitamins/ minerals, and 57% seek an energy boost (Wyatt 2017)
- Top 10 dollar growth Snack categories (2017 IRI data):
  - No-/low-sugar fruit snacks, smoothies, appetizer rolls/snacks
  - low-sugar trail mix, snack-size fresh produce
  - refrigerated handheld non-breakfast entrees
  - meat snacks/ jerky

(Source: Food Technology, 2018)

# Future Snack Trends in the USA:

## Healthy Snacks:

- Seventy-five million U.S. households buy nuts as a healthy snack
- 47 million buy jerky
- 27 million buy fruit snacks (Packaged Facts 2016a)

## –New Snack Product Introductions for kids:

- Jif Power Ups are a wholesome, new peanut butter–based snack for kids
- Dannon introduced Activia Probiotic Dailies drink shots
- Ehrmann introduced High Protein Milk Shots with 20 grams of protein

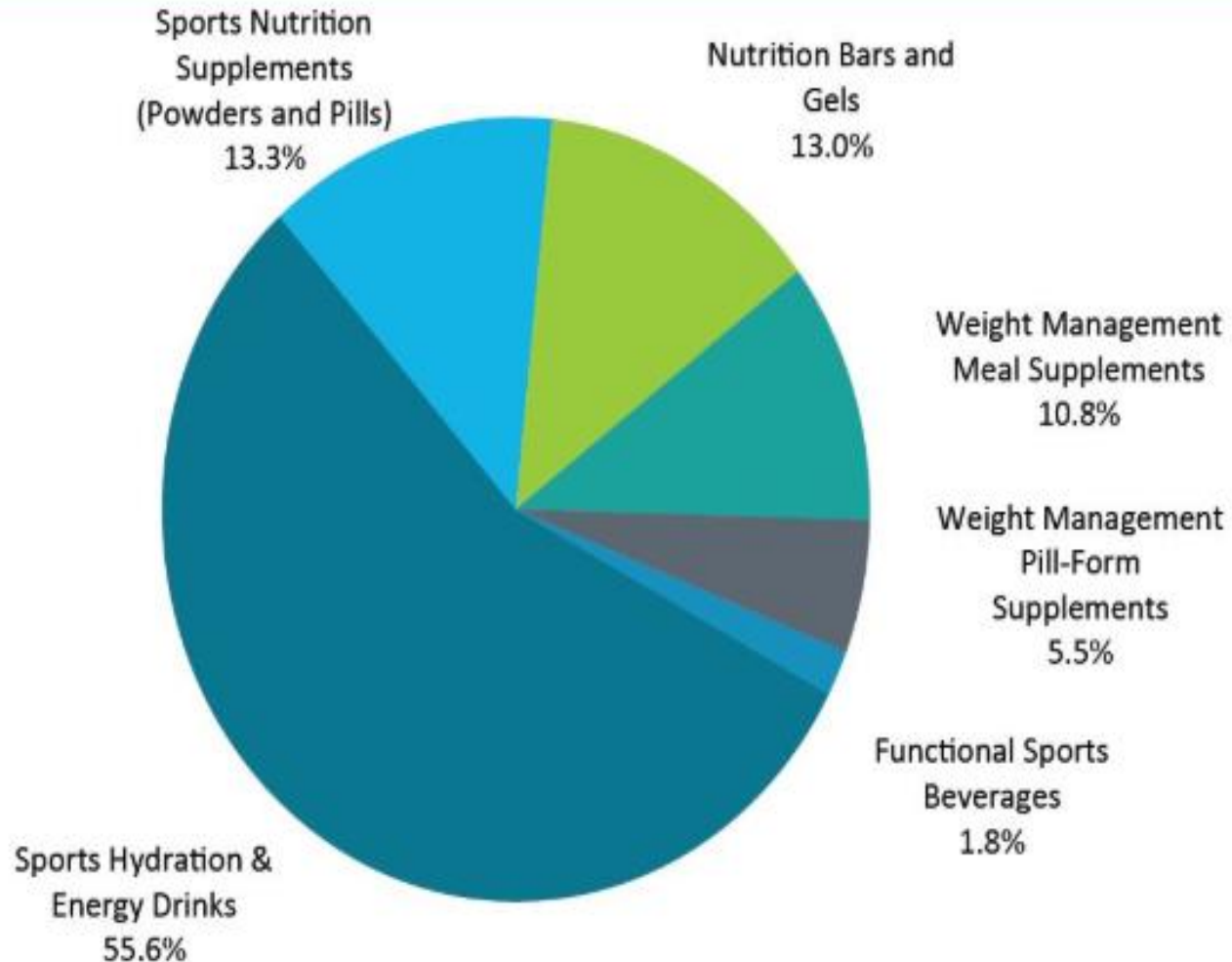
# Fit Consumers

- New demographic of **active and fit consumers** who incorporate exercise into their daily routine, driving the \$42 billion U.S. sports nutrition sector in to the mainstream
- **45% of U.S. adults** described themselves as active:
  - 55% of adults over 65 versus 38% of those aged 18–34 (Mintel 2017)
- Being able to **maintain normal activity and mental sharpness** with age are the top health concerns in the United States
- **Lack of energy, muscle tone, stress, back/neck pain, and mental sharpness** are now among the top U.S. health concerns (HealthFocus 2016)
- **40% of U.S. consumers manage their diet** to ensure they have sustained energy to get through the day (Hartman 2016)

# Fit Consumers

- Functional Beverages:
  - **37%** percent of adults consume sports beverages; 13%, energy drinks; and 4%, energy shots (Packaged Facts 2017)
  - Sports and energy drink sales are projected to **reach \$23 billion USD** in 2018, up **5%**; **hardcore sports beverages** will reach **\$928 million USD**, up **15%** (NBJ 2018)
  - Increases in **Ready-to-drink** (RTD) coffee (up **14%**) and teas (up **7%**) in 2017
  - Sports beverage sales grew **5%** and energy drinks **4%** (per IRI data-BI 2017)

# \$37.5 Billion U.S. Sports Nutrition and Weight Management Industry by Category



Source: Nutrition Business Journal (\$mil., consumer sales)

# Functional Foods for Health

## Brain Health:

–80% of Millennials and 67% of Gen Xers and Boomers believe that food impacts their energy and mental clarity (Brush 2017)

–70% of USA consumers want more foods and beverages to help with **maintaining/improving brain health** (FMI 2016).

–Brain health/cognition/alertness topped the list of the **biggest new opportunities for targeted nutrition products** in a 2017 survey of nutraceutical manufacturers (Polito 2017)

## Survey of other Targeted Nutrition Products:

–gut health, anti-aging, weight management

–diabetes, immunity, joint health, mood, and heart health (Polito 2017)

(Source: Food Technology, 2018)

# Functional Foods for Health

## Other Health Concerns of USA Consumers:

–66% of consumers are looking to foods and beverages to help build their **physical strength and muscle** (FMI 2016)

–Only 30% of those aged 18–34 meet the National Institute of Health’s (NIH) guidelines for **muscle-strengthening** activities (AAOS 2016)

–**Stress and sleep** are other emerging functional food and drink opportunities

–**82% of adults have trouble sleeping** at least once a week, opening up opportunities for late-night snacks and calming drinks, especially teas (Packaged Facts 2017)

# Healthy Fats

- After decades on the “most wanted list” of nutritional villains, **full-fat foods, including butter, are back** in dietary vogue
- Fat-rich weight loss diets such as the **Keto and Paleo diets** are contributing to this trend.
- Whole milk sales jumped **4%** to **\$4.8 billion USD** in 2017 (per IRI-Canning 2018)
- Yogurt eaters who prefer regular **full-fat yogurt increased to 48%** in 2017 (Packaged Facts 2018)
- Sales of ice cream with a “good source of protein” claim **rose 27%** (Nielsen 2017).

# “Natural” and “Clean Label”

- “Clean label” and “natural” food movements are now mainstream in the USA
- 53% of consumers say the exclusion of undesirable ingredients is more important than the inclusion of beneficial ones (Nielsen 2017)
- 50% of all grocery shopping trips now include a clean label food and/or drink (Nielsen 2017)
- New age natural beverages posted the highest dollar gains for clean labels in 2017, **up \$145 million** (Nielsen 2017)

# “Natural” and “Clean Label”

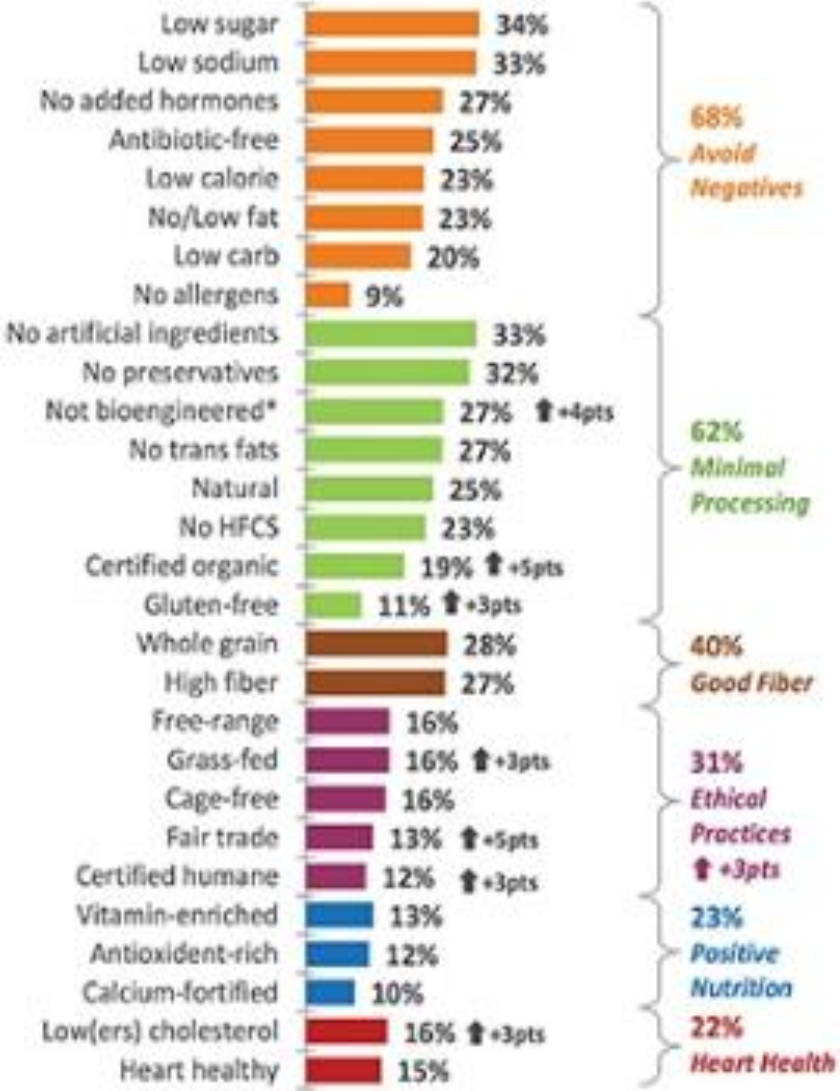
- **90%** of the milk/dairy alternatives category is now clean label, 83% of sugar/sweeteners, 57% of baking supplies, and 40% of diet/nutrition products (Nielsen 2017)
- **Grain-free**, cruelty-free, grass-fed, corn-free were **the fastest-growing health and wellness claims** by dollar sales growth in 2017 (Nielsen 2018)
- **Foodborne illness and chemicals** remain the top food safety issues
- Concerns about **carcinogens and pesticide residues** are on the rise (IFIC 2017)

**Figure 2. Leading Product Claims on Packaged Foods and Beverages (% of adults who said they purchased a product with this claim)** From Packaged Facts



(Source: Food Technology, 2018)

**FIGURE 8: Product Claims Consumers Seek When Purchasing a Food or Beverage**

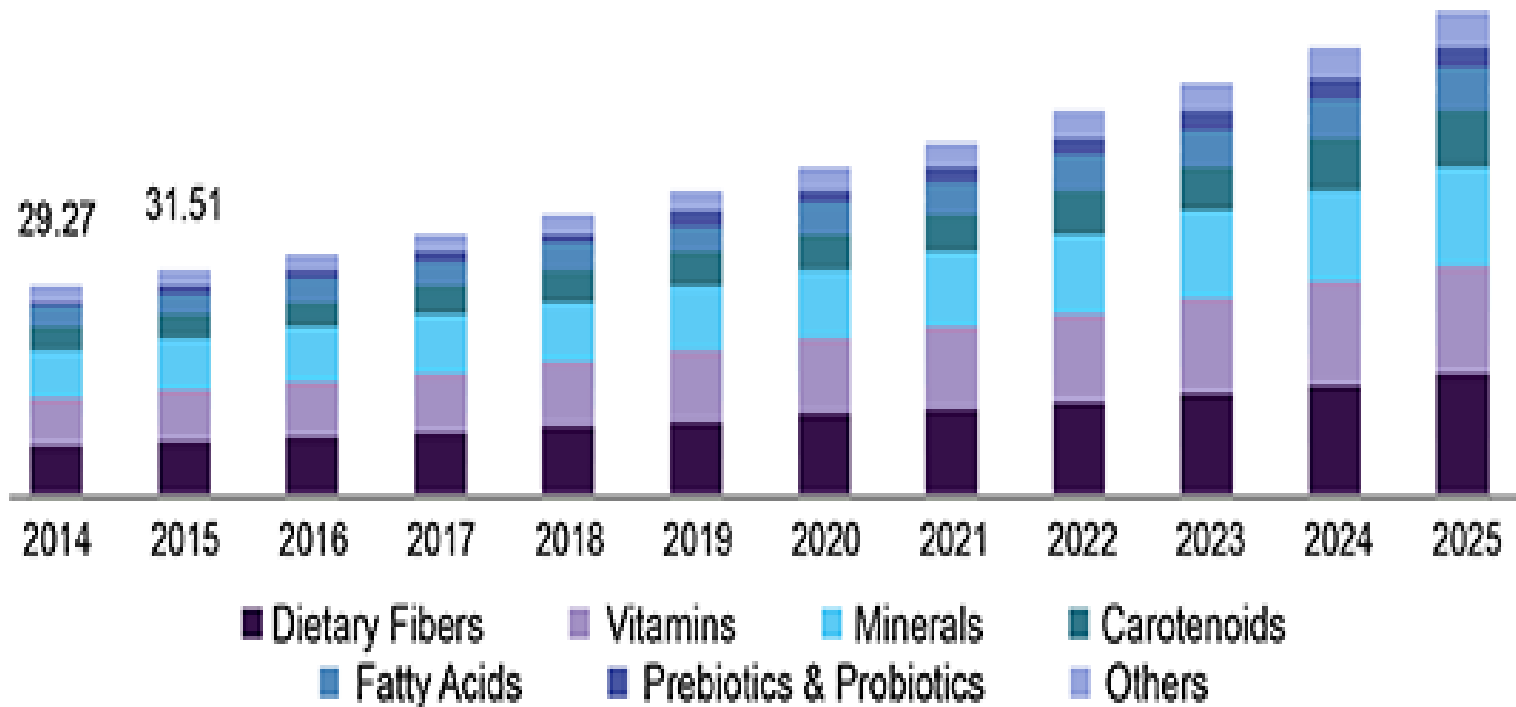


Source: Food Marketing Institute, 2019

# Nutraceutical Market Segmentation

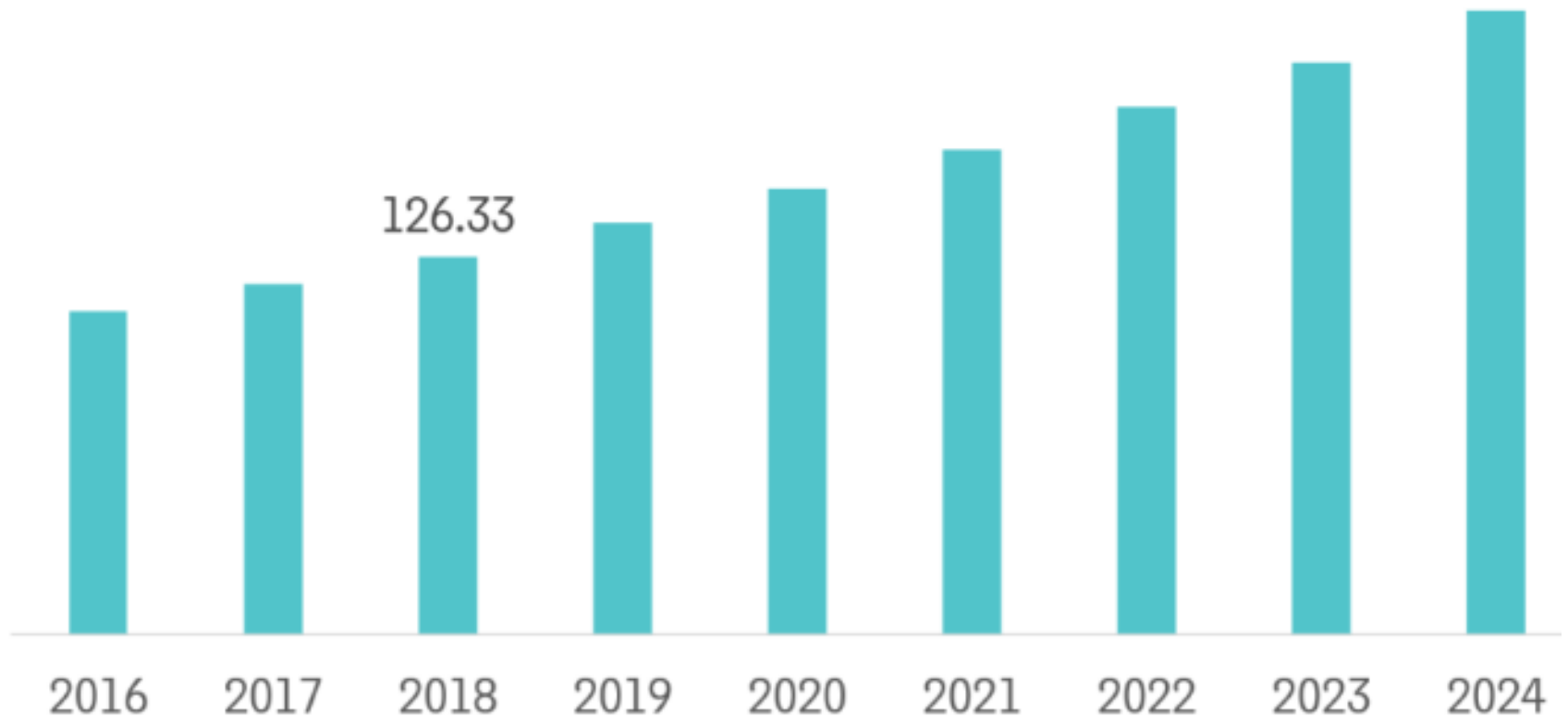
- The Nutraceutical market is segmented into:
  - Functional Food (FF)
  - Functional Beverage (FB)
  - Dietary Supplement (DS)
  - FF are further categorized as:
    - Cereal/bakery, confectionery, dairy, snacks, other functional foods (FF)
    - functional fats and oils, meat, and baby food
  - FB are further categorized as:
    - Sub-segmented as energy drinks, sports drinks, fortified juice, dairy and dairy alternative beverages, and other functional beverages
    - Other functional beverages include RTD tea, coffee, and enhanced water
  - DS are further categorized as:
    - Vitamins, minerals, botanicals, enzymes, fatty acids, proteins, and other dietary supplements
    - Other dietary supplements include probiotics, prebiotics, flavonoids, flavones, carotenoids, beta carotene, etc.

## U.S. functional foods market size, by ingredient, 2014 - 2025 (USD Billion)



Source: [www.grandviewresearch.com](http://www.grandviewresearch.com)

## Nutraceutical Market : Revenue in USD billion, Functional Beverages, 2016 - 2024



Source: Mordor Intelligence



# Future Markets--CBD and Hemp

- Cannabis products such as Hemp and CBD are making its mark in the industry
- It is mostly entrepreneurial now—but will continue to grow once the regulatory climate in the U.S. is normalized
- Hemp CBD supplements grew by 57% in 2018
- Many large functional food players are sitting on the side lines until Federal regulations are established

# Future Markets--CBD and Hemp

- CBD is driving stronger growth than has been seen in a decade in both sleep supplements and mood/mental health supplements
- Functional Foods and DS with CBD oils are literally eating away at sales of more traditional ingredients like St. John's Wort and melatonin

# The CBD Opportunity

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**2017**

- First year hemp-derived CBD products outpace marijuana derived products sales.
- U.S. CBD industry hits **\$367M** (hemp and cannabis derived) –**40% growth** from year prior (*New Frontier Data report*).<sup>2</sup>

**2018**

- CBD market hits **\$591M**.<sup>2</sup>

**2022**

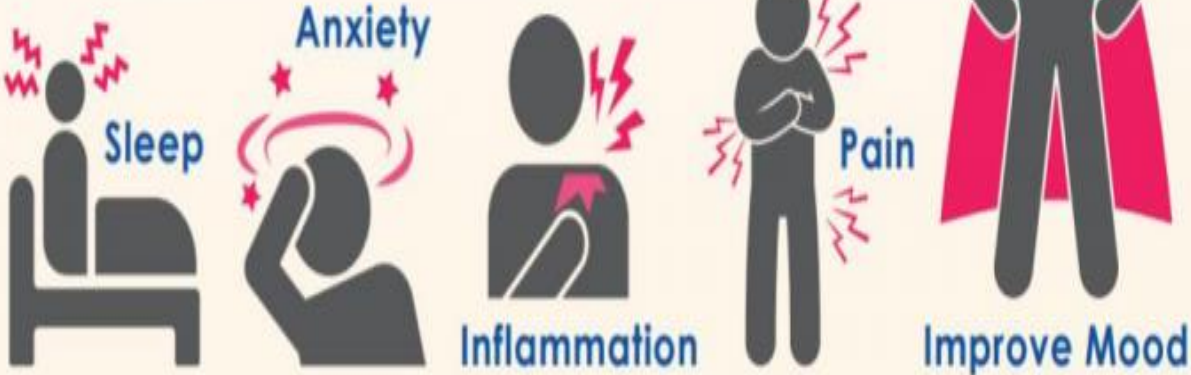
- CBD market expected to hit **\$22 Billion**.<sup>2</sup>

(Source: Bloomberg.com, 2018)

# Overview of the marketplace

The North American Cannabis Industry will reach **\$80B** By 2030

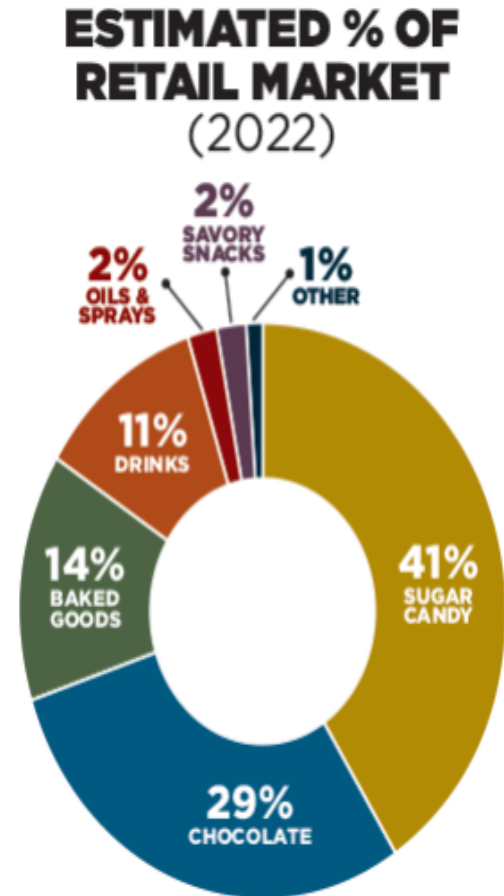
## Leading Reasons for Cannabis or CBD Usage



# Overview of the Retail Marketplace

## Sales keep growing for edibles

- Sugar Candy: annual growth of 15.94%, sales projected to hit \$2.2 billion in 2022
- Beverages: annual growth of 15.39%, sales projected to hit \$587.8 million in 2022
- Baked goods: annual growth of 14.12%, sales projected to hit \$748.1 million in 2022



# Summary

- Baby Boomers and aging Millennials in the USA are driving the growth of the Functional Foods (FF) and Dietary Supplement (DS) industries
- There hasn't been a more influential lifestyle shift in the past few decades than the desire of aging Baby Boomers to lead an active, healthy, and convenience-oriented life
- New conditions of aging, an increase in the number of infants/young children (offspring of the Millennial generation) and pervasive concerns over a lack of energy (with greater stress and anxiety) will cause consumers—both young and old—to further embrace Functional Foods and Dietary Supplements
- This will lead to great market opportunities and growth for FF and DS marketers

**Thank you!**



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