Protein Supplement Market Resarch

Contents

Introduction

Protein products are increasingly being marketed in supermarkets to ordinary people. Do they serve any real purpose for non-athletes?

The "sport-related" protein product sector is booming. It's estimated that the world will be chewing and gulping down £8bn a year of bars, drinks, and other supplements by 2017.

But there's now a wave of products where the branding marks a departure from the traditional world of the protein supplement.

The classic protein drinks have usually been characterised by displays of over-sized bottles and tubs, often with labels depicting rippling torsos. The powders and bars targeted hardcore gym-goers and amateur athletes.

The typical customer was someone who wanted to build muscle and aid recovery after a serious workout.

But the latest generation is positioned more around healthy lifestyle.

In the UK, a "high protein dairy drink" called Upbeat is the latest product to get a big marketing push. It follows the path blazed by For Goodness Shakes, a drink primarily aimed at gym-goers and athletes that was picked up by a wider pool of buyers.

Similar lifestyle protein products can be seen in the US on the shelves of the likes of Wal-Mart, K-Mart, Walgreens, and CVS.

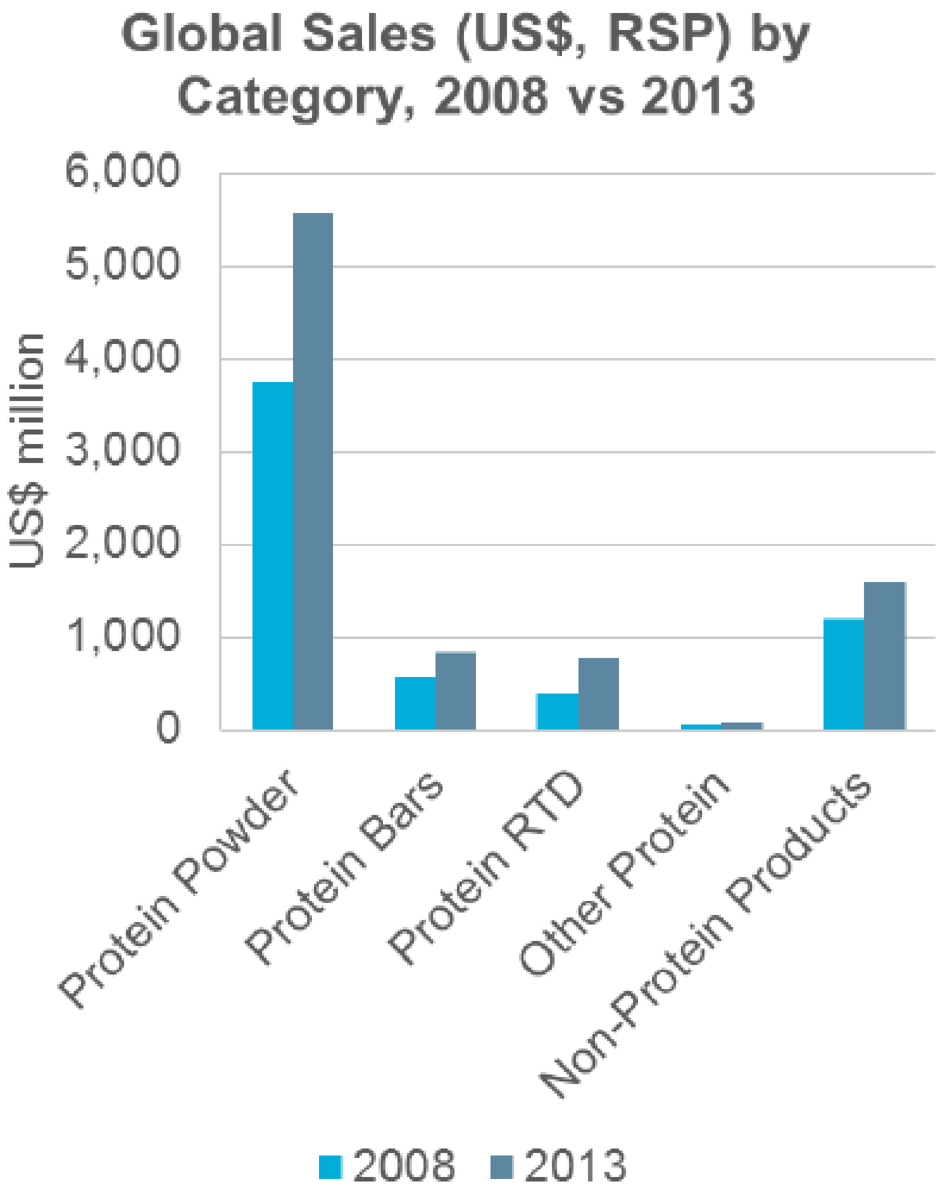
Market

Protein products dominate sales globally

Traditional protein powder account for the lion’s share of global category sales

Protein is the most accessible and understandable sports nutrition ingredient

Non-protein products are beloved by the core users, but can be a harder sell for casual users

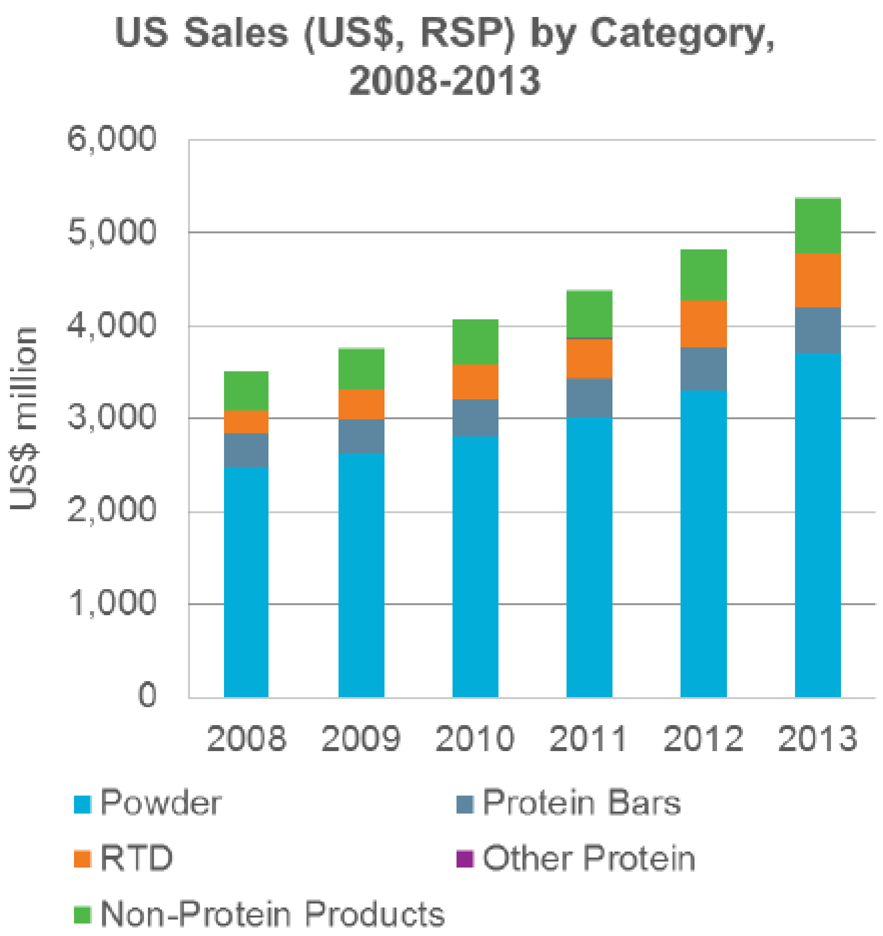


The United States dominates the global market

The United States accounts for over 60% of global sales

American consumers are open to supplementation and increasingly invested in fitness

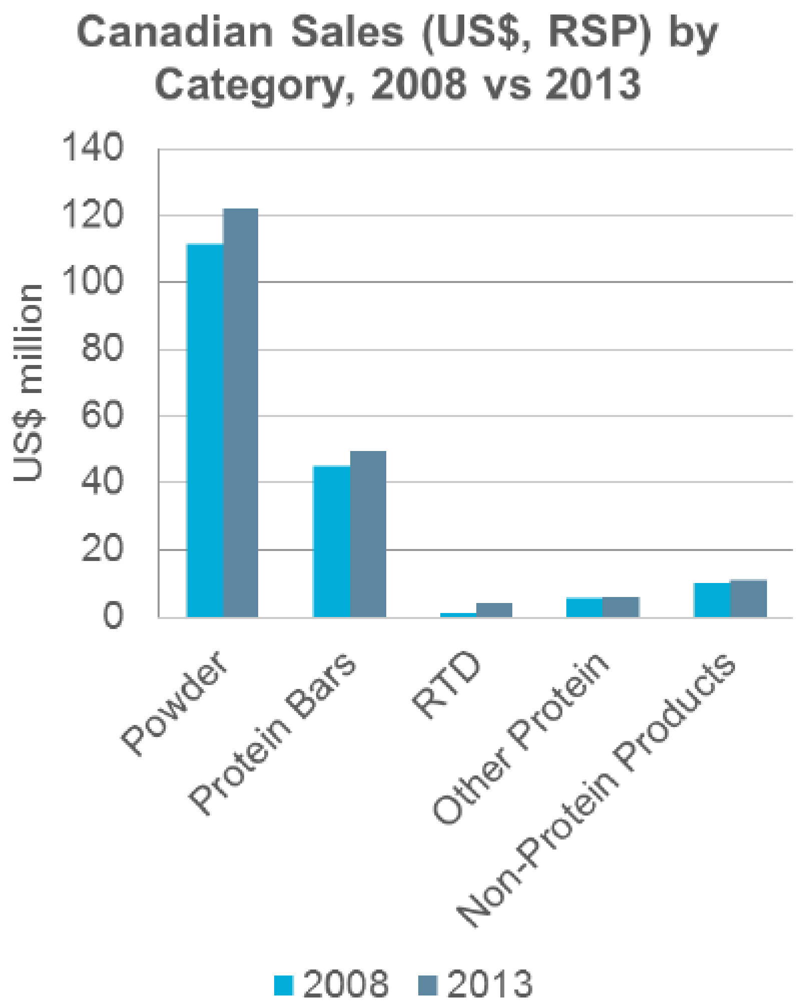
US benefits from high incomes, lax regulations, and world-class fitness and athletics infrastructure



Canada is the world’s sixth-largest market, despite a population of only 35 million

Value sales are expected to grow by over US$40 million to US$234 million through 2018

In addition to sophisticated domestic producers, Canada benefits from direct investment by top US producers



Consumption of sports nutrition is highest in the most developed markets

Sporting culture and supplement regulation play a considerable role in usage

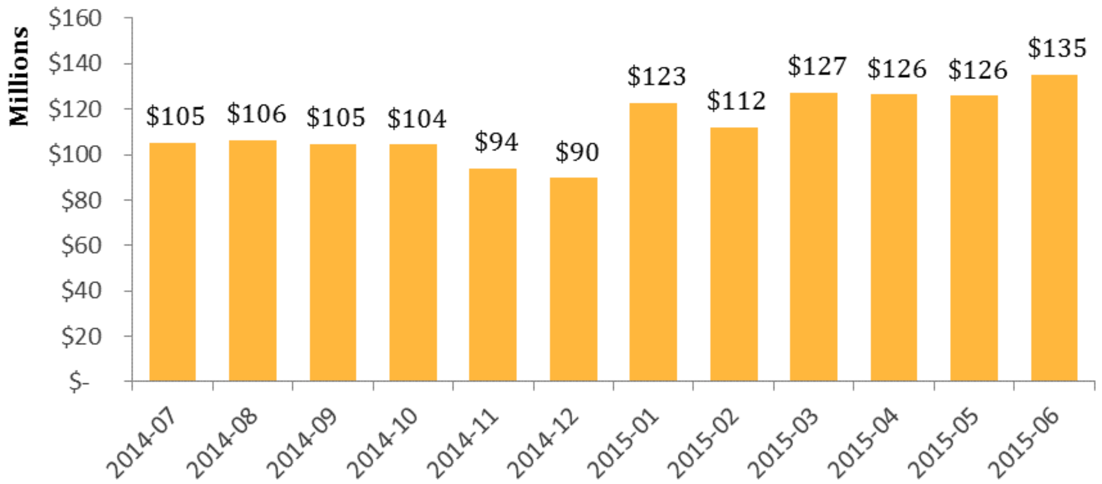
High price points are a barrier to experimentation in low-income markets

Institutional sales (not tracked) are considerable in some developing markets

E-commerce Market Share Report: Protein Supplements

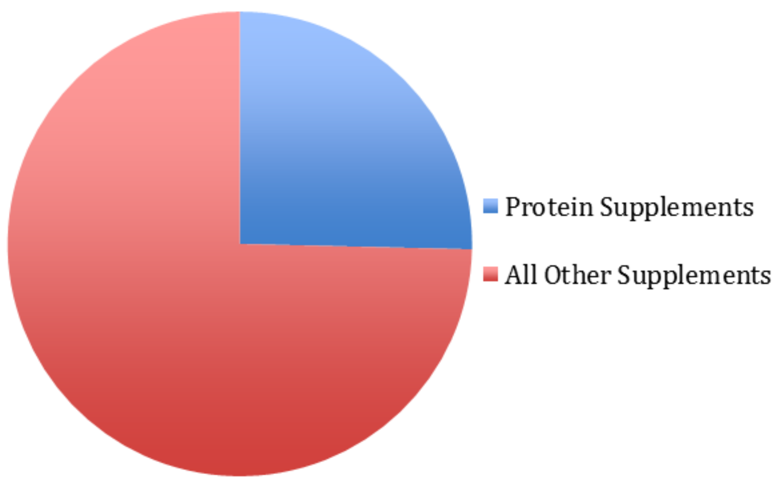
1010data's Ecom Insights team recently analyzed online sales in the health supplement industry for the past 12 months ending June 2015. The data was gathered from purchases anonymously tracked by 1010data's consumer online shopping panel consisting of millions of consumers in the U.S.

What we found is that online shoppers love protein. We estimate that consumers spend about $1.4 billion per year online on health supplements in the U.S. and has grown by over 30% in the past 18 months. In the past 12 months, we estimate that consumers purchased 55 million units of over 34,000 distinct health supplement items at an average price of $25.



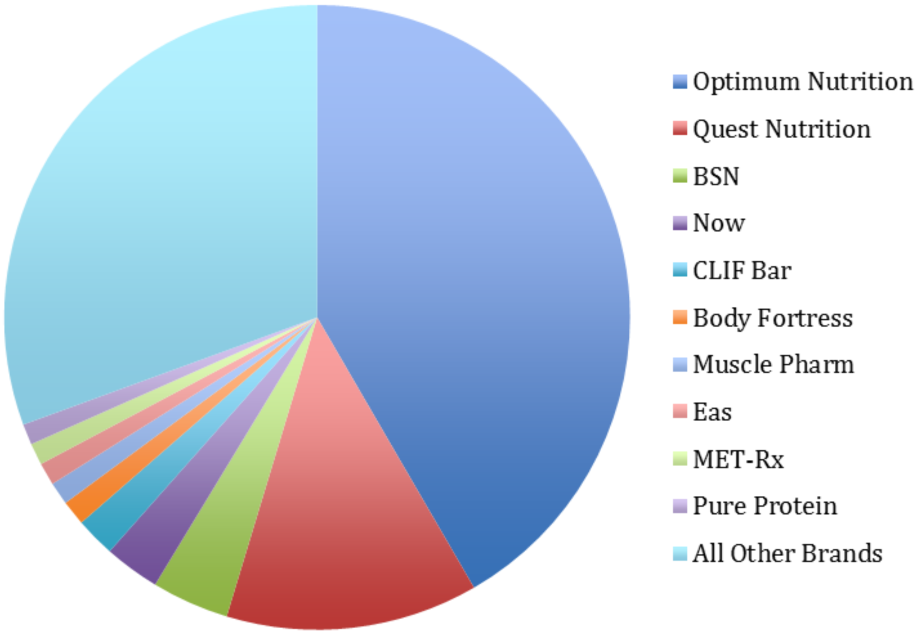
Health Supplement Spending Breakdown

We estimate $340M, or 25% of spending, was on protein supplements in the form of powder and bars, with powder making up $250M.

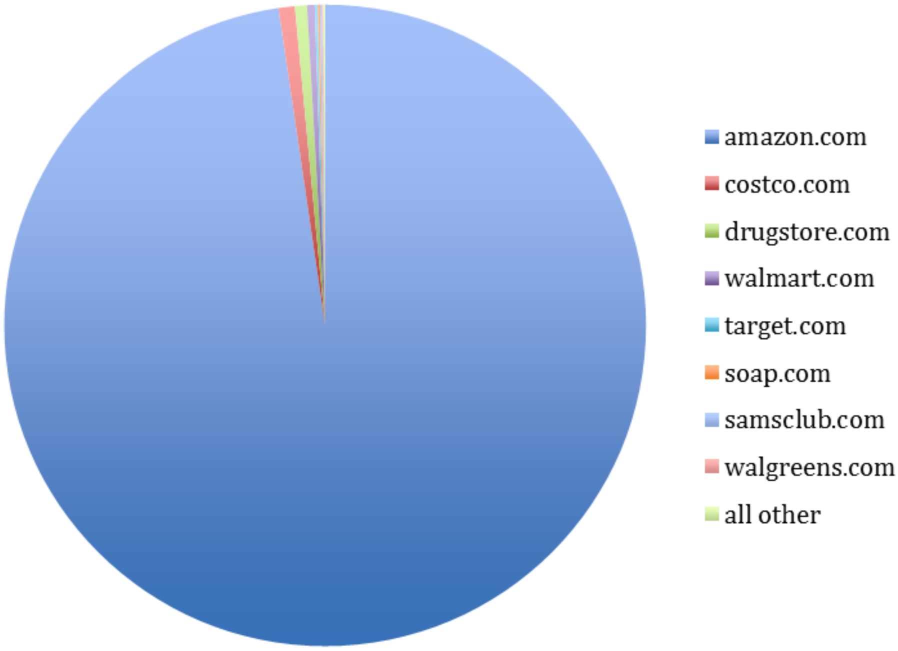


Over 10 million units of protein powder and bars were purchased at an average price of $34 per unit.

The clear market leader in online sales of protein, with a dominating 42% market share, is Optimum Nutrition (ON). ON has 3 times the share of its next closest competitor, Quest Nutrition, who makes Quest Bars, and has 13% market share. Over 670 brands make up the remaining 45% of this fragmented market with no single company having more than 4% share.



So how is Optimum Nutrition dominating the protein market with 42% share? Since almost all of their volume is coming from Amazon, we need to look there to find out. With Amazon Marketplace included, Amazon does a staggering 98% of the dollar volume of protein supplement sales online in the U.S.

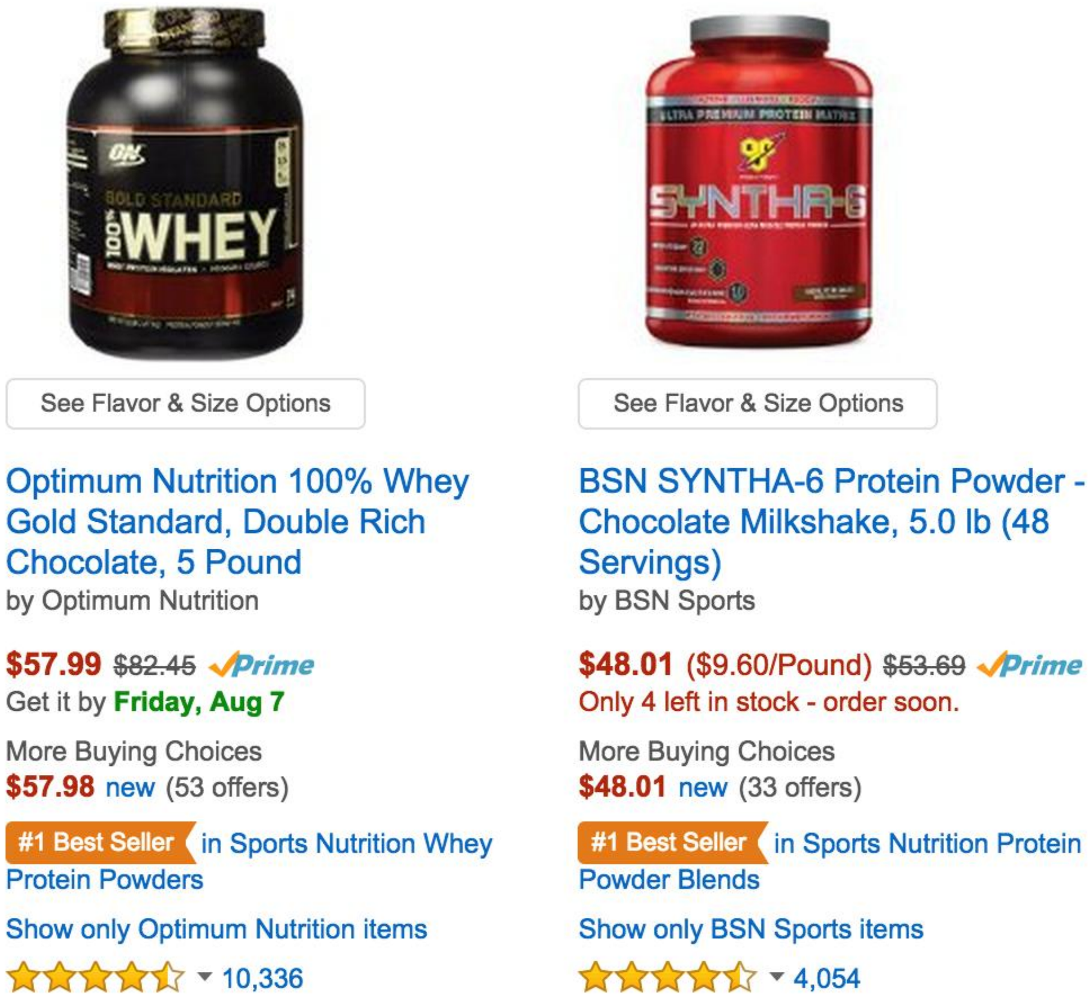


When analyzing how a brand is winning online, the first place to look is where they are selling so much. We just mentioned above, it's on Amazon. Then we look at the "4 Ps" as they are often called in retail: pricing, placement, promotion, and product.

By process of elimination, we can figure out what's going on. It's not low pricing that's causing success. At a $57 price point, Optimum Nutrition costs more than any of the other top 10 protein products. It's not aggressive promotion (i.e. ad dollars). A search on Google or the banner ad tracker Moat reveals no advertising being done by Optimum Nutrition.

It's probably not the product being far superior. I'm sure it's a great product, but it doesn't appear to be drastically different in quality or consumer rating than the other top competitors. Of the top 10 ranked protein supplements, they all have 4 or 4.5 star ratings and hundreds or thousands of reviews.

Also, see the image below. Both products are chocolate flavored, protein powder, 5 pounds, with a 4.5 star rating, and both have "Best Seller" flags. But, ON costs $9 more and outsells BSN by 8 times in unit volume



So that leaves placement. When you search for “protein” on Amazon, Optimum Nutrition is the #1 result with, as of July 30, 2015, over 10,000 reviews and a 4.5 star rating. As mentioned, they are also marked with the highly coveted (by sellers) orange Amazon “Best Seller” tag for the Sports Nutrition Whey Protein Powders category. That tag surely helps increase their conversion rates.

While a great product and a competitive price are important, the single greatest factor causing Optimum Nutrition’s success appears to their #1 rank in searches for protein. That #1 rank, combined with a “best seller” flag from Amazon, along with over 10,000 reviews, appears to be causing consumers to pick that product, further entrenching them as the top ranking product in the search results. From personal experience, anecdotal for this analysis of course, I often pick the best seller if I’m unsure which product to pick as long as it has a 4.5+ star review, so ON’s success from great placement isn’t that surprising to me.

What this analysis tells me is that for protein supplements (probably many retail categories), consumers overwhelmingly choose the product that already appears to be the most popular. Makes sense to me. Must be really good if so many people are buying it.

I wish I had a more profound recommendation to ON’s competitors on how to compete with them. But in this case, if Optimum Nutrition’s competitors want to unseat the undisputed market leader, the data tells us that it’s simply a matter of figuring out a way to bump ON from that top spot.

It would probably cost millions of dollars in promotion to generate the volume to do that, but then you could coast on the organic sales from being in the #1 spot with the “best seller” flag. (At least until someone else tries the same approach to unseat you.)

In summary, it appears that being the #1 ranking product on Amazon searches for protein or protein powder is helping Optimum Nutrition totally dominate the market. Of course they probably got there by having a great product with great reviews combined with effective marketing. We have seen this in other cases too, such as dog food, where Taste of the Wild, having the #1 spot on Amazon searches for dog food, enjoys 15% market share in dollars for dog food. More on the dog and cat food space in a separate blog post.

[Protein powders: The heavyweight in the $16bn sports nutrition market]

The US market for sports nutrition plus energy/nutrition bars and sports drinks is set to cruise past $20 billion by 2020, says Euromonitor International, but which segments are driving growth, and how is the 'regimentation of fitness' influencing product development?

According to Euromonitor, the sports nutrition category in the US is $6.7 billion, and add in the $2.5 billion energy and nutrition bar category and the $6.9 billion sports drink category and you're looking at a current market worth $16 billion.

Sports protein powders make up 70% of that (at $4.7 billion). Sports protein RTD is the next most significant category at $785 million. These categories are expected to grow to $7.5 billion and $1.1 billion by 2020 (see figure 1 below).

"We're still seeing huge interest in protein powders," Chris Schmidt, consumer health analyst at Euromonitor International, told NutraIngredients-USA. *"While a ton of general health, non-sports-focused brands have appeared, the sports brands are growing very strongly, as well.*

"In addition to strong sales online, a number of brands have pushed into mass channels and companies like Iovate and NBTY even have stand-alone, mass facing brands (Six Star and Body Fortress, respectively) that have grown rapidly in retailers like Walmart and Walgreens/CVS in the last several years."

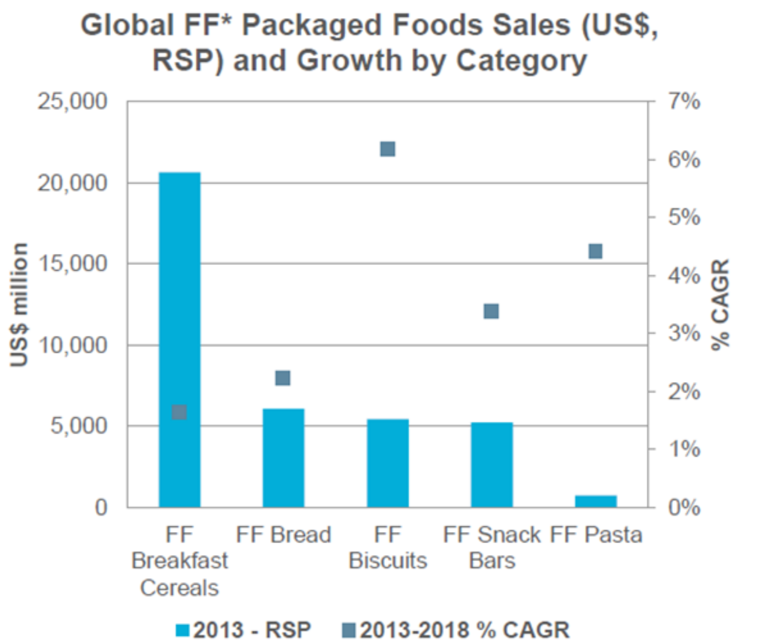
The regimentation of fitness

Schmidt noted that, while body builders and elite athletes still make up the bulk of sales for many traditional brands, the category has benefitted greatly from growing interest among more casual exercisers.

"One of trends really pushing this is the on-going regimentation of fitness," he added, *"which is leading more Average Joes/Janes to participate in more standardized, rigorous exercise, like obstacle races, CrossFit, boot camps, etc. and opening them to supplementation (especially considering sports nutrition brands are increasingly targeting these events with sponsorships, sampling, etc. and therefore taking a bit of the category's 'edge' off)."*

Added protein health and wellness packaged foods

- Bakery categories are investing in high-protein varieties
- Mid-protein snack bars are incorporating other health and wellness ingredients and positionings
- Protein and fibre is a powerful satiety combination



*Fortified/functional

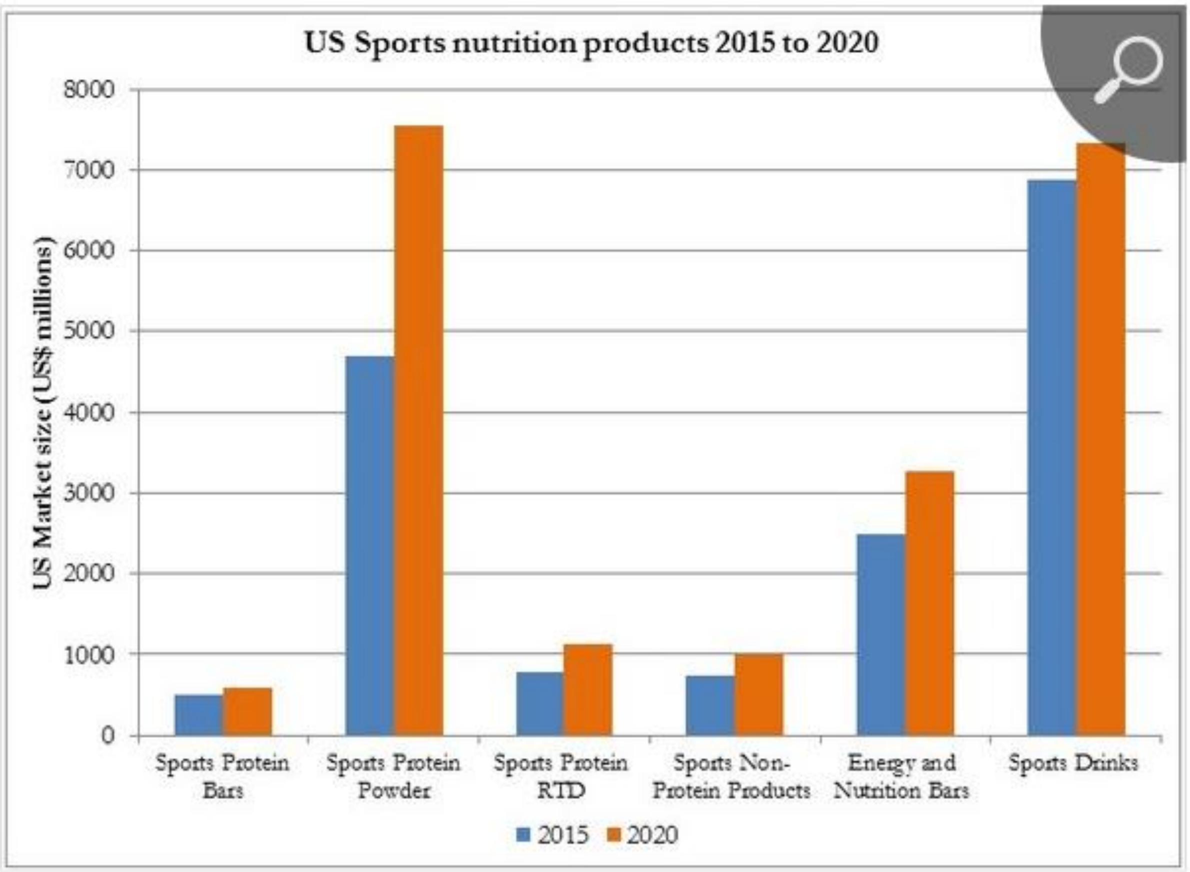
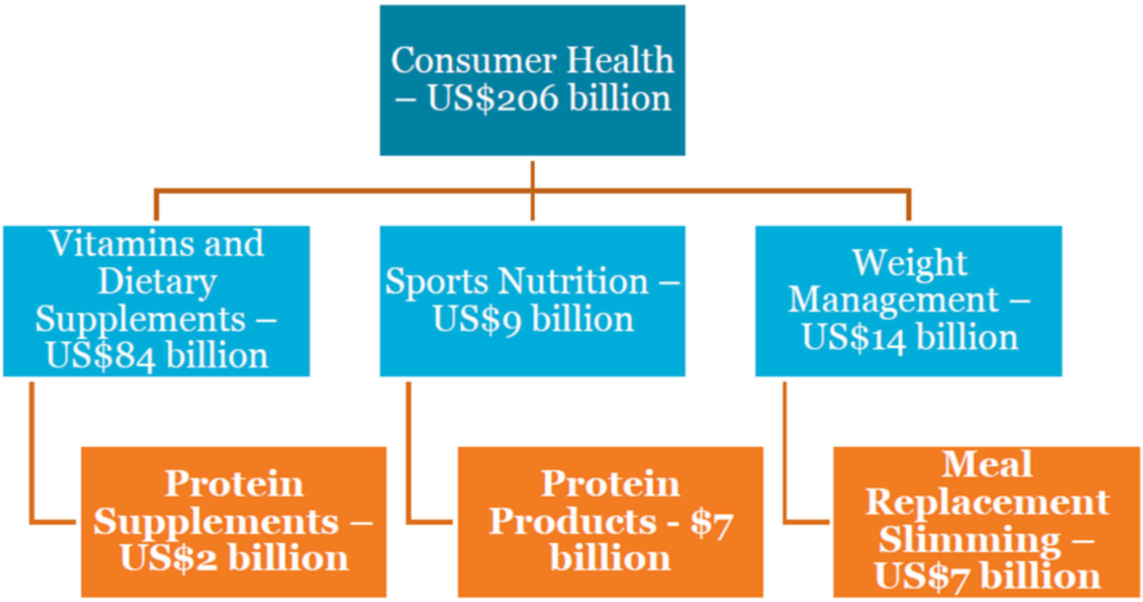


Figure 1. All data for 2015 and 2020, except Sports Drinks, which is for 2014 and projections for 2019.
Source: Euromonitor International.

Category hierarchy



Sports drinks

Another significant category is sports drinks (think Gatorade and Powerade), which was valued at $6.9 billion in 2014 by Euromonitor, and expected to grow to $7.3 billion by 2019.

Interestingly, flavor is a major marketing tool for these products, according to data from Label Insights: For the 295 products positioned as sports drinks in its database, the most common marketing claim is natural flavored. Electrolyte and vitamin claims are less common, according to the Label Insights data (see figure 2 below).

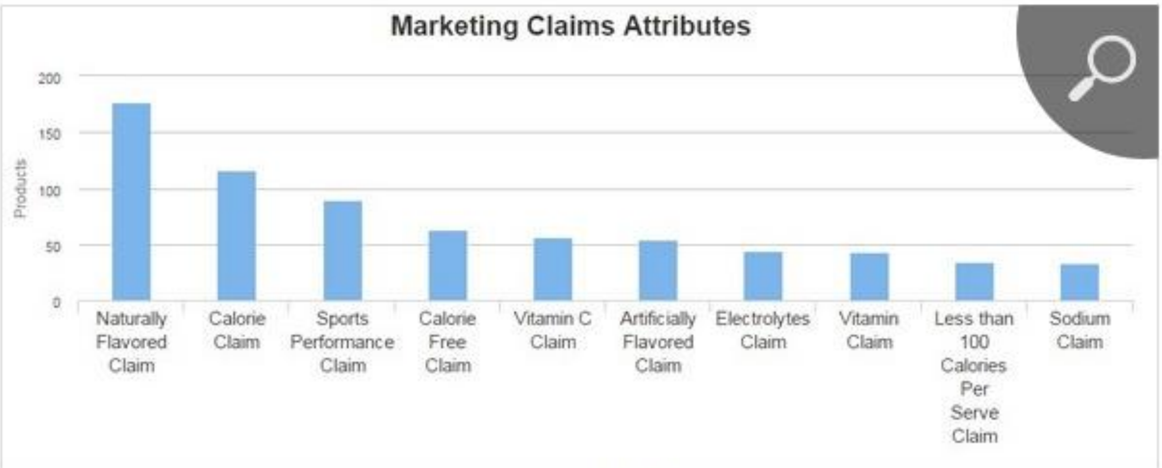


Figure 2. Marketing claims for sports drinks. Source: Label Insight

Recovery products, marketing claims

Protein also dominates the recovery category, with more data from Label Insights showing that, of the 2,056 in their database positioned for 'energy, protein and muscle recovery drinks', protein is the most common marketing claim, closely followed by gluten-free. Again, flavor ranks highly, but with both naturally and artificially flavored in the top 5 most common marketing claims (see figures 3 & 4 below).

Figure 3. Marketing claims for energy, protein and muscle recovery drinks. Source: Label Insight

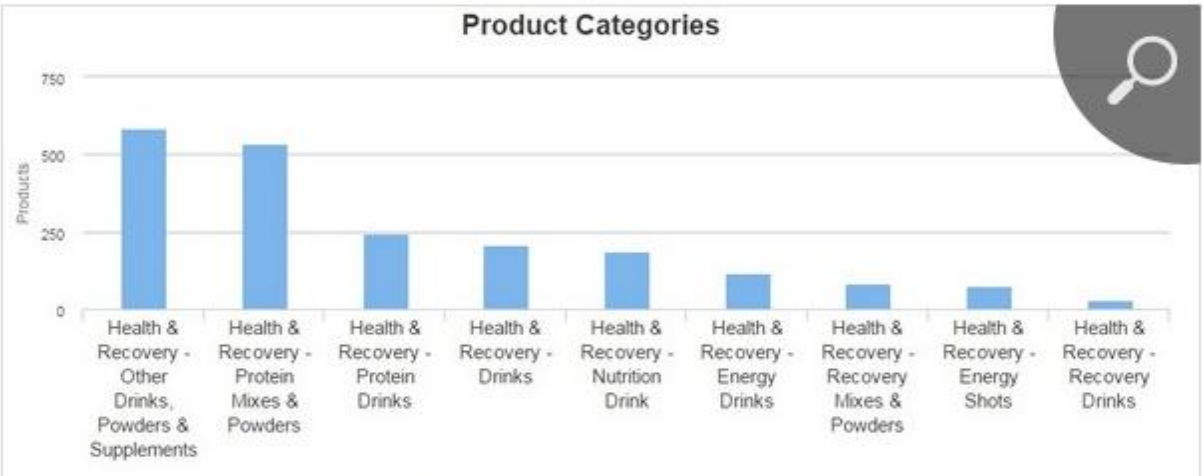
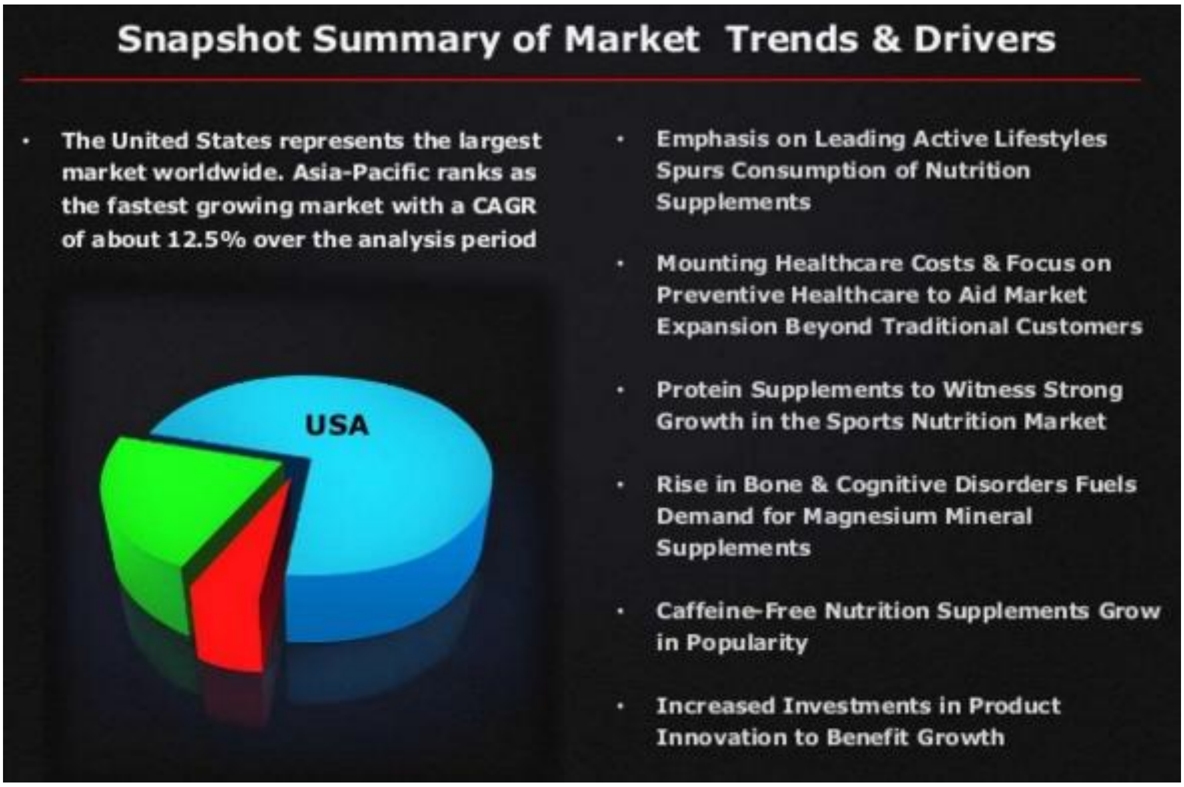
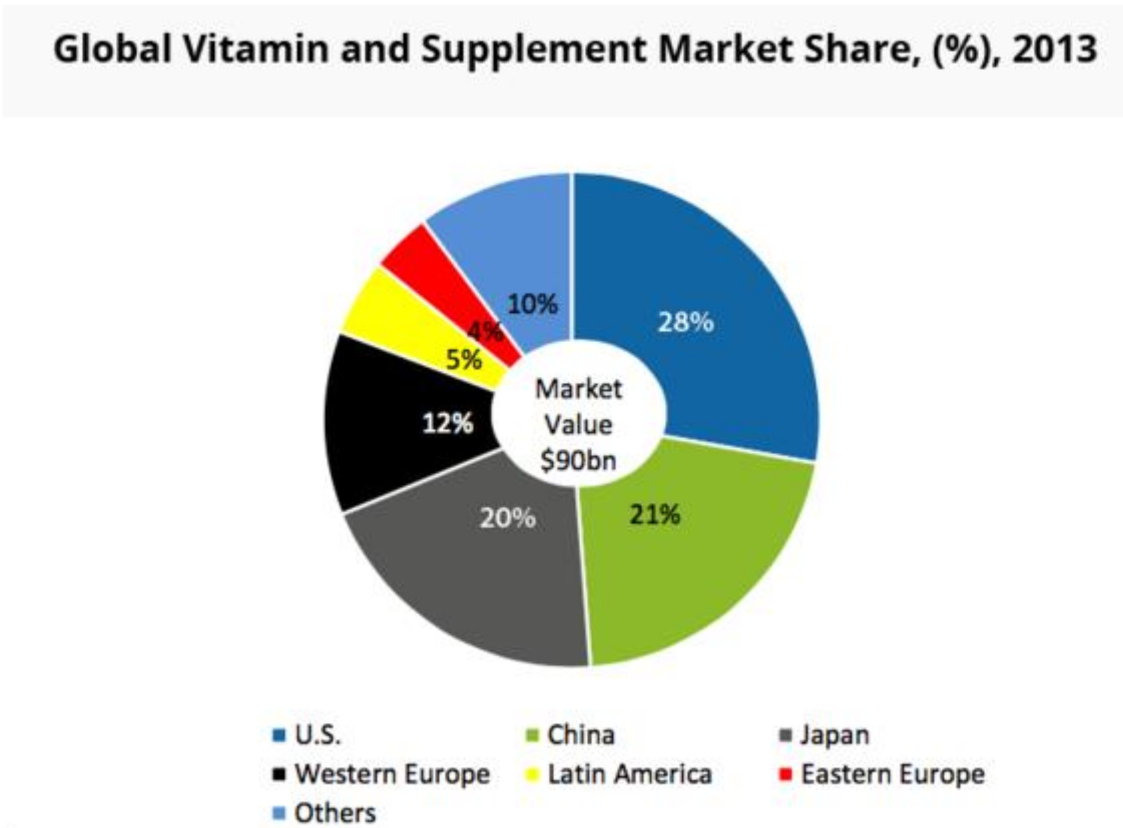


Figure 4. Product categories for energy, protein and muscle recovery drinks. Source: Label Insight

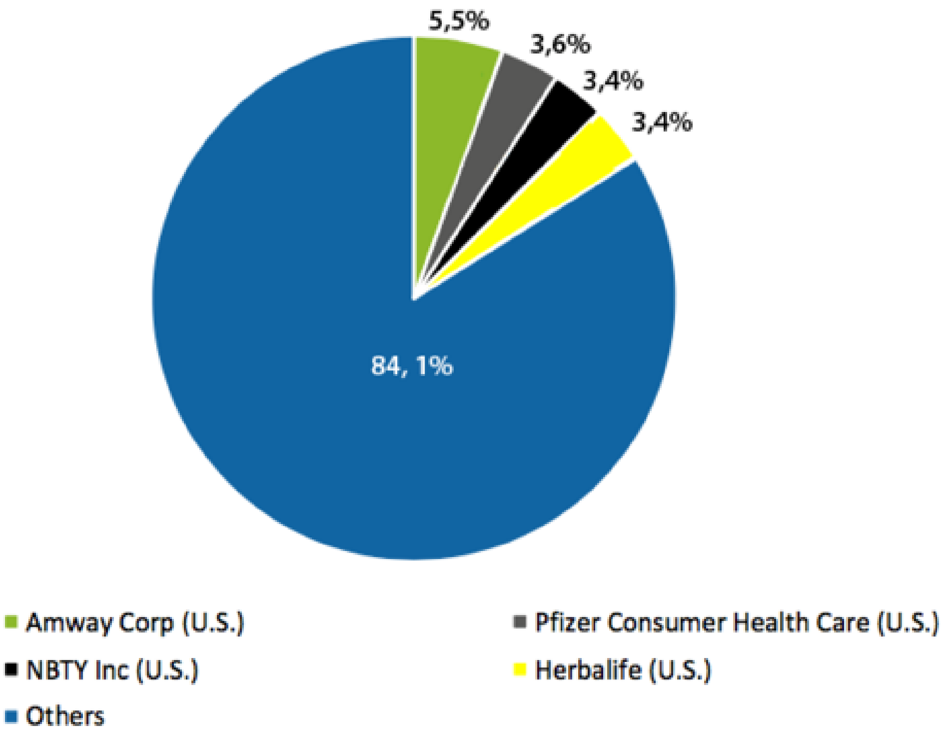
http://www.nutraingredients-usa.com/Markets/Protein-powders-The-heavyweight-in-the-16bn-sports-nutrition-market



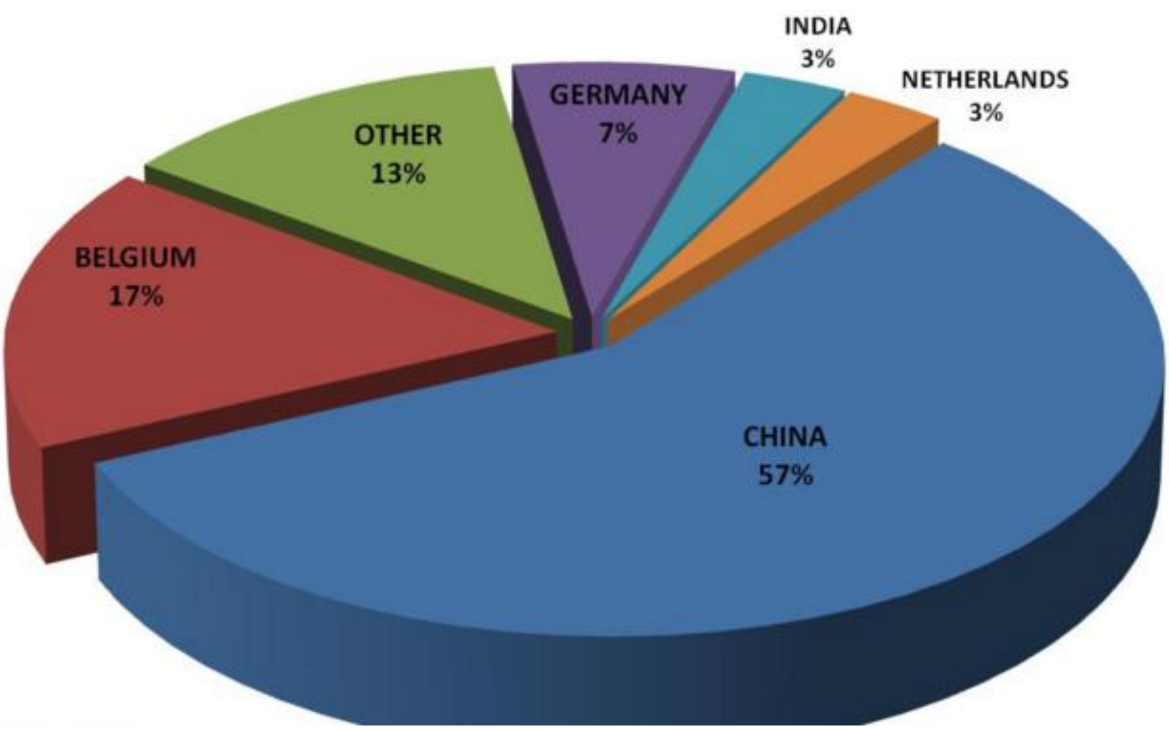
http://www.slideshare.net/GlobalIndustryAnalystsInc/sports-and-fitness-nutrition-supplements-a-global-strategic-business-report



Top Vitamin and Supplement Companies' Market Share (%), 2013



Top 5 Sources of U.S. Vitamin Imports



Who was who in 2013? Competitive results of top companies*

OTC

Company	Global rsp share* 2013 US$ million
Johnson & Johnson Inc	7,911
Bayer AG	4,518
GlaxoSmithKline Plc	4,281
Novartis AG	4,102
Sanofi	3,469

Vitamins and Dietary Supplements

Company	Global rsp share* 2013 US$ million
Amway Corp	4,444
Pfizer Inc	2,528
NBTY Inc	2,188
Bayer AG	1,960
Herbalife Ltd	1,633

Weight Management

Company	Global rsp share* 2013 US$ million
Herbalife Ltd	3,401
Kellogg Co	439
Unilever Group	418
Atkins Nutritionals Inc	253
Abbott Laboratories Inc	229

Sports Nutrition

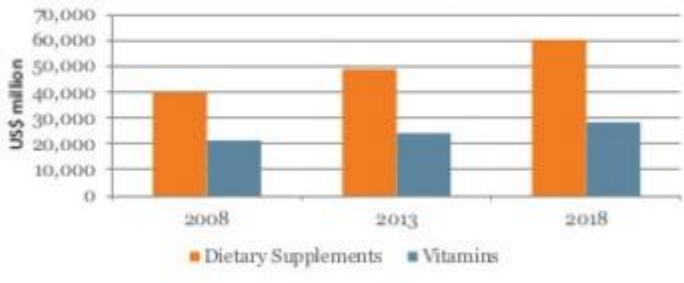
Company	Global rsp share* 2013 US$ million
Glanbia Plc	1,096
Cytoport Inc	574
General Nutrition Centers	399
NBTY Inc	312
GlaxoSmithKline Plc	180

*Note: *2013 provisional figures based on Euromonitor International's estimates and corporate reports*

Vitamins and dietary supplements to help extend longevity

- Nutritional deficiencies tend to develop as people age. Consequently, dietary supplements aiming to help elderly people meet their nutritional needs are expected to be in higher demand.
- Within this context, the maintenance of good sight, stronger bones, an efficient digestive system, a healthy circulatory system, and firm muscles in old age will be key drivers of growth for vitamins and dietary supplements.

Global Vitamins and Dietary Supplements Retail Value RSP (US$) 2008/2013/2018



Dietary Supplements for the Maintenance of Good Health	2013 retail value rsp (US$ million)	% CAGR 2013-2018
Calcium supplements	5,631	3.9
Fish oils/omega fatty acids	3,886	8.2
Probiotic supplements	3,249	8.5
Protein supplements	2,051	9.8
Eye health supplements	1,217	5.8

Segmentation is intensifying

- Know your consumer and their need states
- Avoid the communication extremes of hyperbole and over-generalization

Consumer education is key

- Muscle health is not the only benefit
- Highlighting lesser known benefits can help justify price premiums

Cross-functionality sells

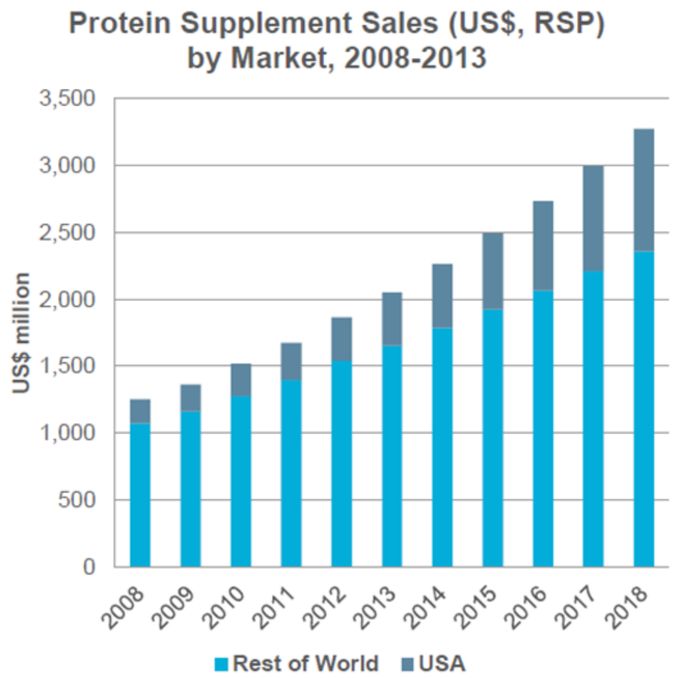
- Protein is not the only thing consumers are looking for
- Protein concerns overlap closely with other functional ingredients

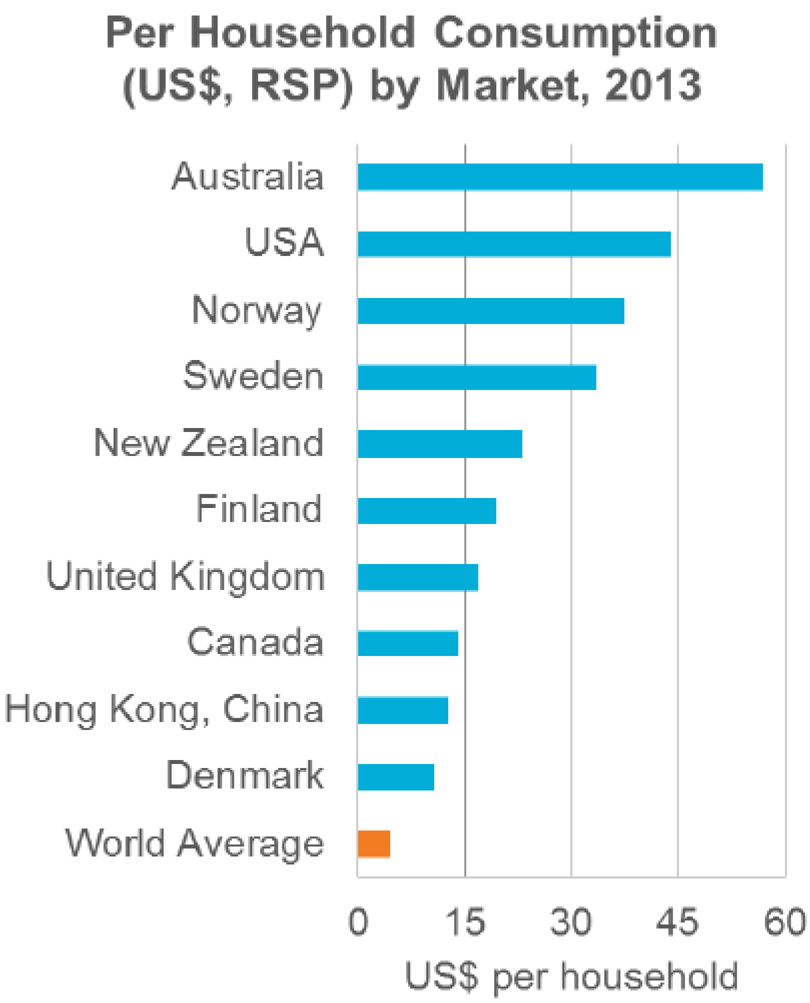
Still room for growth

- Supplement categories are growing quickly across mature and emerging markets
- High-protein foods will continue to outperform standard versions

Protein supplements – one of the fastest-growing VDS categories

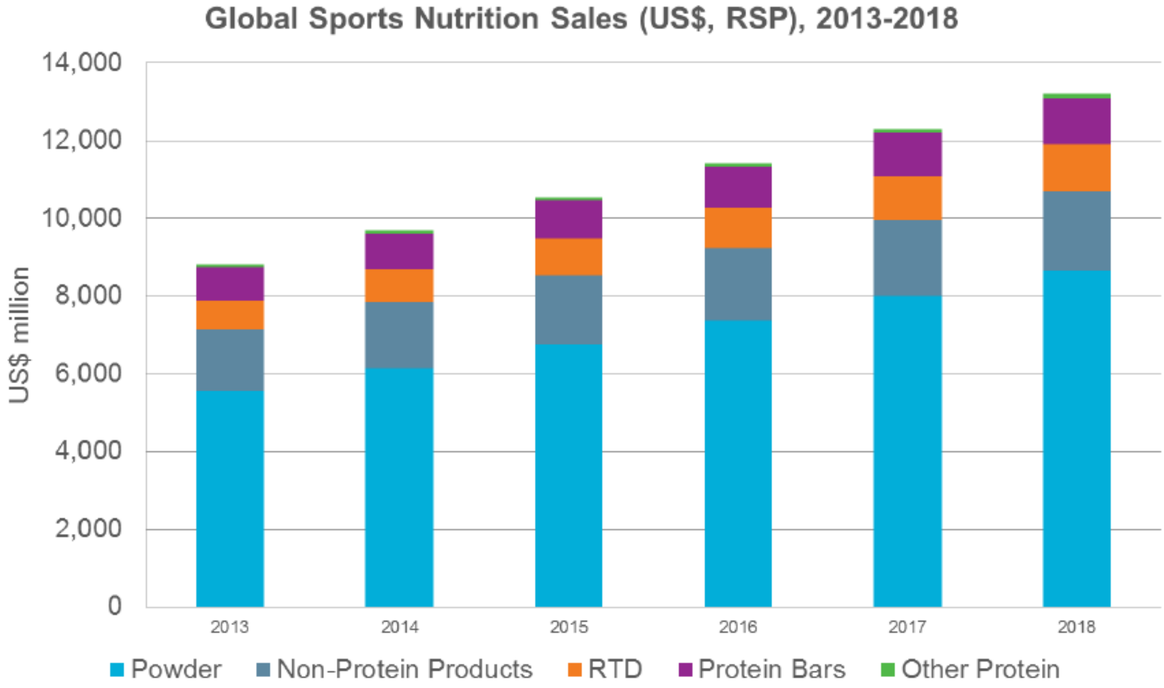
- One of the fastest-growing vitamins and dietary supplements categories
- The category features an extensive amount of formulation innovation
- Most brands target the image- and health-focused, not necessarily athletes





Growth is truly global	• The US plays an outsized role in the industry's development • There are large and rapidly growing markets in every geographic region
Consumers are rapidly segmenting	• New consumers and new need states are redefining the market • It is possible to target multiple demographics without losing credibility
Promote functionality	• New exercise concepts are changing how consumer think of "fitness" • Cross-functional products appeal most to the active nutrition set
Education remains key	• Consumer interest in ingredients, formulations and brand stories is growing • Education can promote connection to a brand and justify higher prices

Global sports nutrition forecasted growth



Health and wellness positioning

MARKET-SPECIFIC TRENDS

- Industry growth: 10+ years of outperformance, led by internet
- Usage: Growing usage rates among American public, though significant opportunities remain
- Industry risk/reward: challenges – NDI stalemate, rising commodity costs, product adulteration – more than offset by opportunities – personalization, rise of integrative medicine, innovation, etc.
- M&A: Continued industry consolidation at robust valuations

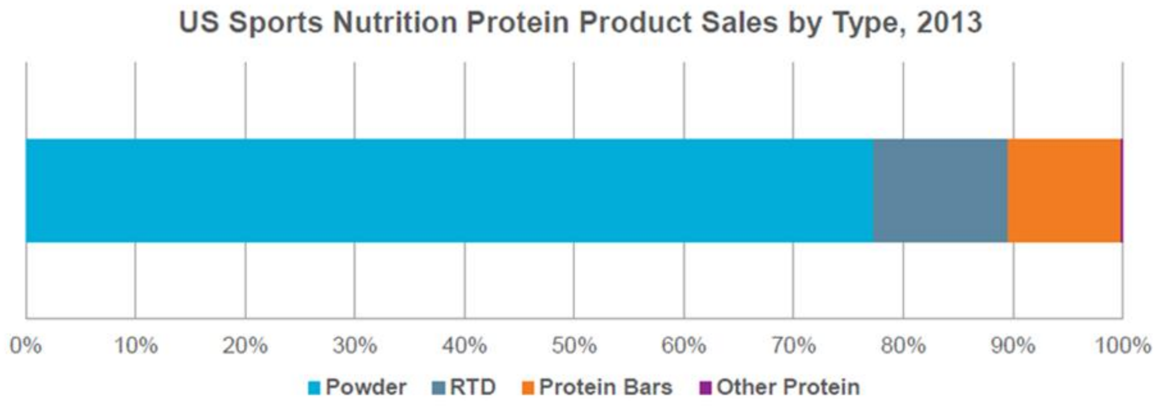
PRODUCT/CHANNEL TRENDS

- Channels: VMHS in natural channel grew 13.5% to $1B; $10B+ conventional channel grew 7.5%
- Products: Vitamins/supplements still dominant in mass (90% of VMHS sales), while they account for 78% in natural; significant growth continues despite scale
- Specific products/ingredients demonstrating strong growth: Plant proteins, ancient grains, probiotics, herbs and whole food supplements, sports nutrition

- The U.S. supplement industry has seen a compound annual growth rate of 5.2% over the last decade (vs. ~1.7% real U.S. GDP growth from 2003-2012)
- In 2013, NBJ anticipates a continuation of the strong growth rate seen in 2012E as VMHS continue to move into the mainstream

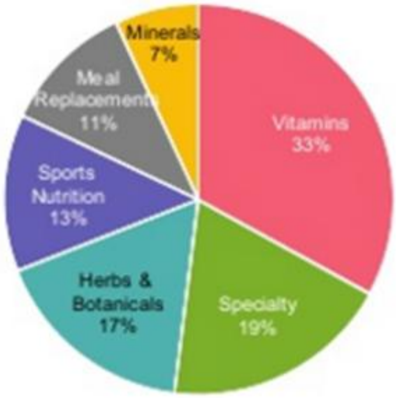
Protein in sports nutrition

- Protein remains the bedrock of the sports nutrition category
- Protein powder dominates protein products, but convenience formats are growing rapidly
- Convenience formats serve as a gateway to the category for more casual users

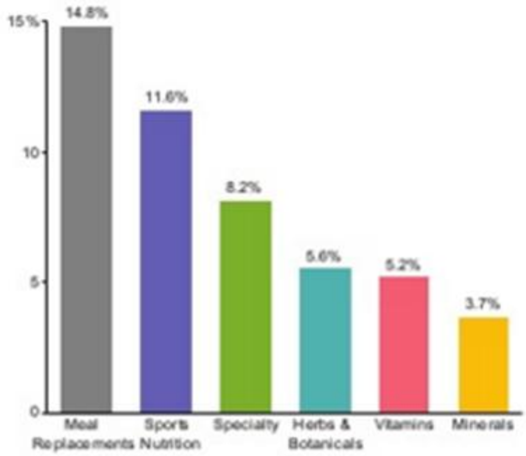


SUPPLEMENT SALES & GROWTH BY PRODUCT

2012E SUPPLEMENT SALES BY PRODUCT TYPE

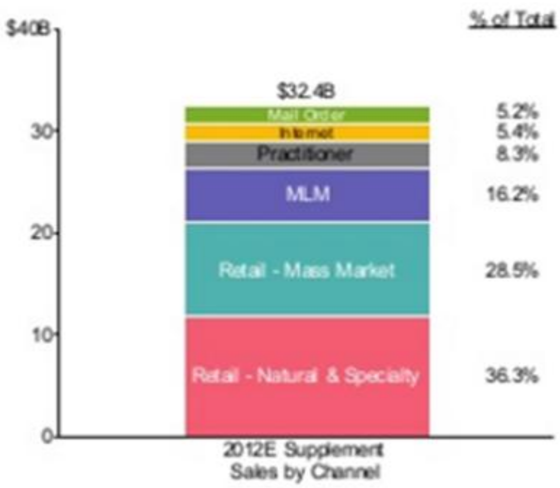


2012E SUPPLEMENT SALES GROWTH BY PRODUCT TYPE



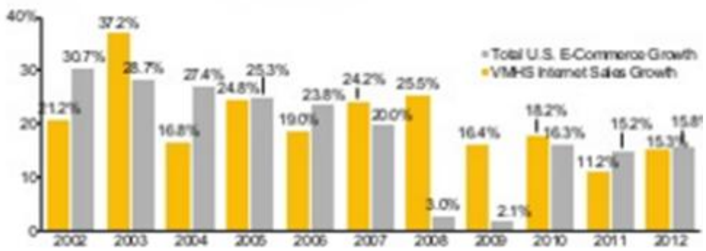
SUPPLEMENT SALES BY CHANNEL

2012E SUPPLEMENT SALES BY CHANNEL



2012E SUPPLEMENT SALES GROWTH BY CHANNEL

INTERNET SUPPLEMENT SALES GROWTH



Close to 70% of U.S. adults use supplements, with reasons for use varying depending on demographics and other factors.

CONSUMER TRENDS AND INSIGHTS

U.S. SUPPLEMENT USAGE[1]

Supplement usage has remained fairly steady in recent years with a sizeable portion of the American population placing value on their health benefits

Sources: (1) Council for Responsible Nutrition 2012 Consumer Survey on Dietary Supplements, NHANES I, NHANES II, NHANESIII, and NHANES 1999-2000 (2) JAMA Internal Medicine – Feb 2013 – "Why U.S. Adults Use Dietary Supplements" (3) JAMA Internal Medicine – 2012 – "Users' Views of Dietary Supplements"

SUPPLEMENT USE MOTIVATIONS

- A recent national study[2] found that the most commonly reported reasons Americans cite for using supplements include "improving overall health" (45%) and "maintaining overall health" (33%)
- Another recent survey[3] showed that the top 5 reasons people choose to take supplements include:
  1. "To feel better" – 41%
  2. "To improve overall energy" – 41%
  3. "To boost their immune system" – 36%
  4. "For digestive issues" – 28%
  5. "To lower cholesterol" – 21%
- Adults 60 years of age and older are more likely than younger people to report motivations related to condition-specific reasons like heart, bone and joint, and eye heath. Older adults are also more likely to take supplements with 67% of those over 50 using supplements vs. 45% of those 50 and under[1]
- Supplement usage based on the advice or recommendation of a healthcare provider only accounts for 23% of supplement use
- Use of supplements has been shown to correlate with favorable health and lifestyle choices including non-smoking, exercising, and health insurance coverage

SUPPLEMENT INDUSTRY OVERVIEW KEY FACTS & FIGURES

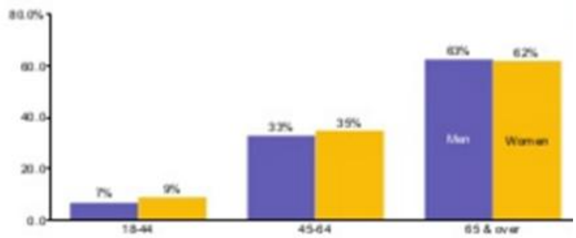
The supplement industry will likely benefit from the aging U.S. population and an increasing focus on preventative health and alternatives to prescription medicines.

DEMOGRAPHICS & POPULATION TRENDS

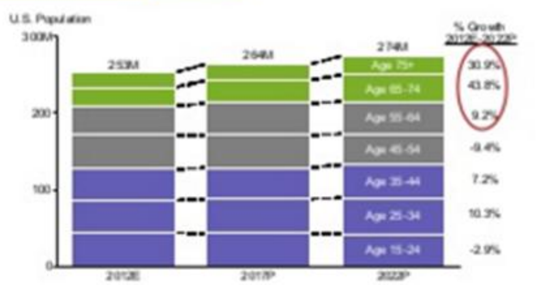
NATIONAL HEALTH EXPENDITURES[1]

National health expenditures have outpaced overall population growth nearly tenfold over the last 5 decades. Since 1960, the U.S. population has grown about 1% each year, while health expenditures have increased at a compound annual growth rate of 9.5%, largely due to the aging population and the rise in obesity and other epidemics.

INCIDENCE OF CHRONIC HEALTH ISSUES BY AGE[2]



U.S. POPULATION TRENDS[3]



2012 SPINS RETAIL SALES UPDATE TRENDS

Consistent with the NBJ data, SPINS reports 8% growth in retail sales of VMHS in 2012, with the natural channel outperforming.

SPINS VMHS PRODUCT AND CHANNEL TRENDS

2012 SPINS PRODUCT TRENDS

- In 2012, Vitamins & Supplements accounted for 89% of total VMHS sales tracked by SPINS. Leading categories within this segment include ready-to-drink meal replacements, food supplement oils, and multi-vitamins. See page 15 for growth drivers.
- Herbs & Homeopathic accounts for 11% of total 2012 VMHS sales tracked by SPINS, with this share remaining steady over the last 3 years. Leading product categories within this segment include cold and flu/immune system formulas, herbal singles, and homeopathic children's and allergy & respiratory medicines. Please see page 16.

2012 SPINS CHANNEL TRENDS

- Conventional
  - With FDM outlets and major players like Walmart* included, the conventional channel dominates, accounting for 91% of SPINS-tracked sales in 2012.
- Natural
  - Given strong growth in the natural channel over the last 3 years, the channel has increased as a percentage of total VMHS retail sales.
  - Whole Foods, which is excluded from these figures, is estimated to be as large as the natural channel ex-Whole Foods.
- Specialty Gourmet*
  - While a small percentage of total sales (less than 0.5%), growth is strong and Specialty Gourmet is becoming a more recognized channel for supplement sales.

Source: SPINS retail sales data (stores w/ >$2M revenue). Whole Foods excluded from all SPINS data.
* = New data not included in our last (2011) VMHS report.

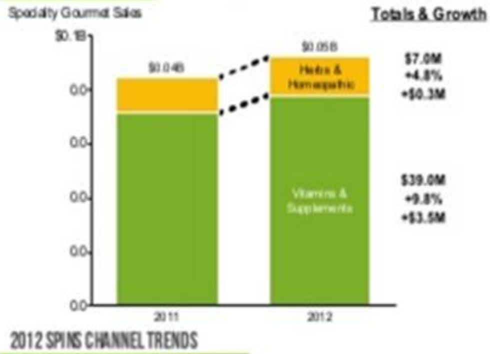
2012 SPINS RETAIL SALES UPDATE TRENDS

All three SPINS-tracked channels enjoyed robust growth in VMHS sales in 2012.

CHANNEL TRENDS

NATURAL CHANNEL

SPECIALTY GOURMET CHANNEL



CONVENTIONAL CHANNEL

2012 SPINS CHANNEL TRENDS

- Herbs & Homeopathic
  - Strongest in the Natural channel, accounting for 22% of total VMHS sales; Herbs & Homeopathic also grew most rapidly in natural (up 12.5%).
  - Smallest share in the Conventional channel, only accounting for 10% of total sales.
- Vitamins & Supplements
  - Strongest in the Conventional channel, accounting for 90% of total sales.
  - Smallest share in Natural (78% of total sales), although the strongest growth of all channels at 13.8%.

2012 SPINS RETAIL SALES UPDATE TRENDS

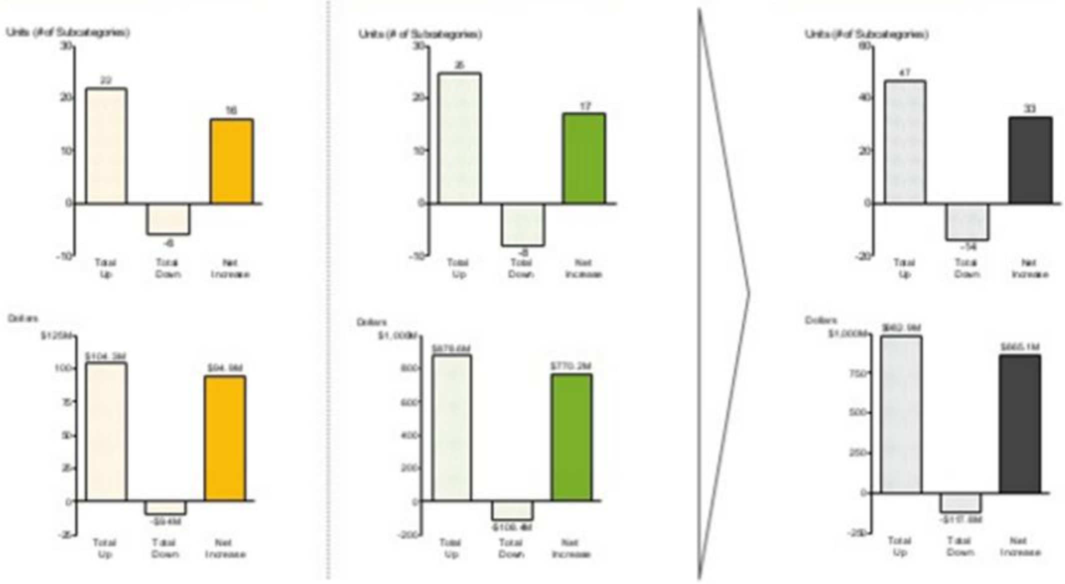
Sales grew in nearly all product subcategories across VMHS in 2012.*

DEPARTMENT GAINS AND LOSSES

HERBS & HOMEOPATHIC DEPT.

VITAMINS & SUPPLEMENTS DEPT.

TOTALS



2012 SPINS RETAIL SALES UPDATE LEADERS & LAGGARDS

VITAMIN & SUPPLEMENT 2012 LEADERS AND LAGGARDS

	SUBCATEGORY	2012 SALES	2012 GROWTH	COMMENTS
GROWTH LEADERS (BY %)*	Yeast Products	$4.3M	32.7%	Nutritional yeast and brewer's yeast are often used as a salt alternative for taste, while also providing additional nutritional value.
	Creatine	$27.5M	31.0%	Use of creatine supplements by weightlifters, bodybuilders, and increasingly mainstream consumers is driving growth in this category.
	DHEA, Pregnenolone & Hormones	$164.4M	26.5%	The hormone melatonin is a leader in natural sleep products and has also been shown in studies to be beneficial to nerve health.
	Powdered Meal Replacements	$602.4M	21.6%	Influenced by the powerful vegan movement, plant-based proteins lead sales growth in powdered meal replacements.
	Other Sports Supplements	$37.6M	21.3%	The demographics of the typical sports supplement user has expanded to include women and youth, as well as new fitness categories.
	Prebiotics and Probiotics	$436.5M	21.1%	Shelf-stable technology and other innovations promise to keep this category on the fast track for the next several years.
GROWTH LAGGARDS	Soy Supplements	$4.2M	-16.8%	Soy is an allergen for many people. Concerns over GMO content and estrogens in soy may also be contributing factors.
	Cartilage Products	$0.5M	-14.3%	Overfishing of many endangered species and high mercury levels found in shark combined with non-beneficial scientific findings in regards to cancer have steered consumers away.
	Vitamin E	$93.5M	-13.5%	We may see a turnaround in vitamin E sales in 2013, as several recent studies have shown benefits for heart, brain, and liver health.
	Fiber Products & Laxatives	$416.5M	-8.5%	Press on laxatives has not been very positive. Now more focus on maintaining digestive tract health with ingredients like chia & probiotics.
	Calcium & Calcium Formulas	$442.8M	-7.3%	Consumers are becoming aware that high levels of calcium may not be the most effective way to promote bone health.
	Aloe Products	$31.8M	-4.0 %	The decline in aloe products can be attributed to the decline of laxative-based cleanse products.

2012 SPINS RETAIL SALES UPDATE **INGREDIENTS**

Across the supplement industry, several stand-out ingredients drove growth.

INGREDIENT TRENDS

	SUBCATEGORY	2012 SALES	2012 GROWTH	COMMENTS
HEAVY HITTERS	Probiotic Supplement	$440M	20.4%	Strong links to digestive health have driven robust growth over the last few years, although growth is now slowing, similar to fish oil.
	Milk Protein	$579M	19.9%	Studies show milk proteins promote weight maintenance, muscle synthesis, and blood glucose control. Many food manufacturers are adding milk protein to their products to enhance their nutritional value.
	Multi-Source Protein with/without Soy	$724M/ $236M	12.4%/ 26.0%	Multi-source proteins, popular with body builders, are purported to be absorbed more effectively by the body because the different protein sources digest at different rates.
UP & COMERS	7-Keto	$2M	699.9%	Shown to aid in weight loss and lean muscle building without typical side effects.
	Rhodiola	$9M	396.6%	Referred to as "Golden Root" or "Arctic Root", Rhodiola is known as a natural anti-depressant.
	Carnosine & Metabolites	$1M	351.4%	Recent studies have lent credence to the touted benefits of Carnosine including anti-aging effects, and life-span extension.
	Blueberry	$3M	282.7%	Among the highest antioxidant capacities of all fruits and vegetables, as well as memory benefits, according to recent studies.

HOW DID OUR PREVIOUS UP & COMERS FARE? (2011 NEWSLETTER)

228% 2-YR GROWTH	66% 2-YR GROWTH	44% 2-YR GROWTH	-9% 2-YR GROWTH
Chia seed, oil	DHA products	Vitamin K	Resveratrol

IMPLICATIONS FOR GROWTH

The industry tailwinds; product, channel, and ingredient trends; consolidation; and competitive dynamics profiled throughout this report provide several considerations for growth.

	PRODUCTS/INGREDIENTS	CHANNELS	GEOGRAPHIES	BRANDING/MARKETING
INDUSTRY DYNAMICS	• Changing demographics = changing product mix • Consumer interest in condition-specific products and preventative "medicine" • Concern re: quality, efficacy, and science balanced against demand for attractive price-value equation • Uncertainty around NDI guidelines • Pet supplements a growing, though nascent, market	• FDM is dominant (but crowded, competitive) channel • Natural and healthcare practitioner channels are bellwethers of innovation, industry trends • Highest growth is online • Retailers sensitive to channel conflict	• Continued attractiveness of U.S. market; high growth, strong demand, no end in sight • Interest in U.S. brands overseas; dearth of product in some markets • Varying regulatory environments, language requirements, etc.	• Consumers seeking ways to identify quality products • FTC scrutiny of claims • Large companies with strong consumer research capabilities and propensity to spend on marketing have entered industry in meaningful ways
POSSIBLE SUGGESTIONS/ IMPLICATIONS FOR GROWTH	• Evaluate current SKUs – which are hero products and which are obsolete? Rationalize product line accordingly • New product categories: focus on high-growth areas supported by demographics and take into account relative competition – Also provides opportunity to increase SKUs at existing retailers and/or purchase size/frequency by customers • Decide where to spend on science and where to leverage others' – Identify opportunities for competitive advantage through science • Take potential for slow FDA response on products/ingredients subject to NDI into account	• Maximize sell-through at existing accounts • Fill in gaps in current channel presence • Experiment with complementary channels – Channel strategy must take into account potential for cannibalization and need to maintain relationships with existing channel partners • Define channel strategy and orient sales/marketing teams around it • Consider whether sub-brand can reduce channel conflict • Get creative re: alternative channels: gyms, DRTV, etc.	• Fill in gaps in U.S. footprint • Consider whether/how to pursue international business, balancing opportunity against resource requirements; possible alternatives: – Bring existing brands overseas or create new brands in other countries – Distributor vs. direct vs. other • If preparing a company for sale, "headroom" internationally can be growth opportunity for new owner, especially one with global distribution	• Focus on making all channel partners as successful as possible, which may require customized strategies • Assure that packaging, brand messaging, etc. are appropriate for customers; consider rebranding to avoid staleness and/or clarify messaging • Track tactics with analytics to assess success and fine tune • Consider benefits of demos/sampling and other interactive programs • Promote science, quality, health benefits, uniqueness of products (as appropriate from a regulatory perspective) • Assure all initiatives reviewed by regulatory experts

IMPLICATIONS FOR GROWTH

INDUSTRY DYNAMICS

ANALYTICS

- Industry becoming increasingly sophisticated, especially with participation of multinational CPG, pharma, other companies
- Careful balance of qualitative/ creative with quantitative
- Strong focus on sell-through data, analyzing online data, customer research, ROI on promotions, etc.

CUSTOMERS

- Handful of population is "hard core" supplement users; significant white space still exists
- Changing demographics impacting consumption
- Chronic disease increasing in prevalence and severity
- Power of customer research in VMHS industry

SUPPLY/FACILITIES

- Concern over adulteration, particularly in certain categories (SNWL) or if products made overseas
- Industry players pursue combination of vertical integration and outsourced co-packing
- Commodity price challenges

COMPETITION

- Competition varies by product/channel:
  - Some "commodity" products (e.g., vitamin C)
  - Some categories with high concentration of market share (e.g., Schiff in krill oil)
  - Healthcare practitioner channel has higher barriers to entry but represents potentially large opportunity as MDs become more involved in VMHS

POSSIBLE SUGGESTIONS/ IMPLICATIONS FOR GROWTH

ANALYTICS

- Don't let quantification trump innovation!
- Opportunity to better analyze distributor, retailer and customer data in "real time" and use to make shifts in strategy
- Focus on customer retention/ longevity
- Analyze SKU- and account-level profitability; use data to guide product and customer decisions
- Assess pricing relative to competitors
- For online business, significant opportunities to analyze consumer purchase behavior, provide highly customized marketing, and drive retention through right level of interactions

CUSTOMERS

- Know your customer and target; a brand can't be everything to everyone
- Consider how to engage with customer; importance of education
- Provide generous levels of customer service/support; often a key indicator of loyalty
- Interact with customers in-store through sampling/demos/ events; interact online through surveys, social media, etc.
- Understand what customers want and expect from your brand

SUPPLY/FACILITIES

- Ensure adequate capacity and supply to support growth
- Budget adequate expense for R+D and quality control
- Audit suppliers thoroughly; avoid unnecessary risk
- Consider supply/demand and pricing dynamics of products, ingredients and manufacturing processes well in advance of new product commercialization

COMPETITION

- Pick and choose battles
- Make strategic decisions in context of competitive dynamics and your company's resources and expertise
- Consider where being nimble, performing grassroots marketing, spending heavily on advertising/marketing, providing education and other tactics can be most effective

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IMPLICATIONS FOR GROWTH

Within U.S. brick-and-mortar and online retail, a handful of key partners may be essential to a company's growth strategy.

DOOR COUNTS FOR KEY RETAILERS

Chain	# of Doors
Mass	
99 Cents Only Stores	311
Army Air Force Exch. Service	3,700
BJ's Wholesale Club	198
Costco	576
Dollar General	10,000+
Dollar Tree	4,671
Family Dollar	7,442
Fred's	700
Harmon Stores	47
Kmart	1,221
Marc's	57
Meijer	200
Sears	1,320
Shopko	332
Sam's Club	612
Target	1,778
Wal-Mart	10,773

Chain	# of Doors
Drug	
Bartell Drug Company	58
CVS Pharmacy	7,300
Drugstore Networks	12,600
Duane Reade	257
Fruth Pharmacy	26
Kerr Drug	76
Kinney Drugs	95
Lewis Drug	32
Navarro Discount Pharmacies	32
Pharmaca	24
Rite Aid	4,667
Walgreens	8,385

Chain	# of Doors
Grocery	
Ahold USA	775
Albertsons	874
BI-LO	207
Delhaize America	1,300
H-E-B	315
Harris Teeter	211
Kroger	3,619
Publix	1,093
Raley's	128
Safeway	1,641
Savemart	243
Supervalu	1,522
Trader Joe's	395
Wakefern	68
Wegmans	81
Winn Dixie	485
Natural Grocery	
Earth Fare	31
Sprouts Farmers Market	157
Vitamin Cottage	59
Whole Foods	335

Chain	# of Doors
Specialty Retail Chains	
GNC	5,967
GNC LiveWell (within Rite Aid)	2,181
Vitamin Shoppe	579
Vitamin World	446
Online	
amazon.com	NA
bodybuilding.com	NA
drugstore.com	NA
HSN.com	NA
iHerb.com	NA
luckyvitamin.com	NA
mothernature.com	NA
puritan.com (NBTY)	NA
QVC.com	NA
supersupplements.com	NA
swansonvitamins.com	NA
vitacost.com	NA
vitaminshoppe.com	NA
walgreens.com	NA

IMPLICATIONS FOR GROWTH

TRENDS IN KEY SUPPLEMENT SALES CHANNELS

MASS

- Supercenters and mass merchandisers top the charts for supplement sales, due primarily to Wal-Mart's massive footprint in the sector.
- Value channels and brands have been favored in this post-recessionary period. A Consumerlabs.com survey of top brands named Costco's private-label products as #1 in club.
- Mass continues to be most competitive, most concentrated, and has the highest proportion of private-label sales.

DRUG

- #3 channel for supplement purchase after mass and natural/specialty.
- RiteAid continues to roll out GNC store-within-a-store concept and is also converting 1,200 stores to a new "wellness center" format (with GNC presence, greater organic and gluten-free options, in-house wellness ambassador, etc.). Walgreen Co. has launched a similar concept called Well at Walgreen's.
- For pharma and OTC companies, VMHS presence is thought to be a way to capitalize on existing distribution and supply chains, and gain leverage with the large drug chains that dominate the industry.

CONVENTIONAL GROCERY

- Traditional grocery is the #4 sales channel after mass, natural/specialty, and drug.
- According to Vestcom, 80% of consumers have bought VMHS in the grocery or drug channels in the last 2 years. Trader Joe's is the favored private-label brand.
- Grocers have more proactively addressed the VMHS category in recent years. While "center store" grocery items grew a total of 5.4% from 2008 to 1Q:12, VMHS grew 28.5% over the same period, according to Nielsen.

NATURAL GROCERY/ SPECIALTY

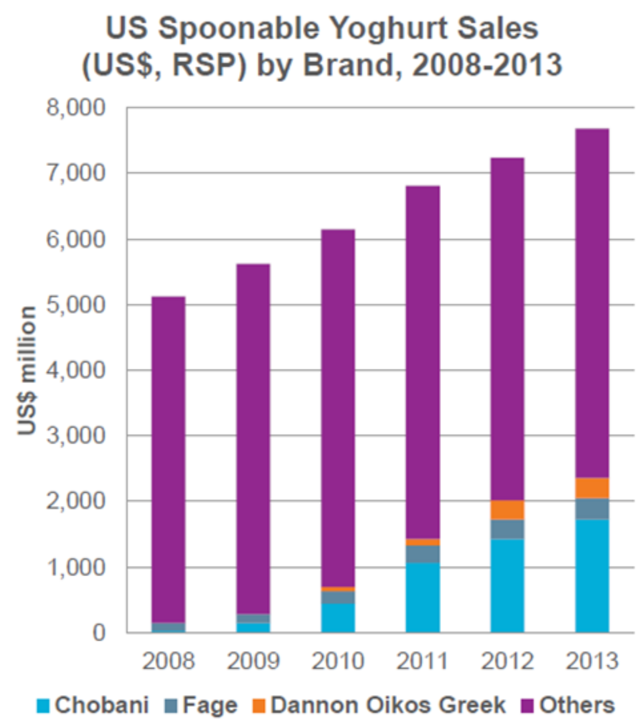
- Natural grocery and specialty stores together were the #2 channel after mass (incl. Wal-Mart).
- Natural tends to be a breeding ground for industry innovation, second only to the practitioner channel. The channel employs a more experiential customer service- and information-based model, and offers a greater variety of products. This is necessary given their discerning, education-oriented shoppers.
- Barlean's is noted as a favorite brand by the natural channel shopper.
- As FDM retailers continue to build out their vitamin sections, natural will need to continue to innovate.

OTHER: DIRECT, MLM, PRACTITIONER

- The online/mail order channel continues to be a major growth avenue and is made up of multi-channel companies like NBTY, as well as direct-only companies like New Vitality and Healthy Directions.
- The growth in e-commerce sales of vitamins is consistent with consumers' increasing propensity to consult the internet for health and wellness matters.
- The practitioner channel has also remained very strong.

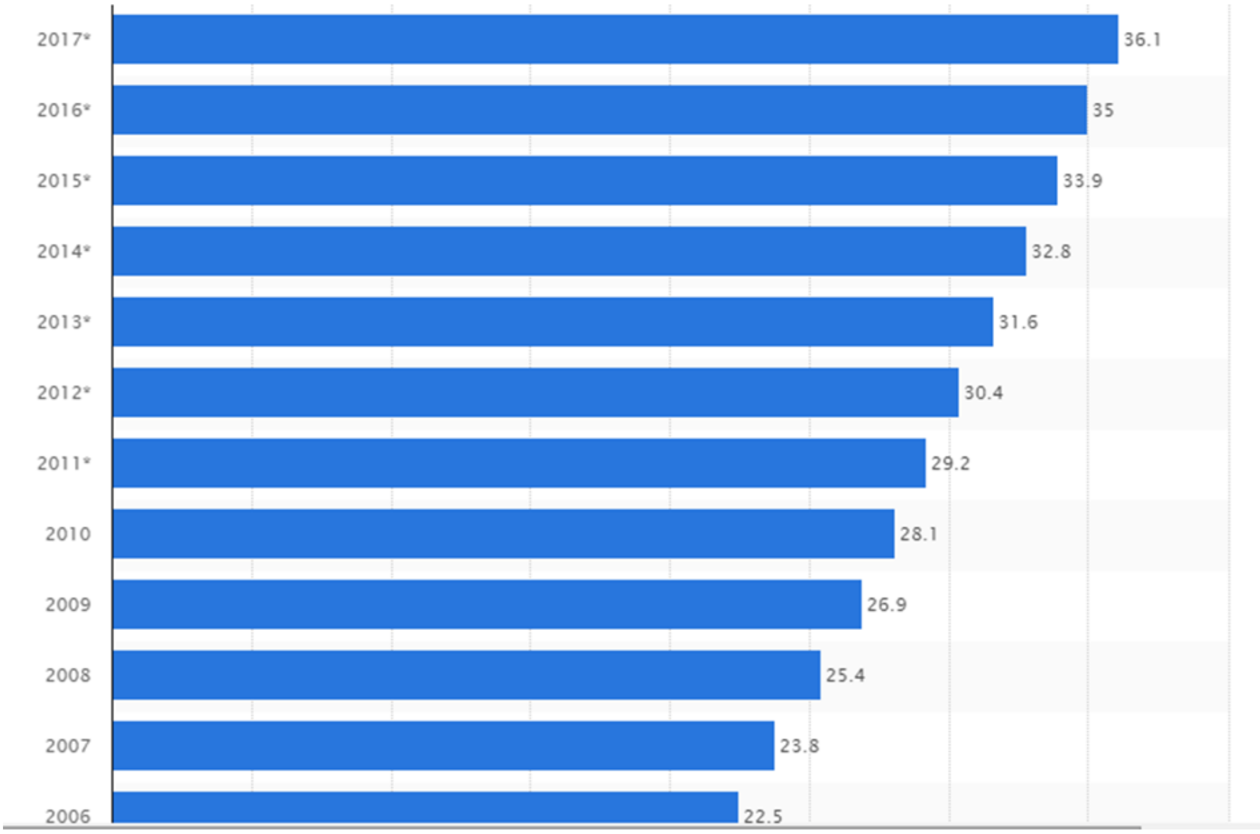
Naturally high-in-protein foods are capitalizing on the craze

- Naturally high-in-protein foods strike multiple healthy food chords
- High-in-protein claims have galvanized yoghurt sales in the US
- Milk producers are banking on protein claims to reverse consumption declines



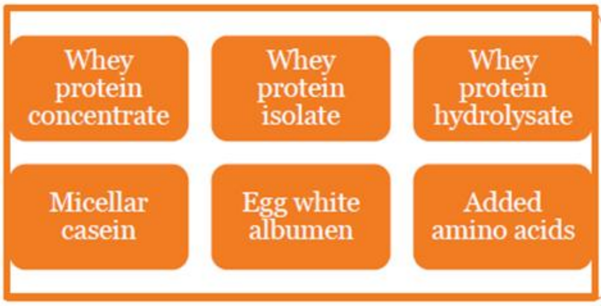
Retail sales of vitamins & nutritional supplements in the United States from 2000 to 2017 (in billion U.S. dollars)*

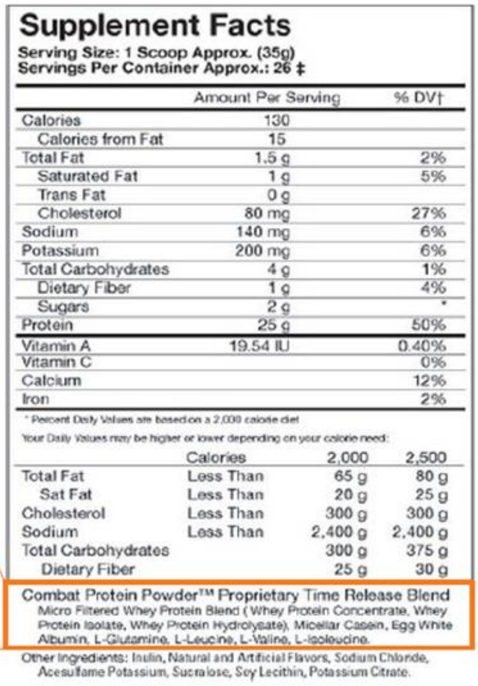
This statistic shows the value of retail sales of vitamins and nutritional supplements in the United States from 2000 to 2017 (projections from 2011). In 2010, sales of these products reached 28.1 billion U.S. dollars.



Sports nutrition protein powder explores new formulations

- Protein powders have undergone a transformation over the last two decades
- Blends are challenging whey protein isolate's role as "king of protein"
- Upselling requires consumer education on the benefits of protein blends





Supplement Facts
Serving Size: 1 Scoop Approx. (35g)
Servings Per Container Approx.: 26 ‡

	Amount Per Serving	% DV†
Calories	130	
Calories from Fat	15	
Total Fat	1.5 g	2%
Saturated Fat	1 g	5%
Trans Fat	0 g	
Cholesterol	80 mg	27%
Sodium	140 mg	6%
Potassium	200 mg	6%
Total Carbohydrates	4 g	1%
Dietary Fiber	1 g	4%
Sugars	2 g	*
Protein	25 g	50%
Vitamin A	19.54 IU	0.40%
Vitamin C		0%
Calcium		12%
Iron		2%

* Percent Daily Values are based on a 2,000 calorie diet
Your Daily Values may be higher or lower depending on your calorie need:

	Calories	2,000	2,500
Total Fat	Less Than	65 g	80 g
Sat Fat	Less Than	20 g	25 g
Cholesterol	Less Than	300 g	300 g
Sodium	Less Than	2,400 g	2,400 g
Total Carbohydrates		300 g	375 g
Dietary Fiber		25 g	30 g

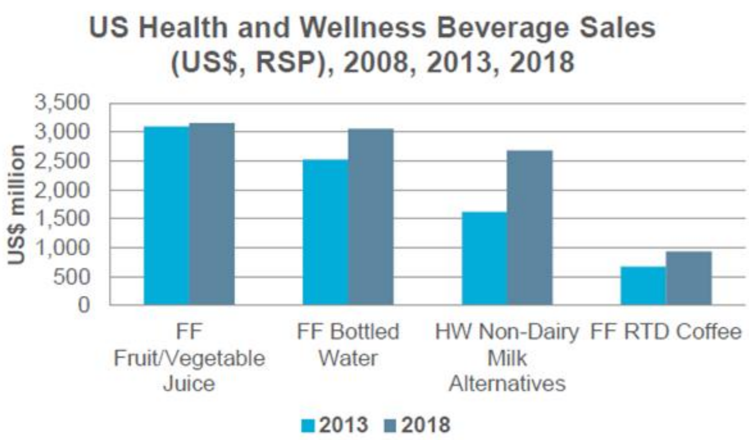
Combat Protein Powder™ Proprietary Time Release Blend
Micro Filtered Whey Protein Blend (Whey Protein Concentrate, Whey Protein Isolate, Whey Protein Hydrolysate), Micellar Casein, Egg White Albumin, L-Glutamine, L-Leucine, L-Valine, L-Isoleucine.

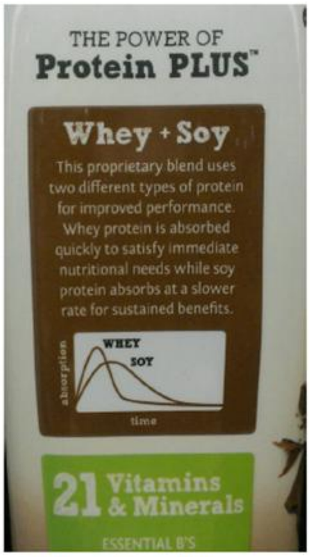
Other Ingredients: Inulin, Natural and Artificial Flavors, Sodium Chloride, Acesulfame Potassium, Sucralose, Soy Lecithin, Potassium Citrate.

Supplement facts label for Muscle Pharm Combat Power

Added protein health and wellness beverages

- Soft drinks are stagnating as consumers ask: "What can your drink do for me?"
- Protein is adding value to bottled water, juice and dairy drinks
- Fortified/functional claims are key to higher unit prices





Bolthouse Farms (Cambell's) Protein Plus – On-package consumer education on the benefits of multiple protein sources

Alternatives to milk proteins lack scale but are gaining steam

- Milk proteins alternatives are less common, but growing quickly
- Plant proteins cater to health-and-wellness-focused consumers
- Soy has limited reach in sports nutrition
- Pea, rice and hemp are emerging as plant-based leaders

BodyLogix Vegan Protein

- Pea, brown rice, potato and chia protein
- Complete amino acid profile
- Non-GMO

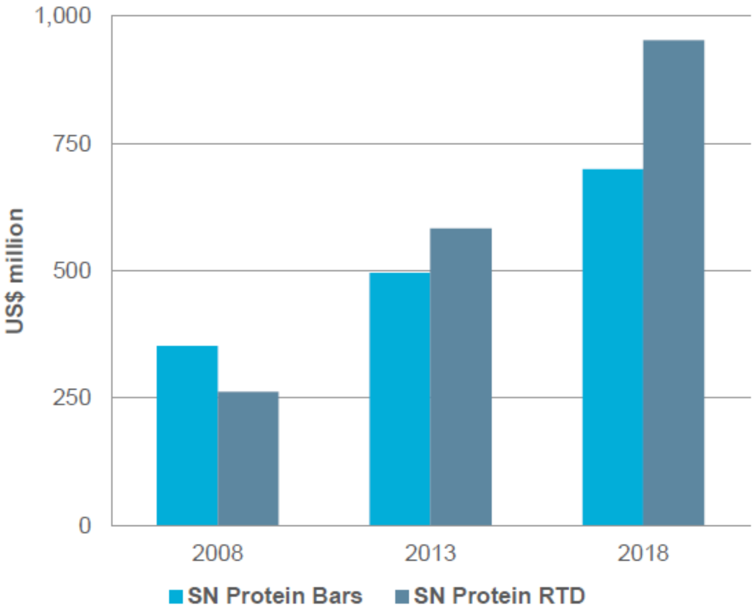
Vega Sport Performance Protein

- Pea, sacha inchi, brown rice and alfalfa protein
- Informed-Choice certified
- High in tryptophan

Premiumisation and "snackability" drive SN protein bars and RTD

- Convenience formats are fairly ubiquitous
- Both categories are undergoing an image overhaul
- Premium brands are borrowing trends from health and wellness and high-end confectionery
- Growing competition from "general wellness" brands

US Sports Nutrition Protein Bar and RTD Sales (US$, RSP), 2008-2018



Consumers

The rise of the protein drinks for ordinary people

Protein products are increasingly being marketed in supermarkets to ordinary people. Do they serve any real purpose for non-athletes?

The "sport-related" protein product sector is booming. It's estimated that the world will be chewing and gulping down £8bn a year of bars, drinks, and other supplements by 2017.

But there's now a wave of products where the branding marks a departure from the traditional world of the protein supplement.

The classic protein drinks have usually been characterised by displays of over-sized bottles and tubs, often with labels depicting rippling torsos. The powders and bars targeted hardcore gym-goers and amateur athletes.

The typical customer was someone who wanted to build muscle and aid recovery after a serious workout.

But the latest generation is positioned more around healthy lifestyle.

In the UK, a "high protein dairy drink" called Upbeat is the latest product to get a big marketing push. It follows the path blazed by For Goodness Shakes, a drink primarily aimed at gym-goers and athletes that was picked up by a wider pool of buyers.

Similar lifestyle protein products can be seen in the US on the shelves of the likes of Wal-Mart, K-Mart, Walgreens, and CVS.

But there's an elephant in the room. People in the West usually already get more than enough protein.

Healthy protein intake depends on weight, with a recommended intake figure of 0.8g per kg of weight per day often cited. Age is also a factor. Over the course of a day, the average man should be eating around 55g of protein, while a woman needs 45g, says the British Dietetic Association. In the US, the national public health body, the Centers for Disease Control and Prevention, recommends 56g for an average man and 45g for a woman.

In the UK the mean intake for men is 86.5g per day, with women consuming 65g, says nutritionist Dr Helen Crawley. The CDC says "most adults in the United States get more than enough protein to meet their needs".

In the US, UK and most of the rest of the West people have diets that easily supply enough protein. A chicken breast might contain around 40g of protein, a cod fillet 30g, a helping of tofu 15g and an egg 6g.

Topping up with supplements can see substantial amounts of extra protein enter the diet, with some shakes offering up to 35g per serving.

Everybody needs protein in their diet on a daily basis as it is essential to body tissues, is necessary for growth and contributes to muscle mass and bone health.

But processing excess intake can put pressure on the kidneys, says Crawley. Excess animal protein is linked with kidney stones. In people with a pre-existing condition, excess protein can accelerate kidney disease.

Only vulnerable groups, such as those recovering from surgery or frail older people, tend to need more protein - something for which medical advice should be sought.

"There's no reason to have added protein in food, because we already have it," says Crawley.

There are those who advocate higher protein ratios in diets, arguing that the mainstream nutritional advice is outdated and that active people might need considerably more. Even the CDC allows a range of between 10-35% of daily calories coming from protein.

Shakes and milkshakes

Protein shakes sit alongside regular milkshakes in the supermarket

So what is behind the appearance of the ever-expanding range of protein supplements?

An "extreme" group of athletes working out in gyms were the pioneers for the supplements' popularity, says Chris Schmidt, a research analyst at market research firm Euromonitor International.

The idea was that muscles damaged during intense weight training could be repaired and developed by turning dried and concentrated whey, a by-product of cheese-making, into a drink. These shakes were seen as more efficient and convenient than having to eat large amounts of high-protein foods.

Only a handful of specialist shops sold the powder and new customers were often found by targeting their personal trainers.

"In the early days they were very much associated with body building. Until the late 90s very few people outside that high performance athletic community had heard of them," says Schmidt.

A large tub of whey protein powder sits on a kitchen worktop as a bodybuilder takes a drink

The bodybuilders were followed by professional athletes, then amateur and college athletes.

"They turned into these lifelong users and that was a big part of what broke the stigma, because a guy from across the street used it, not some Arnold Schwarzenegger bodybuilding guy," says Schmidt.

As more people take an interest in their wellbeing - exercising more and eating more healthily - demand for protein rich products has continued to grow, says Schmidt.

A fan of shakes

Owura Kodua, 30, a police officer in central London, has used protein shakes for four years and buys a £40 tub every six weeks.

"It's a good, easy source of protein. Rather than have to cook a meal when you work shifts like me, a shake will fill you up."

Kodua goes to the gym three or four times a week, where he does weight training and cardiovascular work. He also plays football.

He says he "would not be stuck" without shakes, but would have to plan more carefully.

"You could buy chicken breasts the day before work and make a packed lunch, but [a protein shake] is easy, quick and cheaper.

"I don't believe that I have a bad diet because of it at all. My diet is balanced."

The large tubs still exist, but more convenient ready-mixed shakes are now widely available, along with snack bars and flapjacks. Whey powders have also been joined by other protein sources including casein, hemp and rice.

The combined result has been a sharp increase in sales. According to Euromonitor figures worldwide sales of sports related protein products grew from £2.5bn in 2007 to £4.9bn in 2012 and are likely to reach £7.8bn in 2017. In the UK sales increased from £73m in 2007 to £170m in 2012 and are expected to reach £358m by 2017.

And the most notable part of the growth is the shift to marketing to "ordinary" people. Among new shakes is Wing-Co, a chocolate-flavoured high-protein drink aimed as a snack alternative for men in their 30s and 40s who "aren't sucked in by lots of marketing rubbish".

Upbeat drinks are pitched as a snack or breakfast replacement which might appeal to people including "post-pregnancy mums and vegetarians".

These are drinks which are being pitched at a "far broader more mainstream audience", says Julia Glotz, fresh food editor at The Grocer.

A lot of work has gone into the branding and the drinks look much more like other modern supermarket brands than sports supplements, says Glotz.

Selling protein in the UK

A crate of Wing-Co drinks

The sports nutrition market - excluding "energy" products such as Lucozade or Red Bull - was worth £270m last year, according to Euromonitor International.

High protein products such as powders, bars, tablets, gels and drinks - usually aimed at building muscle growth or speeding recovery - made up more than half of that at £173m in 2012.

Sales of ready-to-drink protein products totalled £16.7m last year, up from £5.6m in 2007. But that figure is expected to climb to £51.7m in the next four years, with the overall protein product market more than doubling to £362m.

The new products aren't even marketed as "supplements". They might be a breakfast substitute for someone in a hurry, or pitched as an alternative to a snack.

They benefit from the general aura of healthiness that hovers over the word "protein". If protein is so healthy, and I want a snack, one that will fill me up, I might very well be drawn to something with protein written on the packet.

The trend, says Glotz, was started by For Goodness Shakes, which "still looked quite gym" but did not look out of place in the chiller cabinet. More have followed.

"You see a few of them in the food-to-go area, where they might be positioned as a particularly filling drink that you can have at lunchtime. And you also see some of them sitting in the milk drinks and milkshakes section."

Others have also spotted the possibilities. Danone makes a high protein yoghurt called Danio, while dieters might find themselves drawn towards Atkins chocolate bars and Marks and Spencer has a range of high protein meals that promise to keep you "fuller longer".

Protein supplements do have a place used once a day after muscle-building training, but most people - including regular gym goers - would find that milk contains the right combination of protein and carbohydrates for rehydration and repair, says Azmina Govindji of the British Dietetic Association.

The key is a balanced diet, but supplements can be attractive.

"It's in our nature to look for quick fixes, this is why diets work so well. If you're promised by the hype and the marketing that this particular shake will help you to build muscle, then these very compelling messages can be quite alluring."

But for many people using shakes and other supplements it's the convenience they offer - rather than the belief that they're an alternative to food - that is important, says Rob Aitken of personal trainers Matt Roberts.

"For up to two hours after a workout there's a window to aid recovery. At that time they may not want to sit down and have a full meal."

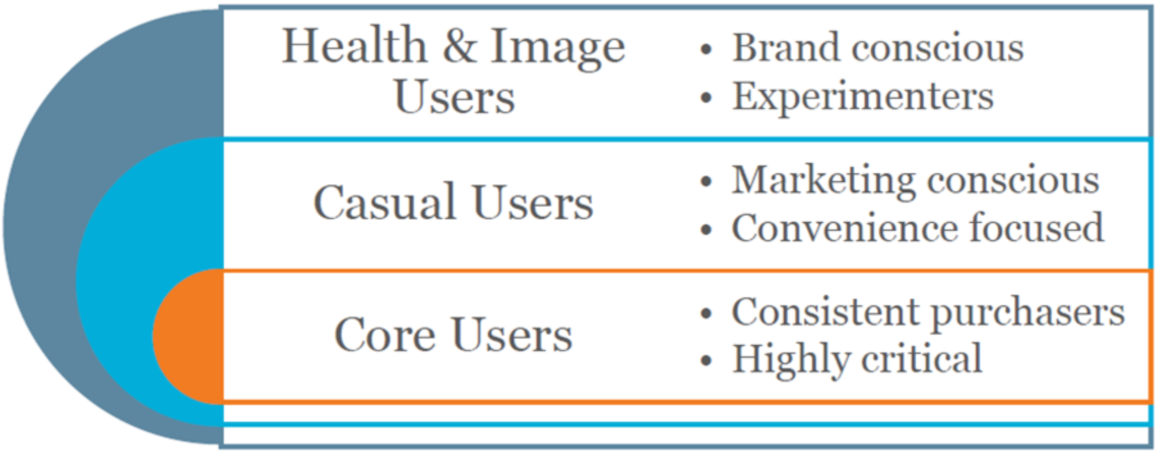
His clients are advised to try and eat protein with every meal and to make sure they combine shakes with real food.

"The clue is in the name, it's a supplement."

“Core users” no longer dominate sports nutrition sales

Evolving fitness trends are driving more consumers to supplementation

General health & wellness brands are bringing in more “image users”



Different users gravitate to different products and positionings

Core Users

Cutting edge formulations

Low cost-per-serving concentrates

Casual Users

Convenience formats

Recognizable ingredients

Health & Image Users

Health & wellness trends

Active lifestyle branding

Protein: All things to all people?

Targeting him

- Growth in muscle mass
- Recovery from resistance exercise
- Bone health

Targeting Her

- Lean muscle maintenance
- Skin/hair health
- Bone health
- Satiety

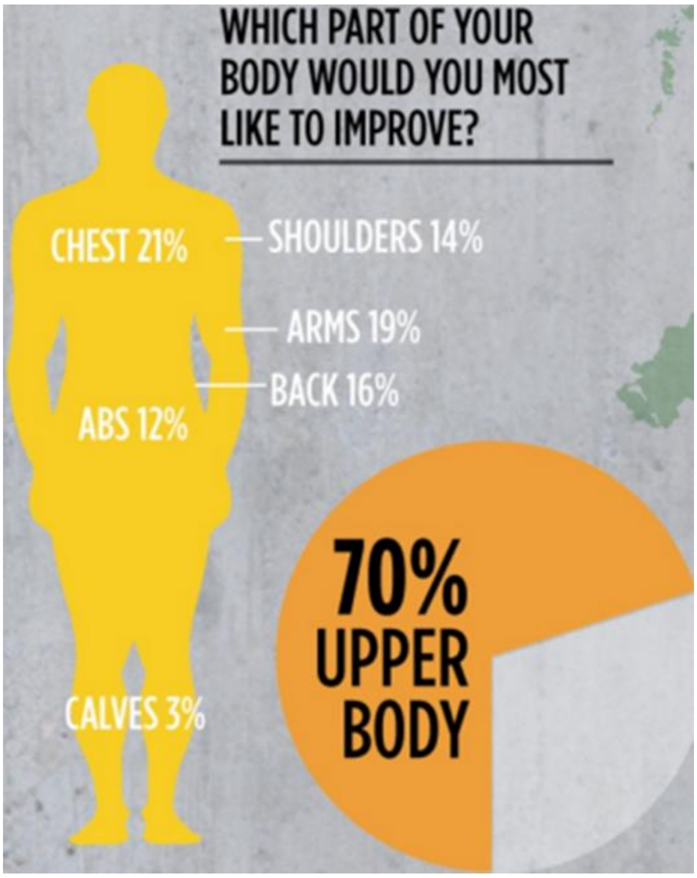
Sports nutrition pushes to close the gender gap

Targeting Her

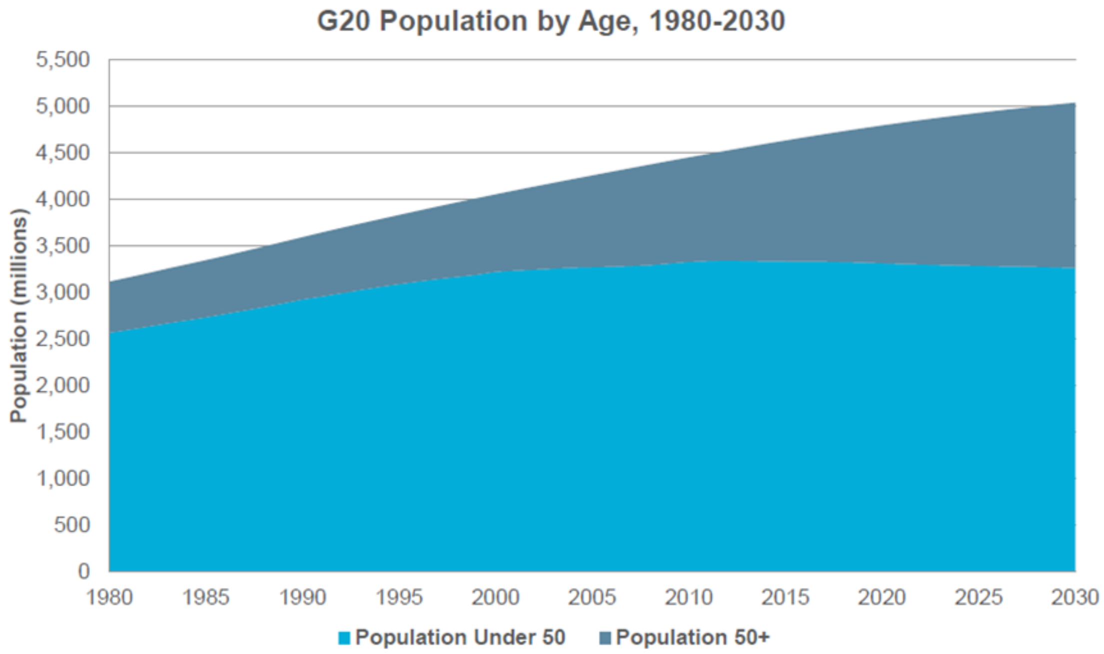
- Satiety/weight management remain key
- Functional fitness trend is increasing demand
- Lean muscle maintenance over muscle gains

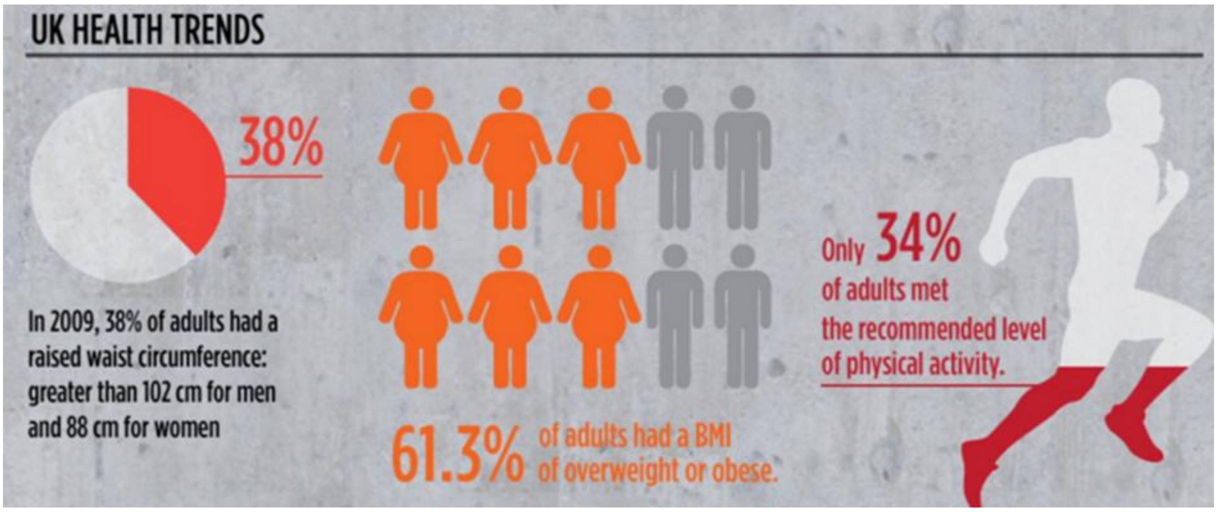
"Diet proteins" with weight loss ingredients like CLA, green coffee extract, etc. have been gaining steam

Established sports nutrition brands are increasingly investing in female brand extensions. Photo: Muscle Pharm's FitMiss line



Anti-aging will appeal to millions more in the near future





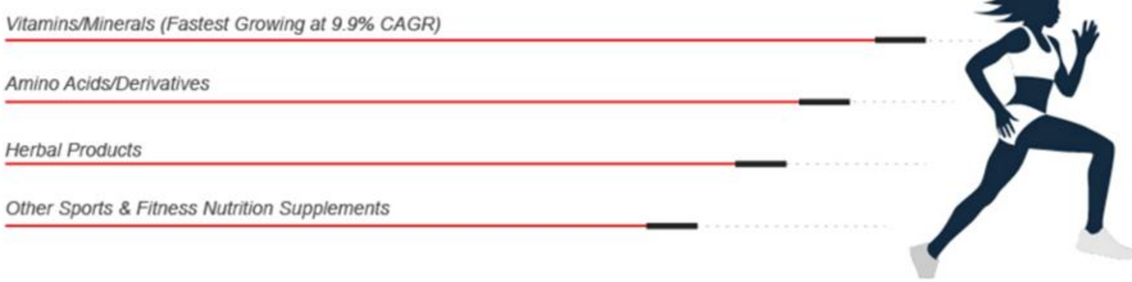
Global Market Share, Size & Demand Forecasts

The United States:
The Largest Market

Asia-Pacific:
The Fastest Growing Market at 12.5% CAGR

Market projected to reach US$8.9 billion by 2020

Growth Projections in Key Product Markets

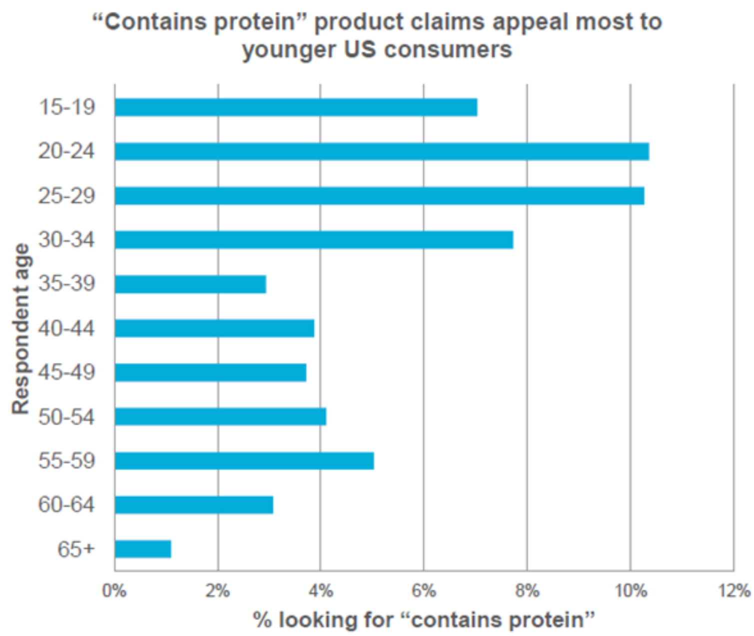


Competition

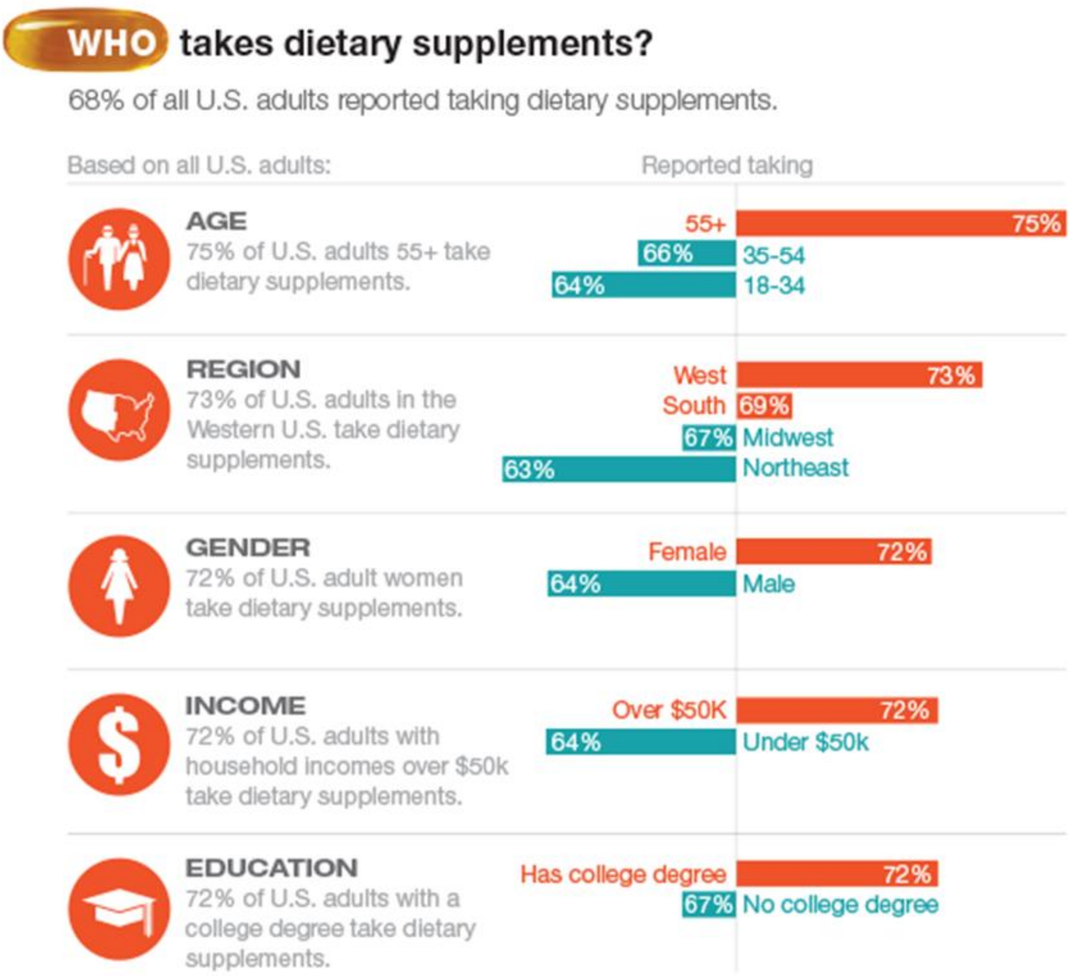
Global Market Drivers

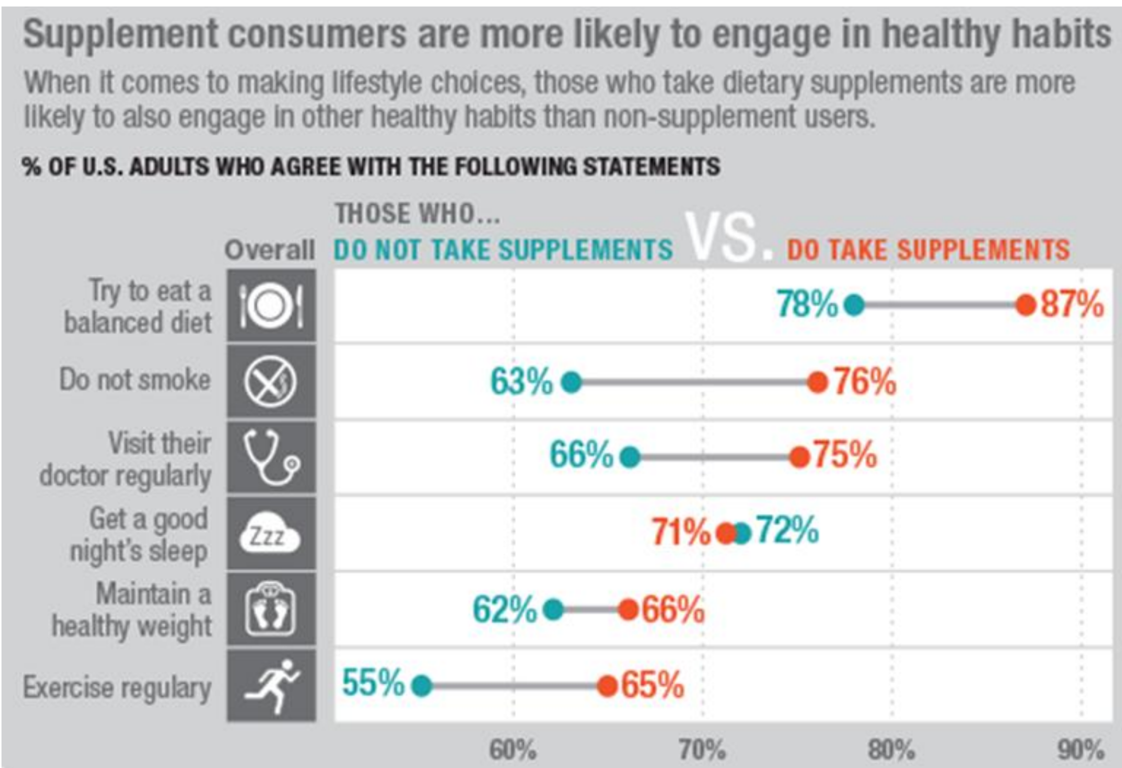
Passport Survey: Popularity in US highest among Millennials

- Claims appeal most strongly to younger consumers
- Aligns with brand-consciousness and fitness trends
- Protein concern ebbs and flows throughout lifetime



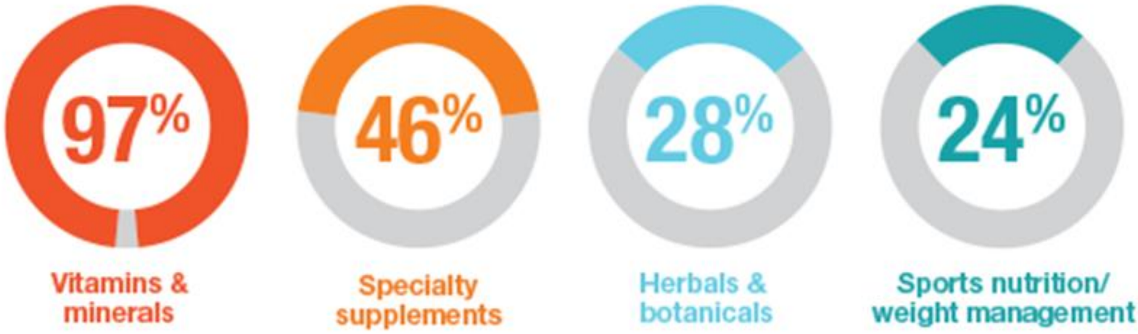
N = 1,813


WHO takes dietary supplements?
68% of all U.S. adults reported taking dietary supplements.
Based on all U.S. adults:
Reported taking
AGE
75% of U.S. adults 55+ take dietary supplements.
55+ 75%
66% 35-54
64% 18-34
REGION
73% of U.S. adults in the Western U.S. take dietary supplements.
West 73%
South 69%
67% Midwest
63% Northeast
GENDER
72% of U.S. adult women take dietary supplements.
Female 72%
64% Male
INCOME
72% of U.S. adults with household incomes over $50k take dietary supplements.
Over $50K 72%
64% Under $50k
EDUCATION
72% of U.S. adults with a college degree take dietary supplements.
Has college degree 72%
67% No college degree


Supplement consumers are more likely to engage in healthy habits
When it comes to making lifestyle choices, those who take dietary supplements are more likely to also engage in other healthy habits than non-supplement users.
% OF U.S. ADULTS WHO AGREE WITH THE FOLLOWING STATEMENTS
THOSE WHO...
Overall
DO NOT TAKE SUPPLEMENTS
VS.
DO TAKE SUPPLEMENTS
Try to eat a balanced diet 78% 87%
Do not smoke 63% 76%
Visit their doctor regularly 66% 75%
Get a good night's sleep 71% 72%
Maintain a healthy weight 62% 66%
Exercise regulary 55% 65%
60%
70%
80%
90%

WHAT types of supplements do they take?

Vitamins and minerals are the most popular category among U.S. adult supplement users with 97% of supplement users taking them.



TOP 5 SUPPLEMENTS WITHIN EACH CATEGORY

For example: 77% of supplement users take a multivitamin

WHERE do they store their supplements?

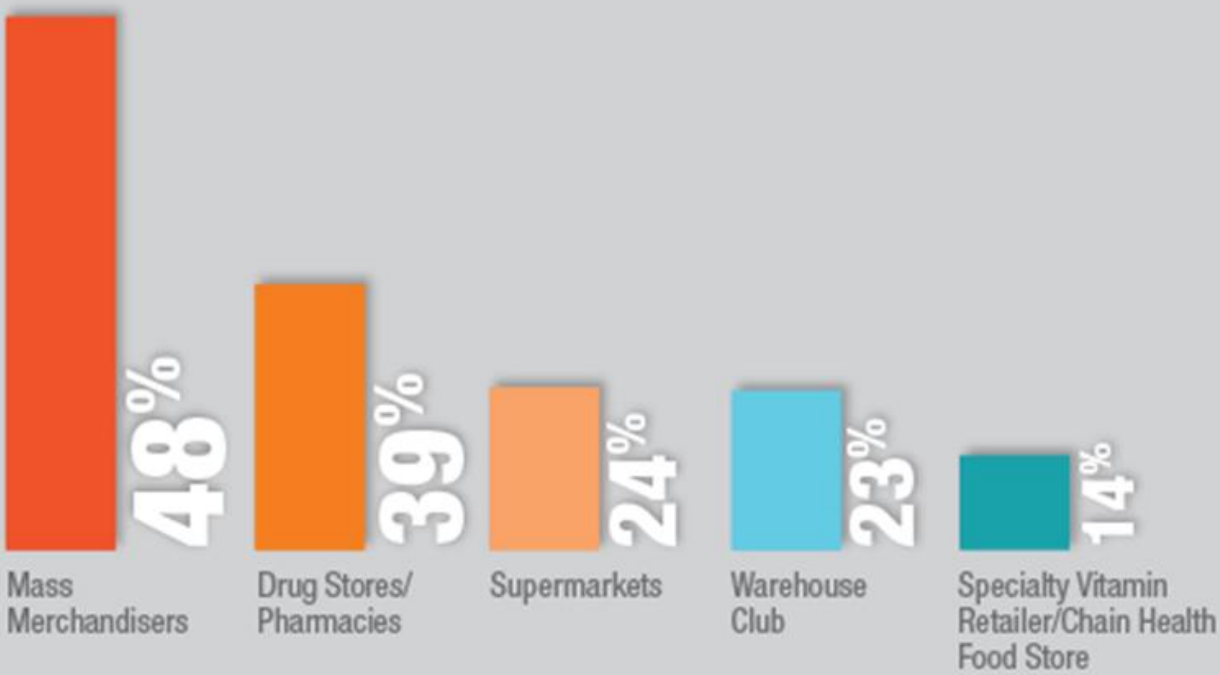
Tip: Store your supplements in a cool, dry place, out of the reach of children, and in a location that is convenient so that you will remember to take them.

TOP FIVE PLACES WHERE SUPPLEMENT USERS KEEP THEIR SUPPLEMENTS

Where do they buy supplements?

Tip: Look for nationally recognized brands or store brands from a trusted retailer.

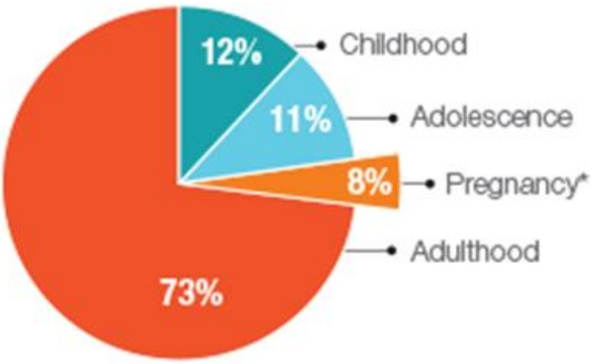
TOP 5 PLACES SUPPLEMENT USERS HAVE PURCHASED SUPPLEMENTS FROM



WHEN did they start taking supplements?

Tip: Supplementing can be appropriate for each life stage. Talk with your doctor or other healthcare practitioner about what dietary supplement regimen is right for you.

AT WHAT AGE SUPPLEMENT USERS STARTED TAKING SUPPLEMENTS

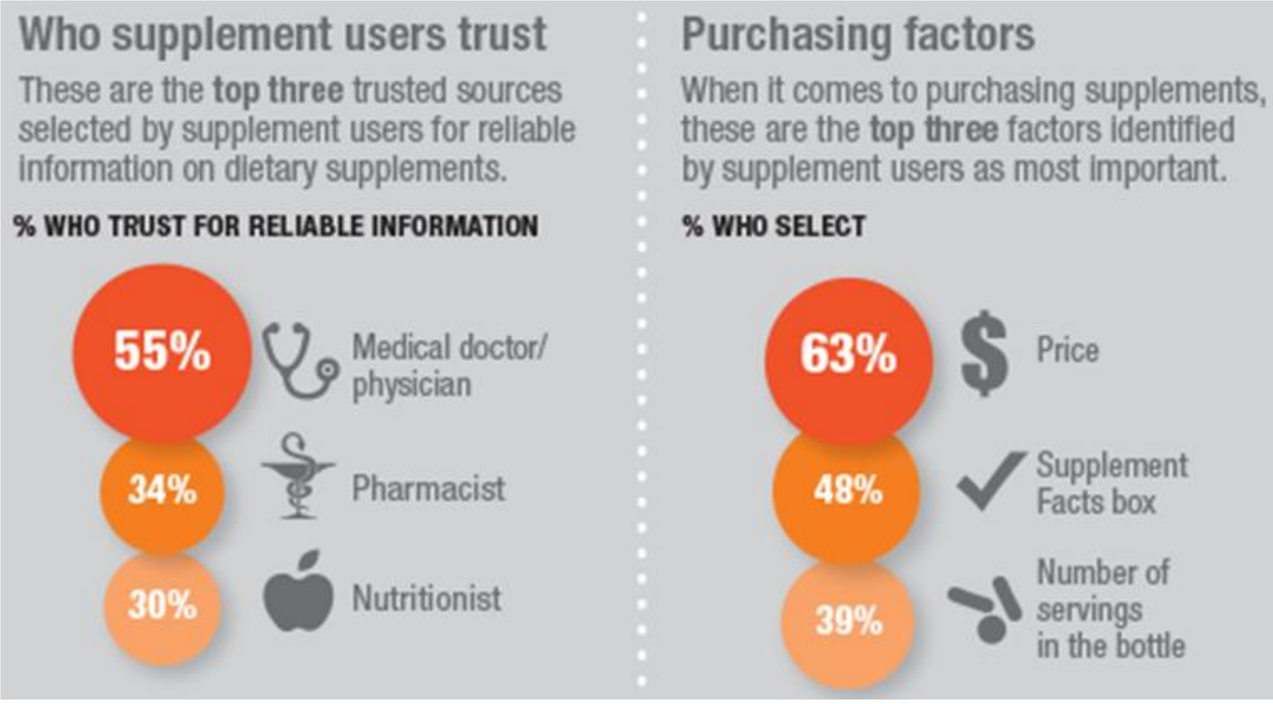


WHY do they take supplements?

Depending on your age, gender and lifestyle, reasons for supplementing can differ. Remember that dietary supplements are not intended to treat, diagnose, mitigate, prevent, or cure diseases.

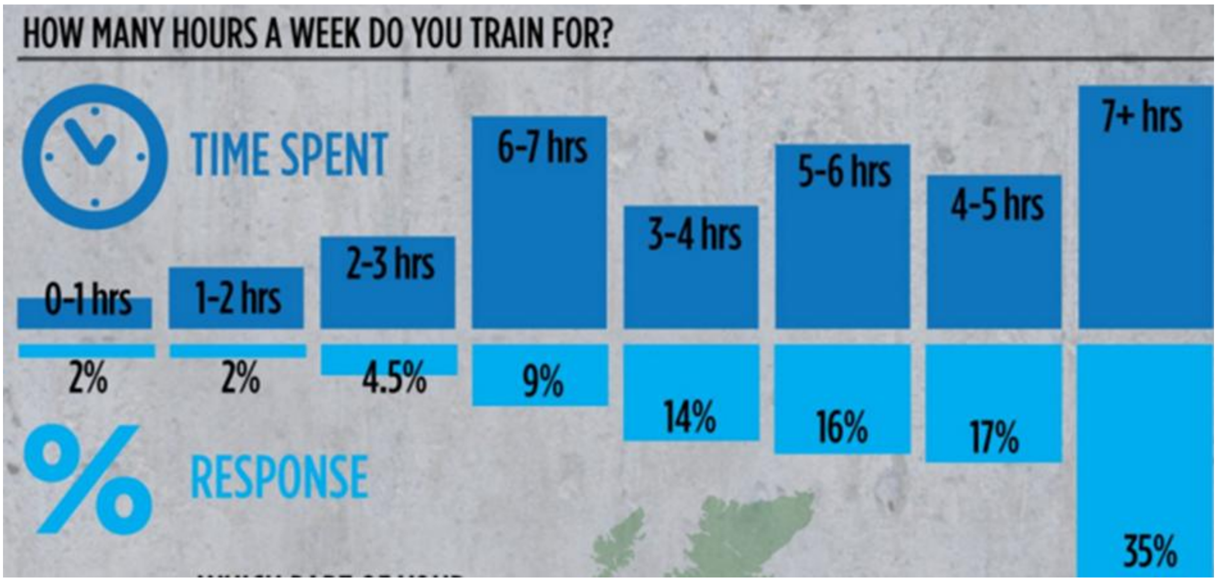
% OF SUPPLEMENT USERS WHO AGREED WITH THE FOLLOWING STATEMENTS

		Gender		Age		
Top Reasons	Overall	Men	Women	18–34	35–54	55+
Overall health/ wellness benefits	54%	51%	56%	50%	55%	57%
To fill nutrient gaps in my diet	36%	33%	39%	38%	32%	39%
Heart health	32%	36%	28%	19%	31%	42%
Healthy aging	29%	27%	32%	15%	31%	40%
Immune health	29%	29%	29%	34%	29%	25%
Energy	29%	31%	27%	31%	33%	23%
Bone health	29%	20%	36%	17%	31%	36%
Help reduce the risk of illness	22%	26%	19%	18%	25%	24%
Joint health	21%	23%	20%	13%	21%	28%


Who supplement users trust
These are the top three trusted sources selected by supplement users for reliable information on dietary supplements.
% WHO TRUST FOR RELIABLE INFORMATION
55%
Medical doctor/ physician
34%
Pharmacist
30%
Nutritionist
Purchasing factors
When it comes to purchasing supplements, these are the top three factors identified by supplement users as most important.
% WHO SELECT
63%
Price
48%
Supplement Facts box
39%
Number of servings in the bottle


SUPPLEMENT TRENDS IN THE UK
Predator Nutrition
WHICH SUPPLEMENT IS MOST ESSENTIAL?
1st
Protein powder won with 76% of the vote
2nd
Second was Multivitamins with 10%
3rd
Third was Preworkouts with 9%


IF YOU DIDN'T HAVE ACCESS TO SUPPLEMENTS, WHAT WOULD YOU DO?
51% WOULD LOOK TO GET SOME STRAIGHT AWAY!
24% WOULD EAT MORE REAL FOOD
16% WOULD BE LESS LIKELY TO GO TO THE GYM


HOW MANY HOURS A WEEK DO YOU TRAIN FOR?
TIME SPENT
% RESPONSE
0-1 hrs
2%
1-2 hrs
2%
2-3 hrs
4.5%
6-7 hrs
9%
3-4 hrs
14%
5-6 hrs
16%
4-5 hrs
17%
7+ hrs
35%

Market opportunities for protein-fortified foods, supplements

Solae, the world leader in developing innovative soy technologies and ingredients, have produced a report to identify the 'Market Opportunities for Protein-Fortified Foods and Supplements in the Active, Aging Market'.
The study included 4,304 people in 13 different countries across Europe, America and Asia.

The research has highlighted some interesting findings, including:

There is a consumer education opportunity for understanding protein:

- The study shows there is a connection between protein and the concerns of active ageing consumers.
  - Over 40 percent of respondents indicate openness to using fortified foods/nutritional supplements.
  - Health maintenance becomes a more significant motivator as individuals growing old.
  - However, only 34 percent recognise that they need more protein as they age.
- Active ageing consumers in general do not perceive any one protein source as delivering benefits uniquely.
  - Soy protein has the highest usage (43 percent) among plant protein sources typically used for food fortification;
  - Animal protein (meat, eggs, milk etc) is the most recognised type of protein
  - However, most participants indicate that 'all proteins equally deliver' the benefits of protein.

Male vs. Female

- Females are more active in using protein-fortified foods and supplements. Expressing higher levels of concern on nearly all aspects: sustaining energy levels, maintaining a healthy weight and maintain muscle tone etc.
- Males are more likely to list 'healthy heart' as a top-3 concern: 37 percent vs. 26 percent (females)

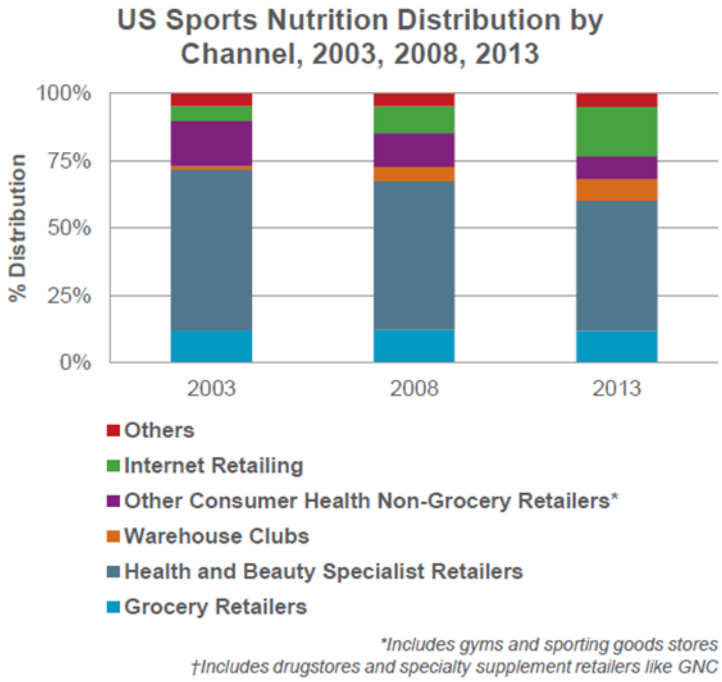
- Females are more likely to list ‘joint pain/mobility’ as top-3 concern: 36 percent vs. 24 percent (males)
- There are interesting differences between men and women for their usage and purchase of protein-fortified foods and supplements.

What determines the purchase?

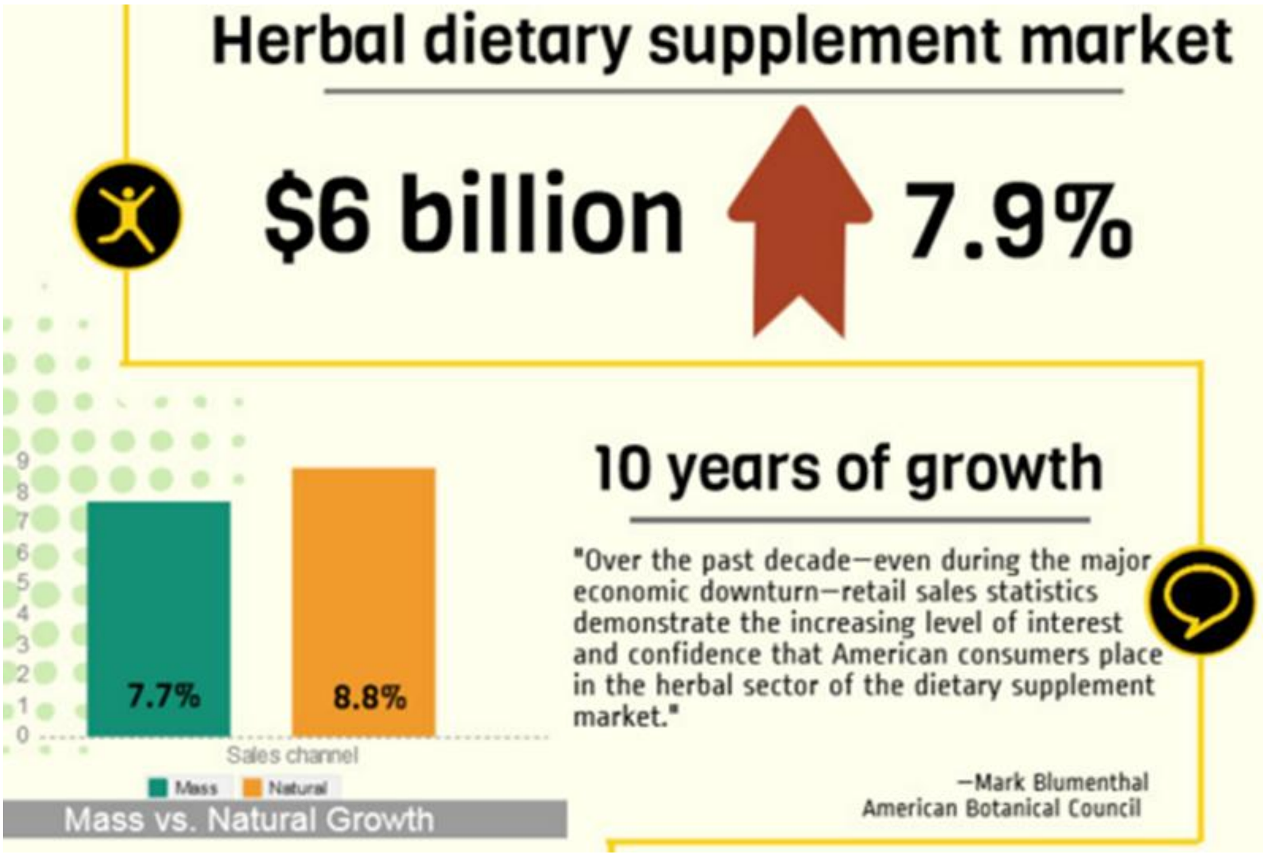
- Specialty Stores and Traditional Supermarkets/Grocers seem to be the top retail channel, while the product’s benefits are the primary factor influencing purchase decision.
- 38 percent consider product benefits first and foremost in making purchasing decisions
- 33 percent consider price first
- 13 percent say that benefits, price, flavour, brand name and size all weigh equally in their decision.
- Among product promotions, ‘sale price’ offers are most motivating, while recommendations from doctors can also impact.
    - 35 percent indicate that recommendations from a doctor or other health professional influence their purchase decision
    - In gaining trial: recommendations from doctors are most influential.
- Products for targeted fat loss, weight management and muscle preservation attract most purchase but with low satisfaction level. (Need with high importance + high dissatisfaction = Market opportunity)
- 51 percent express ‘not satisfied at all’ or ‘somewhat satisfied’ toward the function of ‘minimizing the amount of belly fat’

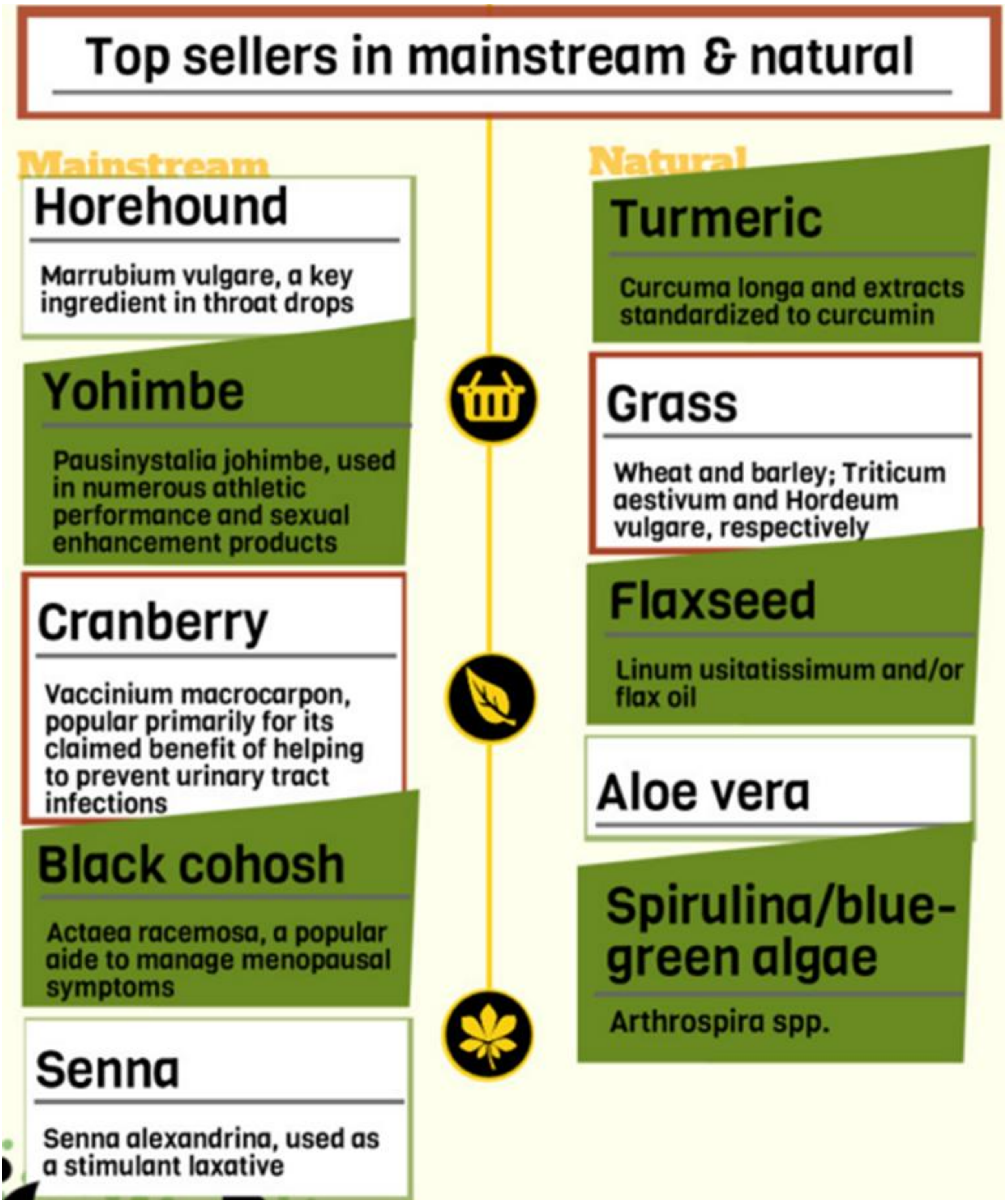
Sports nutrition consumer base is becoming more segmented

- No longer dominated by "core user"
- Evolving fitness trends are driving more consumers to supplement
- Mainstreaming's halo effect widening the consumer base



Competition




Top sellers in mainstream & natural
Mainstream
Horehound
Marrubium vulgare, a key ingredient in throat drops
Yohimbe
Pausinystalia johimbe, used in numerous athletic performance and sexual enhancement products
Cranberry
Vaccinium macrocarpon, popular primarily for its claimed benefit of helping to prevent urinary tract infections
Black cohosh
Actaea racemosa, a popular aide to manage menopausal symptoms
Senna
Senna alexandrina, used as a stimulant laxative
Natural
Turmeric
Curcuma longa and extracts standardized to curcumin
Grass
Wheat and barley; Triticum aestivum and Hordeum vulgare, respectively
Flaxseed
Linum usitatissimum and/or flax oil
Aloe vera
Spirulina/blue-green algae
Arthrospira spp.

UPDATE ON TOP COMPANIES / SUPPLEMENT COMPANIES

Top players in the supplement market include pharmaceutical businesses, supplement-only companies, retailers with product offerings, and others.

TOP SUPPLEMENT COMPANIES ($200M+ IN SUPPLEMENT SALES)

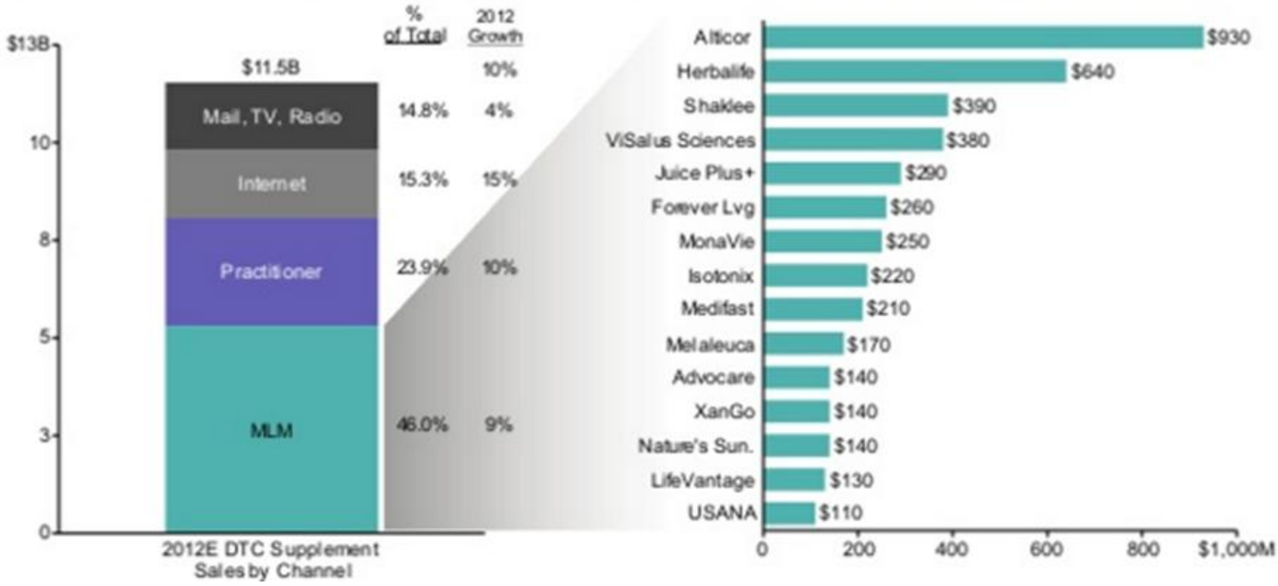
COMPANY	BRANDS	BUSINESS DESCRIPTION	EST. 2012 SALES
NBTY, Inc.	• Nature's Bounty • Sundown • Private Label	• Owned by The Carlyle Group, the company manufactures, markets and distributes branded and private-label supplements.	~$1,820M
Pharmavite (Otsuka)	• Nature Made • Private Label	• Part of Otsuka (Japan), the company manufactures branded and private-label supplements.	~$1,230M
Abbott Labs *	• Ensure • EAS	• Develops, manufactures, and sells pharmaceutical and nutritional products.	~$560M
Perrigo*	• Private Label	• Private-label manufacturer of nutritional supplements.	~$540M
GNC*	• GNC • Third-party contract manufacturing	• Leading global specialty retailer of VMHS products with over 8,200 locations, as well as a contract manufacturer.	~$440M
Pfizer *	• Centrum • Caltrate • Emergen-C (Alacer)	• Develops, manufactures, and markets pharmaceutical and nutritional products.	~$440M
Glanbia*	• Optimum Nutrition • BSN	• International nutritional solutions and cheese group, headquartered in Ireland.	~$380M
Bayer*	• One A Day • Flintstones	• Develops, manufactures, and markets pharmaceutical and nutritional products.	~$350M
Schwabe NA	• Nature's Way • Enzymatic Therapy	• Develops and markets pharmaceutical and nutritional products.	~$320M

UPDATE ON TOP COMPANIES — DIRECT-TO-CONSUMER

A robust direct-to-consumer supplement industry has also emerged in recent years. Network marketing businesses dominated from a scale perspective, but internet and practitioner channels won on growth.

DIRECT-TO-CONSUMER SUPPLEMENT SALES

TOP NETWORK MARKETING COMPANIES - 2012 SALES



UPDATE ON TOP COMPANIES — PUBLIC MARKET UPDATE

PUBLIC COMPANY UPDATES - SUPPLEMENTS

COMPANY	PERIOD	UPDATES
ATRIUM INNOVATIONS	1Q 2013	• Atrium saw high organic growth in 1Q 2013 with the North American Retail and Health Care Practitioners (HCP) businesses doing very well • 8.7% year-over-year growth with strong margins at 19.6% • A joint venture was announced with Fosun Pharma to distribute Atrium products in China • Vertical integration is important • Sports nutrition business is expanding with the Klean Athlete line of products
Nutraceutical	2Q of FY2013 (qtr ended 3/31/13)	• 5% growth from both acquisitions and organic growth • A focus on manufacturing efficiency and sourcing is expected to drive costs down • There is an emphasis on continued merger and acquisition activity after consolidating and integrating previous acquisitions • There is also a focus on new product development and existing product repositioning
Perrigo	1Q 2013	• The Nutritionals segment grew 13.3% year-over-year with growth in all categories, plus $5M of new product sales • Closed a manufacturing facility in Lake Worth, Florida • Lower gross margins due to more VMHS sales and production inefficiencies in infant formula • Focused on other areas currently, including acquiring Sergeant's pet food (categorized in consumer healthcare)

UPDATE ON TOP COMPANIES — PUBLIC MARKET UPDATE

PUBLIC COMPANY UPDATES - INGREDIENTS

COMPANY	PERIOD	UPDATES
CHR HANSEN	2Q of FY2013 (qtr ended 2/28/13)	• Revenue grew 5.8% year-over-year, although EBITDA was down slightly • The Health & Nutrition division showed the highest growth – up 17% mainly due to strong performance in human and animal health in North America • For the first half of fiscal 2013, Health & Nutrition sales accounted for 15% of total sales vs. 14% last year • GI study was not successful - 8M euro impairment charge • Chr Hansen brought on a new CEO on April 1, 2013
DSM	1Q 2013	• Net sales grew 4% year-over-year, driven by 10% growth in Nutrition, the company's largest segment (988M euros of 2,376M euros total in 1Q 2013) • The 1Q 2013 growth in Nutrition was due mainly to high growth acquisitions of Fortitech and Ocean Nutrition • Nutrition segment EBITDA grew 12% to 215M euros of 311M euros total in 1Q2013
NATUREX	1Q 2013	• Revenue grew 13.2% to 83.2M euros. • The Food & Beverage category was down 2.3% (46.7M euros vs. 47.8M euros) while the Nutrition & Health category grew 32.7% (29.2M euros vs. 22.0M euros) – Strong growth in NATlife extracts (proven clinical benefits) • The Americas are 40.2% of total business with growth of 20% in 1Q. Europe was 48.4% of total business, with growth of 10.2% in 1Q 2013 • Decas Botanical Synergies was acquired in September 2012. • In December 2012, Caravelle acquired a 15.4% stake in the company from Nutraceutical (Spain). Caravelle is a diversified French business operating in pharma, mechanics, hotels, etc. • Moved further into developing markets with the purchase of Valentine (India) in April 2012. Valentine produces fruit and vegetable powders and natural food colors

Clip slide

UPDATE ON TOP COMPANIES — PUBLIC MARKET UPDATE

PUBLIC COMPANY UPDATES - RETAIL

COMPANY	PERIOD	UPDATES

GNC	1Q 2013	• Same-store sales grew 1.9% year-over-year for GNC company-owned stores. This was the 31st consecutive quarter of same-store sales growth for the company
		• Revenues grew 6.5% year-over-year. The leap year and the timing of Easter both had negative impacts on sales
		  – Retail sales were up 5% - includes GNC.com and 14 new company stores since the end of 1Q 2012
		  – Franchise revenue grew 6.3% with increased wholesale product sales and franchise income from the U.S. and abroad
		  – Manufacturing and wholesale grew 19.6%
		• New Member Pricing program launched with regular discounts for Gold Card members rather than just the 1st week of the month. This will cost $.05 - $.06 per share in Q2 2013, but should be offset by better revenues and margins in the rest of the year
		• In the 1st quarter of 2013, GNC opened 32 new domestic co-owned stores, 31 new international franchise stores, 9 new domestic franchise stores, and 9 new Rite Aid store-within-a-store units
		• There was a big stock buyback of $61.3M and dividend in the 1st quarter of 2013. $14.7M was paid out in dividends in 1Q 2013, with $.15 per share expected in Q2

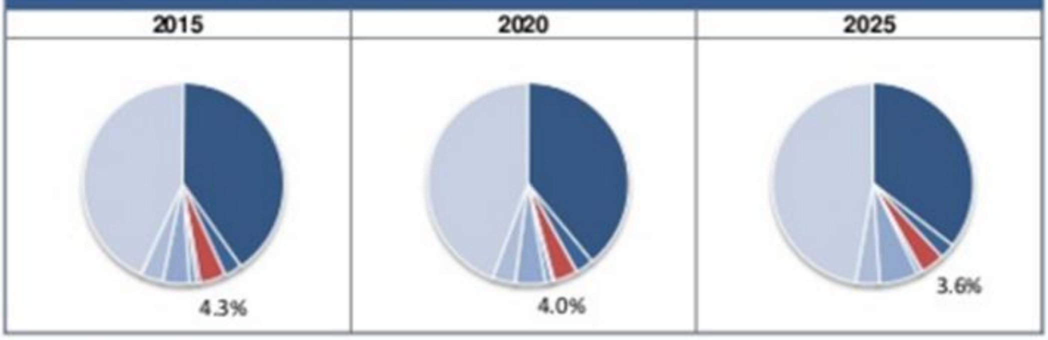
Vitacost	1Q 2013	• Fulfillment improvements have led to a 17% increase in shipments, including 271,000 new customers on vitacost.com • Vitacost is pulling back Amazon sales to focus on vitacost.com and operational efficiencies • Adding 1,000 new SKUs and expanding on food offering • Biggest growth has been in food, sports nutrition, beauty, pet, household, etc. VMHS sales are up 12% • The focus is on private label products, sports nutrition, and non-GMO line as of April 2013 • International – added local China and Brazil websites • Upgraded mobile e-commerce site and smart phone apps with new functionality
the Vitamin Shoppe	1Q 2013	• Same-store sales grew 4.5% in the first quarter due to a combination of higher traffic and higher average ticket value ($9.6M contribution in 1Q2013). This was the 30th consecutive quarter of same-store sales growth • E-commerce sales grew 16.7% • Vitamin Shoppe added 13 new U.S. stores, and also acquired 31 stores in the Pacific Northwest as part of the acquisition of Super Supplements • Making "strategic investments" this year to position for growth • Took down the comp-store sales estimate after a soft April 2013 • The first quarter saw strength in sports nutrition, specialty supplements and natural bath/beauty • The 2013 outlook for Vitamin Shoppe includes 50 new stores, capital expenditures of $45-$50M including the construction of a new distribution center in Ashland, VA (opening summer 2013), and slight dilution due to the acquisition of Super Supplements • Added a line of private label multivitamins and also doing well with sales of Mytrition multipacks (6 SKUs now and will expand to 10 SKUs in 4Q) • Introducing natural sweeteners in stores • Increasing the availability of Health Enthusiasts for customer service online and over the phone • Continued website upgrades are driving strong growth

UPDATE ON TOP COMPANIES — PUBLIC MARKET UPDATE

PUBLIC COMPANY UPDATES - MLM

COMPANY	PERIOD	UPDATES
HERBALIFE.	1Q 2013	• First quarter 2013 was great despite issues, with revenue increasing 13% year-over-year • 18% increase in independent distributors across all regions – Herbalife now in 88 countries • $9.5M of legal and advisory expenses were incurred in 1Q related to the KPMG insider trading case • Herbalife also discontinued their relationship with KPMG given their involvement in the insider trading debacle. They have hired PricewaterhouseCoopers as their new accounting firm and will have to re-audit the last 3 years of financials • There was a $15.1M impact from the devaluation of the Venezuelan currency • Herbalife has had success with weight management and nutrition products: – Expanding meal replacements – Success with the Express meal bar in the U.S. – to roll-out in other countries – Developing meal replacement soups – Expanding Nutrition 24 line to outer countries • Investing in a Winston-Salem manufacturing facility, with construction to start in June 2013, as well as a botanical extract facility in China • Have 600 local access points globally, expanding to 700 this year • Strong focus on customer insights • Bill Ackman called Herbalife a pyramid scheme in February 2013 and divulged a large short position
LifeVantage.	3Q of FY2013 (qtr ended 3/31/13)	• Sales grew 39% year-over-year to $50.4M • There are now 63,000 active LifeVantage distributors, up from 37,000 in March 2012 • Recovering from a product recall that took place in December 2012 (a large-scale voluntary recall of Protandim that took place due to metal bits being found in product) • The Protandim product recall caused an enhanced focus on quality control in manufacturing and sourcing • Engaged investment bank to secure a $30M-$40M credit facility, which is to be used for a share buyback • Built infrastructure in Japan in Q3, which added costs • LifeVantage has seen huge growth yet sees continued references to headwinds as a result of Protandim recall in prior year • Focus going forward will be on gaining new distributors as opposed to preferred customers (who only buy for themselves); new distributors accounted for 8 of 10 enrollments in Q3 • Successful launch of canine health product in late January 2013
Mannatech Live for Real.	1Q 2013	• Net sales for the first quarter of 2013 were $41.7M, a decrease of 6.3% as compared to $44.5M in the first quarter of 2012 • Sales declined in North America by 8.9%; in Asia Pacific by 1.7%; and in Europe, the Middle East, and Africa by 12.8% • The decline in North American sales was primarily due to the reduction in the average revenue per order • International sales were effected by fluctuations in foreign currency exchange rates • New independent associates in 1Q increased 17% year-over-year with 23,900 new associates and members in 1Q. Total associates and members is approximately 231,000 as of March 2013

Figure 5.16 German Sports Nutrition & Fitness Supplements Global Market Share Forecast (% Share), 2015, 2020, 2025



Source: *visiongain 2015*

5.6.1 German Sports Nutrition & Fitness Supplements Market Analysis

The visiongain forecast shows that in 2015 the sports nutrition & fitness supplements market in Germany will be worth $2.78bn. In the global market, Germany accounts for 4.3% share, while in the European market it represents the largest 18.0%. Visiongain forecasts that in 2015-2025 the market will deliver a strong growth with a CAGR of 7.5% driven by an increasing interest in sports activities and a healthy lifestyle. In 2020, the market value will reach $3.88bn and will further increase to $5.73bn by 2025.

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