

Food Supplements Consumer Research

Final Report for



May 2018



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1. Executive summary

Background and methodology

- Whilst there is considerable market data available, in depth understanding of consumer use of and attitudes towards food supplements is limited.
- The growth in the consumption of food supplements in recent years, especially in the sports nutrition, probiotic and herbal/traditional categories, coupled with changes in the ways in which people purchase and consume them, has made a need for fresh consumer insight ever more pressing.
- In light of these trends, the Food Standards Agency commissioned Community Research and 2CV Research to conduct a piece of in depth research into consumer attitudes and behaviour in relation to food supplements.
- The purpose of the research was to further the FSA's understanding of both mainstream and 'niche' food supplement consumption in order to inform the development of its policy in this area.
- Community Research conducted a two phase multi-method piece of work:
 - Phase One consisted of some high level desk research, a short consumer survey, and a piece of social discourse analysis, the findings from which were used to inform the design of Phase Two.
 - Phase Two consisted of eight discussion groups with 'mainstream' consumers and a series of 16 depth interviews (and one mini group) with 'niche' consumers (older people, people with health conditions, people with eating disorders and extreme fitness enthusiasts).

Main findings

Mainstream supplement consumption

- Consumers differentiate between food supplements for day-to-day health, and those for specific purposes (e.g. sports nutrition, weight loss) in terms of how they use them and how efficient they perceive them to be.
- Drivers for food supplement consumption are both rational and emotional:
 - Most people say that they take day-to-day supplements (e.g. mainstream vitamins and oils) to maintain or improve their overall health and give them a 'boost', or to replace lost nutrients due to diet, age or a health condition.
 - By taking supplements, consumers also feel that they are taking control over their health and bodies by doing *something* proactive e.g. to combat the decline due to age.
- Many consumers acknowledge that they take supplements as a force of habit and that they do not know if they are actually making any difference but that because such products were viewed as being fairly benign, it was better to be safe than sorry.
- Whilst there is some cynicism about their efficacy, consumers do not generally perceive there to be any risks associated with food supplements, except for some niche products.
 - They tend not to think about how different food supplements interact with one another or with prescribed medication they are largely seen as harmless.
- Most consumers are buying food supplements from mainstream retailers, and would avoid buying from unknown online retailers due to fears about provenance and adulteration.



- Recommendations (from healthcare or fitness professionals and / or friends and family) and reviews are the key drivers when it comes to decision making around food supplement products and brands.
 - Younger consumers in particular point to social media as having an influence on their choices (while older people are more likely to get information from traditional media).
- Consumers assume that the market is regulated, and have few concerns about the safety of food supplements as long as they continue to buy from reputable retailers and take supplements responsibly.

Niche supplement consumption

- As the determination to achieve results (e.g. lose weight, relieve pain) increases, consumers' willingness to experiment can also go up, and for some, the benefits outweigh the risks.
 - However, most feel that these are 'managed' risks that they know what they are doing and are making informed decisions.
- Communities focussed on specific issues discuss supplements and share recommendations to a greater degree than most mainstream consumers.
- As more niche products are likely to be less widely available, many are pushed to purchase online; it can be easy to then move to the more extreme end of the market.



2. Introduction

2.1 Background and context

2.1.1. Background

A food supplement is defined as 'any foodstuff the purpose of which is to supplement the normal diet and which are concentrated sources of nutrients or other substances with a nutritional or physiological effect, alone or in combination, marketed in dose form, namely forms such as capsules, pastilles, tablets, pills and other similar forms, sachets of powder, ampoules of liquids, drop dispensing bottles, and other similar forms of liquids and powders designed to be taken in measured small unit quantities'¹.

The regulatory landscape for food supplements is complex. The current legislative framework creates overlapping areas of responsibility between several different bodies, with no one department having an overarching lead covering both policy and enforcement. The Department of Health acts as the Competent Authority for the EU legislation on food supplements and coordinates policy across the devolved authorities and with other relevant Government Departments. The Food Standards Agency (FSA) is responsible for the enforcement of these regulations with local authorities. In addition to this the FSA also has specific responsibility for the following, which all intersect with food supplements:

- General food law, food safety legislation and food controls
- Novel foods, food contaminants and enzymes, additives and flavourings
- Chemical risk assessments
- Labelling requirements under the EU Food Information to Consumers Regulation (EU FIC) in Wales and Northern Ireland (Defra in England)
- Incidents and National Food Crime Unit (NFCU)

The UK has seen a significant increase in the growth of the food supplements market, with a 4% increase in current value terms in 2016 alone, to reach £906 million². Forecast growth is to reach £1billion in 2021³. This includes a significant growth in online sales of food supplements, which coupled with the global reach of the market can make consumer protection challenging.

Historically the type of businesses that sell supplements would have been health shops, chemists, supermarkets or direct selling. In the last few years the variety of outlets that sell supplements has increased, with supplements now sold in gyms, leisure centres, beauty salons, small retail shops and sports shops. These business operators may not understand that the products they are selling are defined as "food", and consequently are unaware of the legislative requirements for food supplements. Many may not consider themselves as food businesses in the traditional sense, and therefore are unlikely to be registered with or known by local authorities.

In addition to the growth of non-traditional fixed retail premises, there has also been a significant rise in online retailers. This includes both online market places of major retailers or brands, and niche

¹ The EU Food Supplements Directive 2002/46/EC came into force on 1 August 2005 and is implemented by the Food Supplements Regulations 2003 in England, Wales, Scotland and Northern Ireland

² Vitamins and dietary supplements in the United Kingdom, Euromonitor International, September 2016 ³ Ibid



independent online retailers who may both have their own sites or sell through third parties such as eBay.

2.1.2 Consumers

An overall trend amongst UK consumers of aspiring to a healthier lifestyle has meant consumers are now much more willing to spend money on non-essential goods such as food supplements. This has led to a growth in categories of supplements such as sports nutrition, weight management and wellbeing and vitamins and dietary supplements. Sports protein products, herbal/traditional food supplements and probiotic supplements in particular became the main growth drivers in 2016⁴. The media has been integral in creating demand for fitness and healthier lifestyles, particularly social media, as consumers share their healthy lifestyles and aspire to the lifestyles they follow online.

Despite this growth, however, a recent report by BEUC (Bureau Européen des Unions de Consommateurs), the European consumer organisation, states that consumers are not adequately informed about food supplements. BEUC argue that the huge variety of different but hardly distinguishable products fuel consumers' misinformation⁵. They also highlight possible safety concerns for example the possible effects of food supplements when used in combination with medicines or other foodstuffs⁶.

While the majority of food supplements are not likely pose a safety concern, the growth of online sales has also fuelled an increase in products that pose a significant risk to public health – two products the FSA is focusing on are 2,4-Dinitrophenol (DNP) and Miracle Mineral Solution (MMS).

- DNP is a chemical unfit for human consumption and has been marketed, sold and consumed used as a fat burner, either as a standalone product or included as an ingredient in diet pills and fat burners. DNP is often sought by vulnerable consumers, those who are looking to lose weight or improve muscle definition, for example body builders, and people with eating disorders. Consumption of DNP has resulted in eight deaths in the UK since 2015.
- MMS is advertised as a cure for a range of conditions including autism and Ebola, but is
 essentially a sodium chlorite solution (bleach). MMS is administered in a variety of ways,
 including orally, topically and as an enema. The harm from consuming the substance includes
 severe damage to internal organs and difficulties breathing.

2.2 Research objectives

In 2018 the FSA commissioned Community Research and 2CV Research to conduct consumer research into the use of food supplements to achieve the following five aims:

- To inform the development of the FSA's work on food supplements over the next few years including identifying any emerging risks.
- To gather information about consumers' online purchasing of food supplements.

⁴ Vitamins and dietary supplements in the United Kingdom, Euromonitor International, September 2016

⁵ BEUC, Food Supplements. Challenges and risks for consumers Sep 2016

⁶ Ibid



- To support more targeted and effective enforcement by the National Food Crime Unit and other enforcement bodies, particularly regarding online purchasing.
- To strengthen the FSA's ability to respond effectively and fully with media enquiries about food supplements.
- To provide background information for any future consumer messaging if needed.

The research looked at the following areas:

- 'Normal' supplement use
- 'Niche' supplement use / use by vulnerable consumers

For both 'normal' and 'niche' products / vulnerable groups, the research aimed to explore:

- How and why consumers take supplements
- Triggers and influences
- Sources of information
- Purchase habits

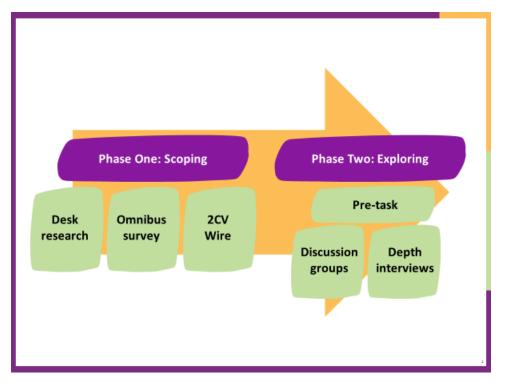


2.3 Research methodology

2.3.1 Overview

The research consisted of two phases, a scoping phase, which provided a level of base knowledge around food supplement consumption with which to inform the second, exploratory phase, an extensive piece of qualitative insight:

Figure 1: Methodology overview



2.3.2 Phase One: Scoping

The overall purpose of Phase One was to inform the design of design and sample of Phase Two, as well as to provide some core insight around food supplement consumption.

Desk research

There is limited publicly available literature around consumer use of, or attitudes, towards food supplements. The little we could find was pulled together into a high level overview (which can be found in the appendices of this report) of consumer insight into food supplements, covering primarily the UK (but also some other countries including the US). Findings from this desk research were used to inform the design of the survey questions as well as the qualitative phase of research.

Omnibus survey

In order to understand the demographics and usage habits of supplement consumers, we placed a series of questions on <u>Populus Data Solution's online omnibus survey</u>⁷ in January 2018. This was nationally representative, with 2,081 UK adults surveyed. In addition to providing further consumer insight in its

⁷ https://www.populusdatasolutions.com/online/



own right, the results from the omnibus were also used to confirm the most appropriate sampling frame for the qualitative research as well as inform the design of the discussion guides.

2CV Wire

To better understand how consumers of supplements are using and talking about these products online we also did some high level exploratory social media listening using 2CV's discourse analysis tool, 2CV Wire. We looked for references to supplements within recent social data (such as blogs, forums and Twitter), explored the thematic language and sought to establish what the 'buzz' around supplements was. Specific findings regarding discussion of MMS and DNP are included in the main report. The bulk of this digital analysis is included in the appendices.

2.3.3 Phase Two: Exploring

Phase two of this project was the main focus of this piece of work and consisted of qualitative research with consumers, most of whom were currently taking food supplements.

Pre-task

Before the face-to-face research, participants were asked to complete an online activity using a mobile app called Indeemo. In the days leading up to the discussion group or depth interview, participants uploaded videos and pictures and text in response to questions about their supplement usage, purchase and storage habits. This provided researchers with a fuller picture of individual usage than would have been possible in the discussion groups alone, as well as helping to bring to life consumer behaviour.

'Mainstream' consumers

We conducted eight 90-minute discussion groups with 'mainstream' consumers, all of whom were taking supplements on a regular basis.

The groups were split by age and gender as per the following table. One of the London groups comprised all parents and focussed specifically on children's use of food supplements.

	Gender	Age	Parents	Location
1	Male	18-34	At least 3 parents	London
2	Female	35-49	All parents	London
3	Male	50-64	No quota set	Derry/Londonderry
4	Female	65+	No quota set	Derry/Londonderry
5	Male	35-49	At least 3 parents	Swansea
6	Female	18-34	At least 3 parents	Swansea



7	Male	65+	Fall out naturally	Manchester
8	Female	50-64	Fall out naturally	Manchester

More vulnerable / niche consumers

We conducted 16 depth interviews and one mini group with more vulnerable / niche consumers of food supplements. These were a mix of face-to-face and telephone discussions with consumers from London, Swansea, Derry/Londonderry and Manchester.

Consumer type	Description	No/type of engagement
Body builders	People who were or had been actively involved in the body building world / were extreme fitness enthusiasts	6 depths
Health conditions	People who took supplements because they believed they helped with a health condition including depression, sickle cell, Asperger's and diabetes	7 depths
Older people	People aged 75+ (who would not be able to attend a focus group)	3 depths
People with eating disorders	Ambassadors from BEAT (eating disorders charity) who have experienced eating disorders in the past	1 mini-group with 4 participants

There was some overlap within these categories, for example, some of the older depth interviewees also had health conditions, and some of the participants in group discussions also had health conditions or were very focussed on their fitness. We aimed to explore DNP amongst the extreme fitness enthusiasts and the eating disorder ambassadors, and MMS amongst consumers with health conditions (although we also brought the products up in the group discussions).

2.4 A note on the report

The primary focus of this report is on the qualitative findings from Phase Two. However, findings from Phase One, particularly the omnibus survey, are reported on where they relate to qualitative findings.



3. Main findings

3.1 Overview of food supplement consumption

3.1.1 Overall food supplement consumption

Findings from the omnibus survey (backed up by our desk research) showed that around half of UK adults currently take food supplements on a regular basis, with a further third having taken them in the past.

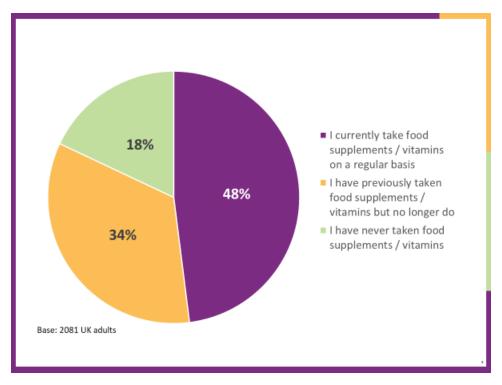


Figure 2: Do you ever take / have you ever taken food supplements such as vitamins?

There are very few significant demographic differences when it comes to overall supplement consumption (although there are many when broken down into specific different types of supplements, as we will explore later). The higher the educational level achieved, the more likely it is that a person currently takes supplements (63% of those with a higher university degree, compared to 45% of those with up to secondary education), and those currently working are more likely to take supplements than those who are not (51% vs 43%).

From the prompted list of supplements, the average consumer had taken 5.36 different supplements. Women had taken more on average than men (5.64 compared to 5.05), but there were no other significant demographic differences.

The length of time that consumers had been taking supplements varied depending on the supplement, but overall, nearly two thirds had been taking supplements for a year or longer (with over a quarter having been taking them for over five years).



3.1.2 Types of food supplements consumed

The figure below shows the most popular supplements overall.

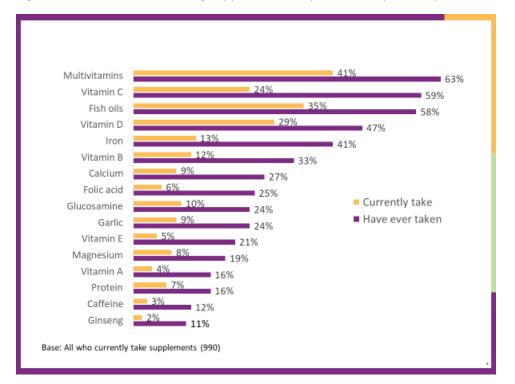


Figure 3: Which of the following supplements do you currently / have you ever taken?

When it comes to the types of food supplements consumed, multivitamins are by far and away the most popular. When choosing from a list of supplements, 41% of those who currently take supplements say they currently take multivitamins and 63% say they have ever taken them. They are also most likely to be mentioned spontaneously, by 29%. While multivitamins are consumed across all demographics, they are slightly more popular amongst women and those in middle age brackets (i.e. not the youngest or the oldest consumers).

Fish oils, Vitamin C and Vitamin D are the next most popular food supplements. Fish oils, currently consumed by 35% of people who regularly take supplements, are most popular amongst older consumers, with 54% currently taking them. Vitamin D, currently taken by 29% of regular supplement consumers, is most popular amongst women (34% compared to 24% of men). Although well over half of current supplement consumers say that they have ever taken Vitamin C, just under a quarter currently do.

The following chart plots which food supplements appeal to certain age groups or genders, based on both the quantitative and qualitative data. (NB this does not include all supplements; those with no significant demographic differences are not included.)



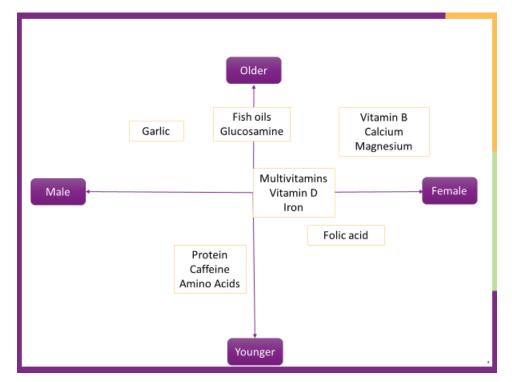


Figure 4: Popular supplements mapped by age and gender

As discussed above, multivitamins and Vitamin D are somewhat more popular with women. Iron supplements are also more popular amongst women (17% of those who regularly take supplements take iron currently compared to 8% of men). Older women tend to be more likely to be taking Vitamin B, calcium and magnesium, and younger women tend to be more likely to be taking folic acid. Amongst men, protein, caffeine and Amino Acids tend to be most popular amongst younger men, while garlic is most popular amongst older men. As well as fish oils, glucosamine is most popular amongst older consumers.

3.2 Attitudes towards food supplements

3.2.1 Categories of food supplements

Qualitatively it became clear that attitudes and behaviour in relation to food supplements did vary depending on the type of supplements being discussed. The following figure indicates the different categories of food supplement and the relative size of each.



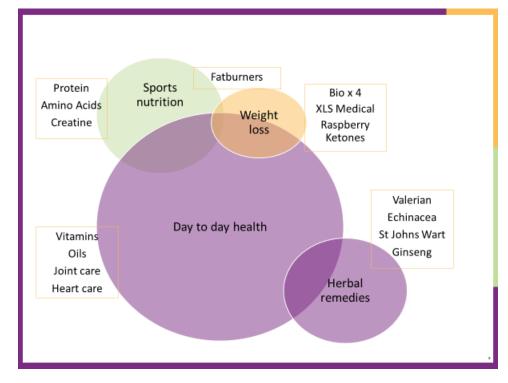


Figure 5: Food supplement categories

The vast majority of consumers fell into the 'day-to-day health' category, taking 'mainstream' supplements such as different vitamins or oils, from mainstream retailers – and the bulk of this report focusses on this audience. 'Herbal remedies' have been pulled out as a separate category as the consumers we spoke to did not tend to differentiate between herbal medicines such as St John's Wort and herbal supplements such as ginseng, but generally saw them falling into the same general group of products.

When it came to food supplements that were felt to enhance sports performance or muscle definition, consumers did tend to have slightly different attitudes and behaviours compared to the 'day-to-day' food supplements (and there was plenty of overlap between the two categories). Likewise, those taking supplements with the express goal of losing weight, although there was a scale of extremity of behaviour, tended to differ somewhat in their attitudes to these supplements compared to mainstream supplements. (NB we spoke to relatively few people taking supplements to aid weight loss.) Again, there was some overlap between the categories – and between the 'sports nutrition' and 'weight loss' categories, namely in the form of fat burners. While differences are discussed throughout this report, in depth insight into these categories and audiences can be found in section 3.4 of this report.

The figure below shows the range of different types of food supplements a household might have. These are taken from the mobile ethnography exercise, whereby participants were asked to take photographs of their supplements and where they kept them.



Figure 6: Examples of products taken



3.2.2 Perceived benefits of food supplements

Participants in the focus groups and depth interviews were asked why they took the food supplements they did, and provided a range of rational explanations:

 One of the most commonly given reasons was for an extra "boost" or to top up general health. It was felt that taking vitamins might help to build immunity to illnesses, for example, help to stave off colds. Some people also felt that the extra boost of vitamins would give them an extra boost of energy. They did not always necessarily feel that they needed the supplements; rather that taking it gave them added immunity – as insurance.

"Just to stay fit and healthy really... Protection from bugs, colds, illnesses, immune system." Female, 35-49

"I take a vitamin daily (multivitamin) as it helps my immune system especially when I'm not feeling too well" Female, 18-34

"Wellbeing really. Certain times of the year if you're feeling a bit tired or a bit lethargic, you reach out for vitamins on the supermarket shelf." Female, 50-64



"I take them as a precaution. You know, prevention is better than cure. You never know whether they are going to work or not. But it's not going to do you any harm." Male, 65+

"I do feel I benefit from taking these supplements especially as I have got older my energy levels have decreased so I feel that taking these vitamins gives me the boost of energy I need to work and continue to be active and healthy." Male, 50-64

• Some people took them specifically to make up for **missing nutrients** that were lacking from their diet or that they were deficient in as a result of a health condition or because of ageing.

"I try to eat well. But then obviously, because of my job, lunch is always either fast or no, not enough, or unhealthy. So, it's that side I need to try and balance out really." Male, 18-34

"I don't like any vegetables at all, so I supplement just for that reason alone, because I know that I'm not getting any nutrients from missing out on those vegetables." Female, 18-34

• Some felt that the supplements they took helped to **relieve the symptoms** of a health condition or those related to ageing. Some of these consumers had originally been prescribed food supplements by their doctors, for example, iron and calcium, and had continued to take them.

"I always feel more mentally relaxed after I have taken [valerian], because I know that it is supposed to help by reducing anxiety. I feel like I would have trouble falling asleep if I didn't take it." Female, 18-34

"I take charcoal tablets for digestion because I suffer with a little bit of IBS." Male, 18-34

"I take cod liver oil every day as I feel it helps with my joints, I don't know if it's a placebo effect but when I haven't taken it for a while my knee starts giving me problems." Male, 35-49

"I started taking the vitamin D and Turmeric as it was said to improve my immune system as I have arthritis and lupus. I also take the vitamin supplements to try and wake me up and give me some more energy. I do also take them to improve my iron as I have anaemia." Female, 50-64

Others took supplements out of habit – they had been taking them for a long time (often since childhood) and just continued to do so (and could see no reason to stop). There was also a sense amongst some that even if they couldn't notice any benefits, they might notice some downsides if they stopped taking it.

"I took them as a child. My mum used to tell me to take fish oils. And it seemed natural to adulthood and I've just kind of carried it on." Female, 18-34



"I haven't noticed any benefits, but I have taken them for so long that I don't want to stop in case I do start to notice a difference." Survey respondent

"I haven't noticed a difference in my daughter, she's been on her multivitamins for at least a year... but I think for me, I feel like if I stopped giving her that, maybe she would be worse." Female, 18-34

• Those taking sports nutrition supplements took them to help with their **training**, for recovery, energy or general performance enhancement.

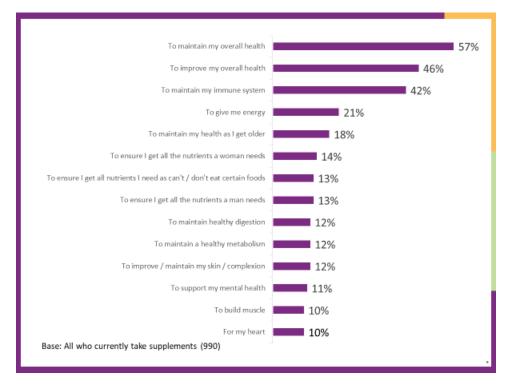
"I take like a recovery shake, it's 4 to 1 carb protein shake just after really tough sessions. Which would maybe be like three times a week, give or take. And then things like gels and stuff like, I take during sessions if I'm doing like a long session. Just to keep my energy up." Male, 18-34

• Some people took supplements for their **appearance**, for example to improve the condition of their hair or nails, or to help with weight loss.

"When I have a really bad hair day I take one [a hair, nails and skin supplement]." Female, 18-34

The quantitative research supports these qualitative findings, with the vast majority of respondents saying that they took supplements to maintain or improve their overall health, as per the chart below.

Figure 7: What do you take these [supplements] for?





A common theme emerged, regardless of the rational reason given for taking supplements, which was that people wanted to feel like they were **taking control** over their health. Even if they couldn't feel a physical difference, at least they felt that they were doing *something* proactive.

"[Taking supplements] doesn't make me feel physically different but mentally feels that I'm doing some good." Male, 35-49

There were a number of reasons for this:

• As people got older they felt that they needed to take better care of their bodies as they noticed that things weren't working as well as they used to.

"We're all of a similar age where some of our bodily functions are not functioning as they should do so they need a boost." Male, 65+

"I think that the older you get you think well, I've got a few aches and pains. A bit arthritic, maybe the Fish Oil..." Female, 50-64

• Related to this, some people felt that they didn't have sufficient opportunity to discuss their minor niggles with medical professionals, for example, their GP appointments were time constrained and as such, focussed on the most 'important' health issues. Taking supplements was a way in which these consumers could try to look after their bodies' less urgent needs.

"Your GP doesn't have an awful lot of time for you unless you've got a sore toe or something." Female, 80

• For many parents, being able to give their children food supplements was a way to maintain some control over their health now that they were no longer able to control their diets.

"Because you don't have that control. When they go to secondary school you lose that balance in meals." Female, 35-49

• Some felt that food was no longer as nutritious as it had been in the past and taking food supplements was a way of taking more control over what was going into their bodies.

"I feel we don't get all the vitamins we used to from all this processed and GM foods. Taking vitamins means I am getting what I don't get from my diet." Female, 65+

3.2.3 Reasons for starting to take food supplements

The reasons participants originally started taking food supplements were unsurprisingly usually connected to the reasons they continued to take them, for example to help relieve the symptoms of a specific condition or to improve sporting performance. However, there were some specific triggers identified:

- Reaching a specific **life stage** was often the prompt for people to start taking a food supplement, for example women trying to get pregnant or reaching the menopause, or young adults leaving home and having to cook for themselves.
- **Recommendations**, both formal (e.g. from health professionals or sports trainers) and informal (from friends and family) were extremely important when it came to taking food supplements.



The parent child relationship was particularly influential – not only parents, namely mothers, giving their children supplements (well into adulthood, consumers talked about this) but also adult children recommending supplements to their parents.

- For some, there were **seasonal** triggers, for example starting to take Vitamin C or Vitamin D at the start of the winter.
- A bout of **illness** often resulted in people taking a food supplement, either to try to get better or to avoid becoming afflicted again.
- For fitness enthusiasts, reaching the next level in their **sports training** was often the trigger.

3.2.4 Perceived efficacy of food supplements

When it came to consumers' perceptions of the effectiveness of food supplements, views ranged from strong belief to cynicism (regardless of the specific product).

Some felt that they had noticed a real change when they started to take a product – and / or they noticed a difference when they stopped taking a product for a period, for example when on holiday.

"I went on holiday for two weeks and forgot to take them [glucosamine] with me. I really noticed my knees played up while we were away. So, I suppose they do work." Male, 50-64

"I started taking multivitamins probably about 3 months ago for the first time, because I used to get really terrible mouth ulcers. And I have noticed a massive difference." Male, 18-34

Others admitted that they couldn't tell if the food supplement they were taking had made any difference (and a few didn't know what some of the supplements they took were supposed to be for!), but they figured it couldn't do any harm.

"It's force of habit really ... I'm probably wasting my money but since I was a child I've always had like Cod Liver Oil." Male, 18-34

"There's no way to know. Like I felt 100% before I started taking it. I'm taking it as a precaution and I still feel 100% now." Female, 18-34

"My mum takes that [B complex], I still have no clue what it does, it sounds crazy. I don't know if this is the adult version of the multivitamin kind of thing, she told me to take that when I was younger. Moving back home she said 'take this, you should see what effect it has on you'... It's weird because I'm normally quite diligent, I was just like of like 'okay, I'll see what happens'." Male, 29, fitness enthusiast

Whether or not they feel the product is effective, many acknowledged that there may be a placebo effect at play, and the very fact that they were taking a product made them feel better.

"I think the only reason, you know whether they work, is like when you stop. So, maybe then you think you'll miss the benefit. But then I always think well, is that state of mind as well?" Female, 50-64



While some participants stuck with the same supplements over time, others liked to try different brands and products and see if they could notice any changes.

"At the moment I'm taking four different things. Well this varies. I just jump around from vitamin to vitamin, not knowing what I'm doing really." Female, 50-64

3.2.5 Negative experiences

Very few participants in the qualitative research had experienced any negative effects from taking food supplements and, similarly in the quantitative survey, there were no mentions of any adverse effects. Those few consumers who had had a negative experience taking food supplements had simply stopped taking that particular product or switched brand. Most consumers would never consider reporting a negative experience. If they did have a negative experience, they would be most likely to complain to the retailer; it would not occur to them to report it more officially, nor would they know where to go to do so.

"I used to take Wellmen's Multivitamins, but they used to give me really bad stomach cramps, so I stopped taking them. Now I take Radiance Multivitamins." Male, 18-34

"I took magnesium for a bit. It made me feel a wee bit queasy. I put that down to me, my stomach rather than the supplement. I just stopped taking it. I didn't think of reporting it to anyone to be honest." Male, 50-64

There was a strong sense amongst participants that most food supplements are harmless and that it is the consumer's own responsibility to use them sensibly.

"I don't think you can do any damage with Multivitamins." Female, 35-49

"I think people as well look at vitamins, it's all natural products whereas if you were given a prescribed medication, people would ... stop and think. Whereas, vitamins and more natural processed substances, they tend to kind of not think of an alarm bell so much." Female, 18-34

"You choose to take supplements. You don't have to take them. You don't choose to take [subscription] medicines. These are prescribed and have an impact. You don't need to take supplements and it's on you to take them the way they're meant to be" Female, 65+

The only exceptions were with certain supplements aimed at sports enthusiasts or people trying to lose weight, particularly fat burners, where people were aware of negative side effects. However, it was felt that the risks associated with some of these products were well known and again, it was down to the consumer to be sensible in how they used them.

"I've seen a guy have a heart attack on the gym floor from taking some kind of [preworkout supplement]... I would never take any pre-workout. If I'd ever considered it before, I certainly didn't after that." Male, 29, fitness enthusiast



"I think for me, some of the weight loss stuff is that I fear that actually, like you said, you're just going to be getting out whatever you put in. Which then means am I not actually getting any goodness in me, because literally it's just trying to flush everything out. So, that for me, you'd want it to work and you're taking it for a reason. But, it is like the XLS Medical, I've never done, I've heard stories and I'm just like oh do you know what, I don't want to then be deficient in something, because I'm taking something just to try and lose weight, when I should just be a bit healthier or make other changes." Female, 18-34

"[The weight loss supplement I take] makes me sweat a lot and can sometimes stop me from sleeping, but it does give me energy and suppress my appetite." Survey respondent

3.2.6 Trends over time

While many consumers acknowledged that food supplements seemed to be growing as a market and recognised a trend towards healthy living, there was still the sense amongst older participants that supplementing more generally was nothing new. For example, they talked about being given things such as Cod Liver Oil, Carrageen Moss and various tonics as children. Some felt that different supplements (e.g. turmeric) came in and out of fashion.

"It's quite fashionable with the younger people who are all into the healthy living thing. So, people will keep on making them and people will keep on buying them." Female, 65+

"I think things go around in circles. Like I say, my mother gave me Cod Liver oil and now I'm in my 50s and I'm taking Cod Liver oil." Female, 50-64

A number of (usually older) people remarked on and / or voiced their concern about the current trend towards young men 'bulking up', with participants feeling there was a pressure on them to conform to a certain body shape. They also felt that some sports nutrition products were often expensive and less 'natural' than some other supplements.

"I think it's over priced for what it is. I think you can get the same stuff from other natural food, or other supplements, I think they just play on people's...like the muscle man thing." Female, 35-49

"Protein as an industry has just gone crazy in the last 10 years... It's just like a trendy thing to have on the packet now, regardless of whether or not it's relevant." Male, 18-34

A few other trends were discussed, such as detox teas, weight loss supplements (including apple cider vinegar and raspberry ketones) and cannabis oils.

3.2.7 Future intentions

Most participants were unsure as to the future when it came to food supplements, although the majority assumed that they would continue to take some or all of the supplements they currently took.



As discussed above, many consumers had a longstanding relationship with supplements, and often could not articulate why they had started or stopped taking different products.

"Years ago I would have taken different things but I just stopped. I used to take garlic and I stopped. You just try them, and they come in and out of fashion. Do you remember that wheatgrass and now it's turmeric?" Female, 65+

"I think it's very difficult as it stands to know what I'm going to need in ten years. It depends how healthy I am." Male, 18-34

Some consumers were quite experimental and expected to try new supplements based on their own research or the recommendations of others. They liked to chop and change a bit to see if, and how, different supplements made a difference. Others expected that they might start taking other supplements in the future because of particular life events e.g. the menopause, or because of the ageing process.

"I have started reading what other people are taking and what they recommend, just to see if I notice any difference and if so I will have to consider taking it." Female, 35-49

"There are certain things that help you in your old age I guess." Male, 18-34

The main reason consumers thought they might stop taking food supplements would be financial – if they decided that they were no longer worth the expense. Some also thought they might cut down on some supplements if they no longer saw the need for them e.g. if they were no longer training so hard.

3.3 Consumption and purchase behaviour

3.3.1 Dosage

Most survey respondents were taking their food supplements on a daily basis or as part of their daily routine. Similarly, most participants in the qualitative sessions took their supplements regularly, although a few were a bit more hit or miss.

"I take Multivitamins, I take Magnesium with Calcium. Occasionally, I do take Turmeric when I can remember to buy it, and I also do the Orange Vitamin C. I do that mainly in the winter." Female, 50-64

There was little concern about mixing food supplements because most people felt that everyday supplements were harmless, although there was some awareness that you needed to combine certain supplements in order to get the benefits.

"I've never heard of two supplements like coming together and causing like a new problem." Male, 18-34

"If you're taking Vitamin C and then taking an iron tablet, there's nothing wrong with that." Female, 18-34



"I mean Cod Liver oil and stuff like that, I mean I very much doubt, I haven't checked those with him [the pharmacist], and garlic, I very much doubt if they'd be contraindicated with anything that I'm taking... I look on those as garlic and multivitamins, I look on those as not a serious supplement to take for some reason." Female, 67, health condition

"Calcium and Vitamin D go together. I can't remember which one supplements the other one to work." Female, 35-49

"The only mixing supplements thing that I know about is that some supplements you need to absorb each other, does that makes sense? I can't remember which ones they are but if you need, if you're taking Vitamin E, you also need to be taking Magnesium, so that you can absorb the Vitamin E, but I don't know the science." Female, 18-34

Many mainstream participants were also not overly concerned about how food supplements combine with prescribed medication, again because they generally felt that most supplements were harmless. Often it hadn't occurred to them to mention their supplement use to their doctors until they were asked about this in the discussion groups.

"I've got a box of paracetamol in my bag and it wouldn't say on there you can't take a Vitamin C supplement with this." Female, 18-34

A few (usually older) participants were more careful.

"It's not a one size fits all. I take the multivitamins with iron but don't give those to Charlie because he takes iron separately. It might affect him negatively." Female, 65+

Some also noted that it wasn't something that doctors asked about – they were aware of the potential risks of combining different medicines because it was brought up, but food supplements didn't tend to be discussed.

"They often give Multivitamins with regular medication and a lot of doctors don't even think twice." Female, 18-34

Most consumers were following the instructions with regards to recommended dosage. Some people did not remember to take them every day, and a few 'over' dosed on occasion (for example, took extra Vitamin C if they were coming down with a cold), but the general consensus was that it did not matter if you did not follow the exact dosage recommendations.

"You can't OD on them... I've never heard of anyone being too healthy." Female, 50-

64

"If there are any vitamins I don't need, my body will get rid of them. I'd rather have too much than too little." Female, 51, health condition

"The body takes what it needs and gets rid of the rest." Female, 18-34



"I remember asking my doctor once, "Does it do any harm taking too many vitamins" and he said, "Well, you'll rattle", but he said, "I don't think they can do you much harm." Female, 69, health condition

"I don't take the iron ones every day because I'm never too sure how much of it is in my diet already, so I just take less". Female, 65+

Again, the exception to this was with sports nutrition products where people were much more careful about how much they took, when they took them and what they took them with.

"Something like a multivitamin, it comes in loads of places, the worst-case scenario, it does nothing. You're not going to go wrong, but a lot of the performance stuff, you have to prepare it yourself. Like a powder or something, I would never take anything like that that I hadn't actually been instructed to take." Male, 18-34

"I think there are people who definitely take way more than they should and I think that's down to them not being educated in the potential issues and drawbacks because after a while, if you take too much protein, it doesn't do the job that it should do. It affects your kidneys and actually it gets stored in fat." Male, 29, Fitness enthusiast

"There's a pre-work-out called Calal [?] which I take every now and again, but you're not meant to take the A5s with the Calal, because it will send your heart into absolute overdrive. And it could give you a heart attack." Male, 35-49

As shown below, the quantitative results indicated that most consumers are actually less blasé than the mainstream participants in our face-to-face sessions claimed to be when it comes to supplement dosage or mixing products.



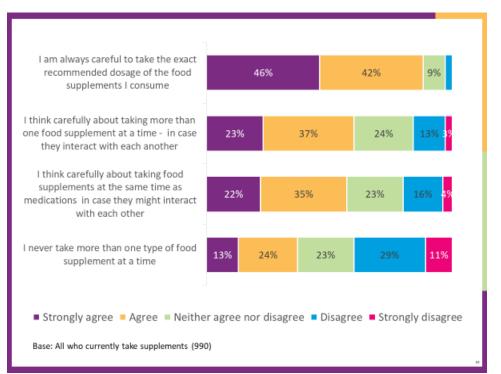


Figure 8: How much do you agree or disagree with the following statements?

The vast majority (88%) of consumers agree that they are always careful to take the exact recommended dosage of the food supplements they consume, with women slightly more likely to agree. Of the very few respondents who said that they did not always take the exact recommended dosage, most said that they either took more than recommended or that they simply didn't pay much attention to what the recommended dosage was.

When thinking about how food supplements might interact with one another, 59% agreed that they thought carefully about this, with younger respondents more likely to agree with this statement. A similar proportion (57%) agree that they think about how food supplements might interact with medication.

37% of survey respondents said that they never take more than one type of food supplements at a time, a figure which does not tally with what we found in the qualitative research; however, this is likely to be as a result of purposive recruitment for these sessions, where it is likely that those taking multiple supplements were more likely to take part.

3.3.2 Formats

The vast majority of participants were taking supplements in pill form, but some supplements were taken in other delivery formats. Powders and shakes were popular, although some saw these as food replacements rather than food supplements. Some participants were taking gels and sprays but noted that it wasn't always as easy to take these 'correctly', for example, be sure of the exact dosage.



"A spray would worry me. I'd worry where's it going. Am I spraying it right? I think I'd end up double spraying just to make sure it's in." Male, 18-34

A few participants welcomed the idea of supplements coming in different formats. Some older participants were taking so many pills that they physically didn't feel they could swallow any more. Parents particularly liked the chewy vitamins their children took as it made it much easier to give them to them – some had continued to give these to their children well past the recommended age as a result.

Some participants were taking different herbal and other types of teas which they saw as being food supplements in that they offered the same sorts of benefits. Taste was often a factor here in people's decision to choose a different delivery format.

"I don't know what even got me on to Peppermint tea. But, I just, I love the taste." Female, 35-49

"One of my friends is quite into fitness as well, so we chat about it all the time. Oh, what protein are you on? She takes Amino Acid tablets, so she'll be like recommending tablets to me, but I like the drink because I much prefer it, because it tastes nice." Female, 18-34

A small minority were buying specific foods and adding them to meals, for example, grating turmeric into dishes.

There was also discussion about fortified food and drinks which were also seen as food supplements as they provided an additional boost of vitamins and nutrients.

3.3.3 Purchase habits

The majority of qualitative participants were buying their food supplements from traditional bricks and mortar stores, most commonly Holland & Barrett, Boots and Superdrug or from supermarkets as part of their weekly shops. This corresponds to the quantitative findings in which supermarkets (42%), pharmacies (30%) and health food stores (24%) were the most common places at which respondents bought their food supplements.

The retail brand was often more important than the product brand when it came to trust in a food supplement, and many consumers were happy to buy own label when it came to 'mainstream' supplements. There is an assumption that buying from established retailers bought reassurance that the product being bought was safe.

"If it's in Boots and Tesco's, then I know it's safe and it's what it is." Female, 30-49

Participants often looked out for offers before stocking up on food supplements.

"When I am running low, I will see if Holland & Barrett are doing the penny sale where I can by some vitamins and then the second one for 1p. If there is no penny sale, then I go online to myprotein and buy the tablets off there as I normally always have a discount code." Male, 18-34



"I buy my Cod Liver oil whenever it's on offer usually 3 for 2 in Boots. It lasts for ages as it's only two teaspoons a day. My multivitamins I usually just pick up in Aldi when I do my shopping." Female, 50-64

Plenty of consumers bought their food supplements online, although these were often from the same retailers. Some were buying from more specialist online retailers, such as myprotein, myvitamins, and wiggle.co.uk.

The main reason people chose to buy online was for the cost savings and / or convenience of being able to buy in bulk, or because they were buying more niche or specific supplements that weren't as readily available offline. Quantitative results showed that the products that were more likely to be bought online were sports nutrition products such as protein and Amino Acids.

The vast majority of the participants we spoke to claimed to be risk averse when it came to buying food supplements online and would only go to reputable retailers. Survey results backed this up, with 91% of respondents agreeing with the statement 'I am confident that I am buying food supplements from reputable retailers'.

"A tablet is putting something into your body, I might take a punt on a jumper I found in the market you know, if it gets a tear in it, it gets a tear in it. But if I take a tablet from a market and I get a tear in my insides, who am I going back to?" Male, 18-34

There was mistrust of unknown online retailers (and consumers would include eBay and Amazon sellers within this), often based on negative experiences of buying online in other categories. Consumers were concerned about the provenance and or adulteration of products bought online – although primarily the assumption was that a product was more likely to be pointless than dangerous.

"I trust the in-store purchases more because you just generally don't know what you are going to get online. And there are stories, like this was filled with rat poison and you can't be certain about where you buy them from." Female, 18-34

"If you buy something with Amazon Prime it's stocked by Amazon, it's not some little back street shop." Female, 35-49

"You wouldn't go to the little sites. Backstreet protein, buy it here. Oh yes. No, you go to the big ones." Male, 35-49

"They could have mixed it, made it themselves, put something dodgy in it." Male, 18-34

One participant had a friend who had had a bad experience buying supplements online:

"A few of my friends took them a few years ago, they did. But, they've stopped taking them because they became very ill with it... And they found it was, what they thought was a fat burner, it was something else. And because they ordered it off of the Internet they didn't really research it properly. And the seller gave them something else. I can't remember what it was exactly, but it, I think one of them had



to have their stomach pumped, or something because it would end up badly." Female, 18-34

There were some other routes into the market for a small number of people, particularly women. Some participants were currently buying or had previously bought their supplements via a multi-level marketing company, specific companies named in the research were:

- Juice Plus
- Arbonnne
- Herbalife
- Forever Living
- Melaleuca
- TLC (Total Life Changes)

These participants had found out about products through friends, relatives and acquaintances at the gym, who had vested interests in selling them.

"It's from a company called Arbonne. Which is like a networking thing. They do all sorts of different products. It's a friend of mine that's a consultant, and it was her that told me about them." Female, 50-64

"A few of the guys I buy off online have got their own Facebook accounts. And they train using all these various supplements, vitamins and minerals and then they've got their own companies and they sell them. And I buy them off of them." Male, 35-49

These products tend to be of higher value than the everyday supplements participants bought in high street stores and supermarkets and at least one participant had been urged to subscribe to longer term use.

"She was pushing me to sign up and I didn't want to sign up" Female, 35-49

"These immune system drinks, which are quite expensive, and every month I buy them and think that's the last time I buy them, I'm not spending another £60 next month. Because it's £60 a month, but then there's 30 pouches, so it's the cost of a coffee really, I suppose. I look at it like that and I justify it that way". Female, 50-64

"I frown when I get the bill because it's shipped from America and there's taxes and changes on currency and all sort of things so, by the time you've finished, you've spent like £70 but, in fairness, it lasts about a month and a half and it does the job, so you kind of suck it up." Male, 31, health condition

Participants buying in this way often had a degree of personal involvement with the seller.

"I bought some stuff via a guy in a gym as well. Herbalife, somebody mentioned it. This is going back a while, but I liked the bloke, and I thought I may as well try it". Male, 35-49



"You can order products from TLC even if you're not a subscribing customer but Melaleuca you have to be either a rep or you have to subscribe to a rep who you can buy from. So, in the process of that you're meeting a lot of other people who are also using those sorts of products and discuss things with them. Both companies have got quite detailed independent research on various of their products, or maybe not even directly about their products but about things which link to their products. So, there's a wealth of information there." Male, 31, health condition

There were also two specific examples within the research of participants buying products based on their perceived knowledge of the person(ality) behind them. These products were A5 fatburners and Bio x 4.

The following pen portraits illustrate the experiences of some participants buying via these different routes:







3.3.4 Sources of information

There were a range of factors that went into consumers' decision making processes when it came to choosing specific types of supplements or brands:

- Some consumers do extensive **research** into different supplements and the properties of different ingredients, particularly when it comes to buying more 'niche' products.
 - "I look for evidence and research [online]. If I'm going to purchase that product and spend my money, I want to know that it's worked on so many people." Female, 18-34

"[I started taking Pine Pollen because] last year I started having, again, energy issues, and that was just like generally. So, I took to the internet to try and find natural herbal remedies for that and this one came up. It's a very potent sort of Chinese compound and it wasn't recommended by anyone, I read hundreds of reviews. I really did my research because I do like to check before I put things in my body." Male, 27, Fitness enthusiast

• As discussed above, many were encouraged to start taking a particular product on the **recommendation or advice** of a family member, friend, medical or fitness professional. Some also looked for advice on forums.

"After having my son, I was anaemic, and I was kept in hospital because I had preeclampsia as well for a week, and [the doctor] recommended me to have iron and folic acid as well. I take zinc as well because my mother-in-law recommended that, because I suffer with really bad migraines." Female, 18-34



"The diet that I'm on I'm on a forum for it, and they say hair loss is one of the side effects, which at the moment I haven't got, but I have started reading what other people are taking and what they recommend, just to see if I notice any difference and if so, I will have to consider taking it [biotin]." Female, 34-49

"People that are personal trainers that I know. I would ask them what products they recommend." Female, 18-34

• Online **reviews** (from professionals or from everyday users) could play a key role in reassuring consumers, particularly younger participants. They often used reviews when deciding between products and would go to multiple different sites for comparison.

"You'll always read the reviews. I know I will. I will go on the reviews of yes, this product and it's got a stack of bad reviews, I'm like well I'm not buying that. Go to the next one, oh God, everyone loves it." Male, 35-49

• Some participants liked to **experiment** and make decisions based on how they felt after taking a certain product or whether it had an impact.

"It's just faddish with me. I just try it [weight loss shakes] for a couple of weeks and then try something else different." Male, 35-49

"I tried [Joe Wicks'] 90-day plan. And a month of each different cycle and with each cycle sort of came with different training and different vitamins. So, I just thought the last time wasn't that good, so I thought I would try and change it up a bit." Male, 18-34

• Older participants were more likely to rely on **traditional media** when it came to choosing food supplements.

"The Daily Mail supplement, I do go for that, when they have that health thing in the middle of the page." Female, 50-64

People did talk to one another about their supplement consumption, either to family members or within friendship groups – or in interest groups, for example people who were members of the same gym. This was where many people got recommendations about specific products or the idea to start taking supplements at all. Women in particular seemed to be more likely to discuss food supplements widely, whilst older men were less likely (and tended to only talk about them with their partners).

"I've always took the coconut oil supplement. My wife got me on to them." Male, 65+

"With me, I think my friends are all quite active and they are quite fit, and so it is something that we talk about. We do talk about food a lot. We like food. And I've got one other vegan friend, so we talk about what we should be taking, what's the literature, what's the research. So, for me, it is quite a conversation we have quite often." Female, 18-34



"It's a small world. Everybody knows everybody else. People swap training tips but also what stuff to take. What works. What doesn't." Male, 35, fitness enthusiast

3.4 Differences by audience type

3.4.1 Parents

The survey showed that parents are more likely to be currently taking supplements compared to nonparents (52% compared to 46%). Amongst parents, a similar proportion (53%) say they buy food supplements for their children (highest amongst AB consumers and those in London). 15% buy them for their pre-schoolers, 30% for their 5-10 year olds, and 24% for their 11-18 year olds.

When it comes to the most popular supplements for parents to give their children, as with mainstream adults, multivitamins were the most popular, with 35% of parents saying they gave them to their children and a further 13% saying 'vitamins' more generally.

Qualitatively we spoke to a group of mothers specifically about the supplements they gave their children and why, but also talked to parents in many of the other groups and depth interviews. By and large the reasons that parents gave their children food supplements reflected the mainstream consumers:

• Mirroring the main reason given for day-to-day supplement consumption, many spoke about giving their children supplements as an additional **boost** to their health.

"I just like it that I'm protecting him, he's got that extra extra boost. We are not a sick family and hopefully I'm just sort of maintaining that." Female, 35-49

• Parents often gave their children supplements to make up for their diets, most commonly, if they felt their children were **fussy eaters** or simply not eating a varied enough diet.

"The older one is really fussy. So, I feel like I need to give her what she's missing." Female, 35-49

"My daughter takes a multivitamin because she doesn't eat... I guess she's not getting all the vitamins by eating properly because she throws it back up so I know then that at least then something's getting into her." Female, 47, health condition

- A few had children with specific deficiencies and gave their children supplements for this.
- Finally, many had been recommended specific supplements by their health visitor, most commonly Vitamin D, and had continued to give their children these.

"The baby he's on vitamin D drops because that's what the health visitor said I've got to do. So, I actually literally put it on me and then give it to him. My daughter, we are dairy free, so from, she's been dairy free from about 7 months, so she has Calcium supplements for that. She also has a Multivit which I give her every morning, and then also I give her Floradix iron supplement, because she's got a gene that makes her fatigued and she's also athletic, she does a lot of activity, so I don't want her getting tired at school and stuff like that." Female, 35-49



3.4.2 Body builders / extreme fitness enthusiasts

In order to better understand this audience, we specifically recruited extreme fitness enthusiasts and body builders for in depth interviews. However, we also came across consumers taking food supplements for sports nutrition in our focus groups as well and so have also drawn from these discussions. Within our sample there was a scale of extremity – from everyday gym goers, who were very into their training and taking a wide range of supplements, to those whose livelihoods depended on their fitness / sports ability and / or whose lives revolved around this world. In addition to body builders and gym enthusiasts, we spoke to a boxer and a mixed martial arts competitor, who brought slightly different perspectives to the discussions.

Sports nutrition consumers took products for a variety of reasons, but they tended to focus on recovery and performance enhancement. It was felt that, whilst in theory it was possible to achieve some of the benefits supplements brought through diet alone, it would be an expensive and inefficient thing to do.

"I'd prefer to get my protein naturally through meat and tuna but it's massively expensive. Also, protein through some meat is higher in carbs so I actually put on more weight than I want to." Male, 35, fitness enthusiast

"When I'm really in deep training mode, it's so key for your body to get a lot of protein to build and repair the muscles and I definitely see a difference aesthetically and feel that my recovery is slower if I'm not getting enough protein and the only way to get enough really without eating 15 whole chickens is by just getting this powder. It's a real fast track to getting enough in your body." Male, 27, fitness enthusiast

There was some differentiation between taking products for sports enhancement versus for aesthetic reasons, with some admitting that they had started for the former reason but had continued to do so in order to ensure their ongoing muscle definition.

"When I was 20, I got into taking supplements as a way of cleaner eating, higher protein intake on top of my weights training at the time. Now, I guess, I still want to grow muscle but it's more maintaining it... I'll be honest, it's mostly aesthetically driven now more than it used to be." Male, 29, fitness enthusiast

"With the clubbing scene as well these days, say you go to Ibiza everyone's shredded, they're ripped and obviously you want to fit in, don't you, you want to be like everyone else. That's one of the biggest reasons why a lot of people do it, is not just for self confidence but basically to look like everyone else when you're going away. You don't want to be the chubby one or the skinny one, you want to have at least a bit of definition." Male, 30, fitness enthusiast

Unlike with some day-to-day supplements, consumers often had a strong rationale for each of the different sports related products they took. They tended to have done careful research about products before taking them and / or went on the recommendations of fitness professionals, usually their trainers.

"I got a personal trainer when I started working in the city a few years ago and he really noticed my ability to recover. Training back to back days was hindered because



I wasn't getting enough intake of protein, so it was from his suggestion that I started taking it." Male, 27, fitness enthusiast

"It's all a fine balance. I take Amino Acids to aid recovery, zinc, magnesium for sustaining my immune system, multi vitamins for tiredness and to fight off colds, protein so I can build muscle but stay at a certain weight while training. Supplements offer me an efficient way to get the things I need." Male, 35, fitness enthusiast

They tended to therefore make informed decisions about how and when to consume supplements and often followed a fairly strict regime. They were careful about mixing and timing their supplements and similarly were careful about taking the correct dosages. Some participants did admit to taking more than the recommended amounts, but felt that they were doing so safely because they were basing their dosage on their body size rather than an average.

These consumers discussed their supplements use with their peers (both face-to-face e.g. in the gym, and online via relevant fitness communities), and used such discussions to inform their decision making. Some felt there to be a 'pack mentality' at gyms, in which people would start taking a product because someone else had and people didn't want to be left out. It was considered very easy to get hold of supplements via one's networks, including illegal supplements.

"In the body building world, like drugs anywhere else, it's sold illegally so you have a dealer and they will normally operate in the gyms." Male, 27, fitness enthusiast

"It's openly discussed at the gym I left. It starts off as a bit of an in-joke - who's taking what but eventually names of products come about and it's offered to you." Male, 31, fitness enthusiast

At the less extreme end of the spectrum i.e. those for whom the gym / working out was an important part of their lives, but not their primary focus, participants were often taking a considerable number of different supplements to aid their training.

"I take multivitamins, I take a diet whey protein, that's before and after my workouts. I take a pre-workout supplement, I take a Chinese testosterone, it's called Pine Pollen. I've never actually listed them out, so it sounds quite crazy. I take something called B Complex as well, that's more recent, and a super food." Male, 27, fitness enthusiast

However, they felt that the products they were taking were fairly innocuous ("vanilla") – they knew about other products that they perceived to be more dangerous, for example pre-workout supplements or fat burners, but they were not prepared to go there themselves. They thought that they were efficient but they did not feel that the risks or side effects were worth it.

"There's things like Hydroxycut, that's a very potent fat stripper and I've seen some of my friends getting palpitations as a result of them, and skin changes, things like that I just can't handle. I've forgotten what the name is called but I've also seen pills that basically any sort of fatty foods you take they syphon them off and it goes straight through your system and, as you can imagine, you have to use the toilet a lot. So, some real nasty things like that, I can't really handle that. I'd rather just run and eat well. Yes, so fat strippers, I just wouldn't go near them." Male, 27, fitness enthusiast



"You will never really see a personal trainer recommend a pre-workout because it's fairly, not dangerous, but it's not good to jump your heart rate, which is what it does." Male, 27, fitness enthusiast

A couple of participants had expressly changed gyms because they felt that there was too much pressure in some.

"They're [supplements] a short cut to success. People take them as a fast track. I moved gym to get away from that. I had been offered stuff." Male, 31, fitness enthusiast

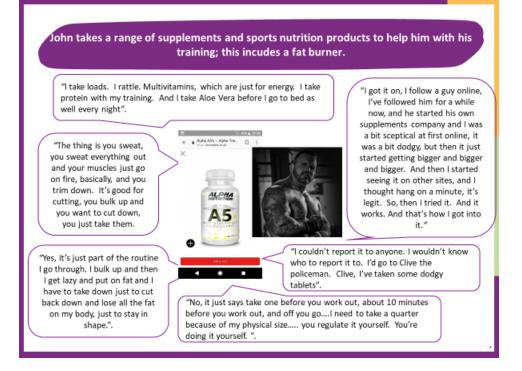
There was a sense that people were generally more informed about sports nutrition supplements, particularly protein, than they had been in the past, driven by the wide availability and variety of different products in the market.

At the more extreme end of the spectrum, consumers were more likely to be displaying risky behaviour when it came to their supplement use, with some individuals having taken illegal products. Use of such under the counter products tended not to be long term; rather, these consumers would use them in preparation for a particular event. Generally these participants had started out taking the more 'vanilla' supplements, and gradually progressed to the riskier products as their interest in and dedication to their training developed. A few participants (who were not taking riskier products) felt that once you started on certain supplements it became increasingly difficult to cut back.

"I used to play a lot of sports when I was younger, there were a lot of people on them [sports enhancers]. In the industry I was in, they used to take loads of sports enhancers for energy, for building muscle, I was just never ever into it, because when you finish whatever you're doing in sports, then what's going to happen? Because you're going to stop taking it. And then do you want to take it for the rest of your life to maintain...?" Male, 18-34

The pen portrait below provides an example of someone at the more extreme end of the sports nutrition world.





People talked primarily about steroids and fat strippers when it came to dangerous products taken in this community. The products/brands that were mentioned included: thermogenics, thermopure, clenbuterol, ephedrine, T3, T5, Stack 5s, A5s.

These consumers were well aware of the inherent dangers of these different products, but either they felt that they were informed enough to be able to manage these risks, or they simply felt that the risks were worth it. There was a sense that it was important not to become overly reliant on these types of products, but short term use was seen as less problematic.

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"I knew the risks [of fat burners] but just assumed I'd be safe." Male, 34, fitness
enthusiast
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"You know what you're doing and why you're doing it. I take fat-burners but only for a short period. You take 'em for two weeks before the competition. They are not a long term solution. You take them for when you need them." Male, 35, fitness enthusiast

Fat burners were also spontaneously mentioned by one participant from the eating disorders discussion group (who worked in a gym herself) – these were seen as a quick fix that people sometimes described to themselves as 'cleansing'. The group participants tended to associate these type of products with bodybuilders rather than with their community – but they pointed out that they wouldn't necessarily know – unlike 'pure' eating which was out in the open, this was seen as more shameful and as such, people would be less likely to discuss openly.

While many had heard of DNP, only one participant (the boxer) admitted to having taken it themselves (although he had stopped using it once it was banned). He had used it in order to get down to his target weight for fights.



"I used [DNP] to make weights for fights. If I was drying out and starving myself of food when I was training, I would be a lot weaker, but when I was taking the DNP, I don't know if it was the psychological thing, I used to give me that extra kick to get through sessions. Obviously, it raises your heart rate and burns more calories. That's one of reasons I took it, for the weight, but people take it for sports enhancement. I know people who take it before a fight to give them a kick but I personally never used to because I was worried about my heart exploding." Male, 34, fitness enthusiast

As part of the social discourse analysis, we specifically searched for the terms DNP and 2,4-Dinitrophenol over the three month period from 1 January to 1 April. Overall we found relatively few mentions (around 1k compared to over 1.3m for supplements more broadly), with most discussions focussing on weight loss. There were very few mentions of regulation in relation to DNP - only 25% of mentions referencing DNP also referenced regulation or a regulator. Regulation was typically referenced within articles including a statistic or quote from a regulatory body rather than consumers.

3.4.3 People with eating disorders

To inform this section of the report, we spoke to a group of Ambassadors from Beat, the eating disorders charity. Ambassadors are volunteers who have recovered from an eating disorder and have been out of in-patient treatment for at least one year. Mindful of the sensitivities involved, these participants were expressly asked to talk about food supplements at a general rather than personal level i.e. what they had heard or knew about food supplements within this community, rather than their own individual experiences.

We have pulled out the relevant themes that were discussed in this forum:

Trends

Participants talked about the ongoing popularity of any supplements that are appetite suppressants (particularly caffeine) and those that have a laxative effect. They also talked about a newer trend which was a shift from 'thinspiration' and 'thin at any cost' towards 'fitspiration' and orthorexia, the adoption of clean eating. Whilst the latter are less about weight loss and more about being 'pure' and not eating anything processed, participants made the point that they are still restrictive and rules driven. For example, they felt that some with eating disorders project an image of adopting a clean eating lifestyle or a vegan diet as a way of restricting their food intake in a socially acceptable way. Food supplements, for example spirulina and other superfoods, were recognised as playing a part in this trend.

"Using supplements to base really clean, low calorie meals around is a big trend." Female, 18-34, Beat ambassador

One participant mentioned her relative who has an eating disorder triggered by going to the gym and learning about supplements to help bulk up. He ended up taking lots of protein powders. As discussed in the previous section, she felt that these types of products had become more popular recently and were much more of a feature of people's restrictive eating.



Alternative source of nutrients

Food supplements were often taken by people with eating disorders as a way to ensure that they got some of the nutrients they needed without having to actually eat i.e. they could avoid food but still get some vitamins.

"In the hospital, they may refuse all food, but they are happy to take a multivitamin. I think it's kind of seen as calorie free food. I took a multivitamin and I think it's quite common." Female, 18-34, Beat ambassador

Participants acknowledged the contradictions, whereby people would recognise that they were harming themselves by not eating, but felt that they were mitigating against some of the harm by taking supplements.

Detailed knowledge

Participants felt that people with eating disorders were likely to be very alert to what different supplements contain (e.g. lactose, sugar) as well as the pros and cons of using them (most obviously potential weight gain but also impact skin etc.). This tied in with the need to control everything they ate – they would always check the ingredients of everything. They would also want to find out more about products by looking at online reviews.

Outside influences

It was felt that social media could help legitimise the harmful use of supplements. The group discussed how people with eating disorders were often selective with the information they took in – for example, if something says it is good for weight loss, then people may decide to take it, regardless of the side-effects. It was felt that because people with eating disorders often have a very distorted sense of self, they were likely to take in any information that helps to reinforce the eating disorder.

"Your mind retains anything that serves or benefits the eating disorder...that keeps the eating disorder alive. Any other information goes over your head a bit." Female, 18-34, Beat ambassador

As a result, it was felt that people were also likely to use media (namely social media, especially Instagram) selectively and take on board any message that reinforced their eating disorder, even if those messages were from people who had no health expertise or who are basing their views on their personal experience rather than factual evidence. As a result, there was some call for better regulation of online influencers endorsing dangerous products.

Difficulties of engaging with this audience

Because of this tendency to engage only with messages that reinforced an eating disorder, it was felt that it would be difficult to convey messages about risky food supplements. Because there were so many dissenting voices within the community, it was difficult to know who to trust. Participants also emphasised that it can be impossible to reach someone who is at the lowest point of an eating disorder.

"If they are trying to target people with eating disorders [with messages about harmful supplements], there is no point as we are not going to listen. But if you get in there before, there's more chance." Female, 18-34, Beat ambassador



3.4.4 People with health conditions

The FSA were interested in learning about consumers who took food supplements, for example MMS, because they believed that they helped with specific health conditions. We interviewed seven participants who had been expressly recruited as fulfilling this criterion, but also found that many of the participants in our discussion groups and all of the older depth interviewees also had health conditions for which they often took supplements.

Overall, we spoke to people who were living with depression, arthritis, diabetes, sickle cell, migraines, osteoporosis, high blood pressure, and Asperger's (with many living with multiple conditions). Across this we spoke to men and women from a range of ages and backgrounds (although most participants were older).

Experiences, attitudes and behaviours in relation to food supplements varied greatly depending on both life stage and on the health condition – as such, it is very hard to summarise about this audience as they are not a homogenous group. For some, food supplements were considered key to the treatment of their health condition, without which they would struggle. Others felt that the food supplements they took (usually alongside other medication) were beneficial, but not vital.

"The doctors and consultants have got their treatment plans but at a very very early age I discovered that a lot of the things they were prescribing for me either weren't working, didn't make a difference or came with other side effects. So, since I was a child really my mum tried different supplements, like a supplement called Spatone which is an iron supplement, she just tried different things to see how it would help me with my condition really... I've moved away from the synthesised kind of medications and I'm more interested in the more natural products that are derived from natural origins or that I can get in some sort of food supplement." Male, 31, health condition

"It [fish oil] makes me immediately feel more aware of my surroundings. I feel more proactive with it." Male, 20, health condition

"I think it gives you a boost. I don't think it lasts all day but I think it gives you a boost. I know when I take it I feel more alive taking it and when I get bogged down in the day with everything that's going on I don't feel it works at the end of the day." Female, 47, Depression

"No [I haven't noticed a difference when I stop taking Glucosamine] but I always think if you can help your bones in any way, why not. I mean how much are they? £5 or £6 and they last you months? I mean what is £6 for your health." Female, 69, health condition

However, one common theme that came out when discussing food supplement use in relation to health conditions, was that generally people tended to be part of a community or network of people with similar health conditions. They discussed treatment and share recommendations for ways to treat their illnesses, including food supplements.



"A couple of my friends have got depression as well for different reasons, one of them said to me 'what are you taking'. She was here one morning when I was taking it for breakfast and I said I'm taking multivitamins, she went 'what a good idea, what do you think it does for you', I said 'I think it helps me feel more alive', so she went 'oh, okay' and she tried it and she went 'actually you're right, it does help'." Female, 47, health condition

"These forums are very interesting to go on because you do learn a lot about your condition on them." Female, 69, health condition

As well as discussing their treatments and the different products they took with other people, many of those participants with health conditions spent some time researching food supplements, both to look for different products to take and to learn more about what they are currently taking.

"If I'm looking at any product, no matter where it's coming from, the first thing I will do is I'll try and look for the active ingredients... There's always some sort of long winded scientific name in the ingredients and then I will jump onto Google and I'll put that in and see what is that and get a bit more of an understanding of it. Then I'll look at what are the effects of that, positive and negative, are there any side effects to it." Male, 31, health condition

Many of the participants we spoke to were also taking medication for their health condition, and generally speaking, these consumers seemed to be a bit more careful about (or at least aware of) the interaction between the different medicines and supplements they took. For example, many of them had researched themselves or asked advice when buying supplements, although they tended to ask the supplement retailers or pharmacists rather than their doctors.

"I asked [the shop] advice, I said being diabetic can I take it. He said we do sugar free ones but before you do anything just have a chat with your doctor. But I thought if it's sugar free it will be fine, it's got sweeteners in it... I should have gone to the doctors and asked... I've had my blood tests done and it's all come back normal. So I think, if they'd been affecting me, it would show up in the results." Male, 60, health condition

"I google it to see if there's any, you know, and if you look at the tablets, information on the tablets anyway, it'll tell you what other things will, you're not supposed to take with my tablets... You can't go to your doctor and ask, you know, if you're there with something else you'll ask, but you can't just go and say well, can I take this? The chemist, the pharmacist is pretty good." Female, 69, health condition

Whilst many were very careful when it came to their supplement consumption, for some of the participants we spoke to, the symptoms of their health conditions were severe enough to make them less cautious than they might have been about the products they took. They seemed more willing to experiment with different types of supplements and / or more obscure products.

"It's good to experiment." Male, 20, health condition



"I'm just looking for a fix that'll stop the pain... I took cannabis oil but it's illegal and I didn't know that." Female, 50-64

As MMS is often positioned as a cure for a variety of different health conditions, we had hoped to recruit participants who had heard of it. Unfortunately only one participant said they had come across it, but we think this may have been a mistake as the participant said that their friend had had it recommended by their GP.

As with DNP, we specifically looked for mentions of MMS in the social discourse analysis. Compared to DNP, this was more widely discussed, but there were still very few mentions overall (around 2k over the three month period). There was a spike in discussions in mid February with a number of news stories in the UK and US press and blogs. Again, there was little mention of regulation - only 20% of mentions referencing MMS also referenced regulation or a regulator. Consumer reactions to articles talking about MMS most commonly focused on criticising those who took or gave the supplement.

3.5 Regulation

There was a broad sense that there was (or must be) some kind or regulation of food supplements. Participants recognised food supplements as distinct from medicines (with the exception of some herbal medicines) and therefore anticipated a separate regulator. However, because most saw mainstream supplements as fairly harmless, regulation was not something that most participants had given much thought to.

"I'm not aware of it and I pay no attention to it, or I would know what it was wouldn't I, but presumably there's be some governing body for any sort of supplement?" Male, 35-49

"If you get a bad experience that's when you want to know why haven't they been regulated properly. But, if you're taking something and it hasn't affected you, just carry on taking it." Male, 60, health condition

There was a general assumption that if they were buying a mainstream product from a well known brand they did not need to worry.

"They test them. I don't think a buyer from Tesco would just go and buy any old product." Male, 35-49

"Because you buy them from places like Holland & Barrett, and you imagine that they've done all of this background." Female, 50-64

"We don't know who regulates it, so we have to trust somebody, and so we're trusting the bigger stores." Male, 35-49

Where consumers did question products, their concerns tended to focus on the efficacy rather than the safety of different supplements; this was also noted in the online discussions in the 2CV Wire analysis. Whilst participants in the qualitative sessions (when expressly prompted) expressed a desire for some



kind of kite marking on food supplements, there is a danger that this may be seen as confirmation that a product works, rather than it is what it says it is.



4. Conclusions

Consumers who are taking mainstream supplements claim to be consuming them sensibly, and generally buy from reputable retailers. They assume that if they continue to behave responsibly, they have nothing to worry about, not least because they consider most food supplements fairly harmless. They tend not to have thought about regulation of this market but are confident that the products they buy have been checked by *someone* (be it the retailers themselves or some kind of authority) as long as they don't buy from somewhere obviously 'dodgy'. The only potential cause for concern is that there is little understanding of the distinction between herbal medicine and herbal supplements – and as a result, there is little consideration of any impact that mixing may have.

While the sports nutrition audience tend to be more attuned to and careful about the products they consume, they are also more likely to be buying new and niche products. At the extreme end of the spectrum, consumers in this category know that they are taking risks but consider them worth it. Likewise, consumers looking to lose weight using supplements, and people with health conditions who are unable to find medical solutions, may be more vulnerable to consuming dangerous products because they think the benefits outweigh the risks. Both audiences may be more susceptible to targeted advertising that promises to deliver the outcomes they are looking for.



5. Appendices

5.1 Desk research findings

Methodology

As noted in your research brief, there is limited consumer research in relation to food supplements. Community Research and 2CV identified a number of reports and articles relating to consumer consumption of and attitudes towards food supplements and vitamins and pulled out the most useful information. All figures are referenced below but the key reports used were the Health Food Manufacturer Association's Health of the Nation survey (2016) and Kantar Media's Consumer Health Study (2017). Data from the US and Canada has also been included as having potential relevance.

Key findings

How many people take food supplements?

- 65% of all UK adults took some form of vitamin or supplement either daily or on an occasional basis in the 12 months ending June 2016, vs 63% in the previous year⁸
 - This figure is similar to the US, where 63% of adults reported taking a dietary supplement in the last 12 months⁹
 - \circ ~ In Canada 47% of adults took supplements in 2015 10
- 59% of the UK adult population, around 38 million, now take food supplements, a 4% rise over the last two years¹¹

How often are they taking them?

• 45% of those that take supplements take them five times or more per week¹²

Who is taking food supplements?

- In the US nearly half (48%) of supplement/vitamin users hold a college degree or higher and they earn a higher annual household income than the average adult. The majority of users are women (57%)¹³
- US consumers are also more likely to be taking care of their own health (e.g. less likely to smoke, more likely to eat a balanced diet)¹⁴

⁸ <u>http://www.hfma.co.uk/media-events/industry-facts/</u>

⁹ Kantar Media's 2017 MARS Consumer Health Study, <u>https://us.kantar.com/business/health/2017/vitamins-and-supplements-have-a-healthy-hold-on-consumers/</u>

¹⁰ 2015 Canadian Community Health Survey, <u>https://www.statcan.gc.ca/pub/82-625-x/2017001/article/14831-eng.htm</u>

¹¹ Health Food Manufacturer Association's Health of the Nation survey, 2016 (10,000 adults, UK) <u>http://www.hfma.co.uk/wp-content/uploads/2017/06/hotn-survey-highlights-2016.pdf</u>

¹² HFMA's Health of the Nation survey, 2016

¹³ Kantar Medias 2017 MARS Consumer Health Study

¹⁴ Kantar Medias 2017 MARS Consumer Health Study



 In Canada, women were more likely than men to take nutritional supplements, with the most notable difference among those aged 51 to 70 years, where almost two-thirds (65%) of women used supplements compared with 43% of men¹⁵

What are people taking?

- Multivitamins are the most commonly taken supplement, with almost 50% of supplementtakers taking them regularly. Fish oil and Vitamin C are next, with 30% and 27% of people taking them regularly¹⁶
- This is further backed up by a 2015 survey of UK adults, in which 13% of respondents were taking multivitamins, 10% were taking fish oils, 7% Vitamin C and Omega 3, and 5% taking calcium¹⁷
- There seems to be a trend towards different types of delivery formats (e.g. powders, chews, creams, sprays etc.¹⁸) which may impact on people's perceptions of supplements

Why are they taking them?

- 67% of people take supplements for general health and wellbeing compared to just 17% that take them for a vitamin deficiency¹⁹
- The percentage of those that take supplements due to age has decreased over the years²⁰

Where are they buying them?

- 53% of people buy their supplements from their local supermarket, 27% buy them from their local chemist or pharmacy, 22% opt for their local health food store, and 17% go online²¹
- Mintel estimates that 31% are sold in chemists and 26% in supermarkets²²

Sources of information

- When choosing health supplements or products, 30% of people get the majority of their information online, and 27% get it from product packs or boxes. Only 6% get it from advertising in newspapers and magazines. Since 2014 fewer people look to advertising and doctors for information and more people look to product packs and boxes and online ²³
- 56% of consumers find the information on vitamin packs helpful²⁴

¹⁵ 2015 Canadian Community Health Survey, <u>https://www.statcan.gc.ca/pub/82-625-x/2017001/article/14831-eng.htm</u>

¹⁶ HFMA's Health of the Nation survey, 2016

¹⁷ 2015 UK survey, <u>https://www.statista.com/statistics/614704/consumption-of-food-supplements-and-vitamins-uk/</u>

¹⁸ Grant Thornton's 2017 trend report (based on Mintel data) <u>https://www.grantthornton.co.uk/insights/five-</u> emerging-trends-in-vitamins-minerals-and-supplements/

¹⁹ HFMA's Health of the Nation survey, 2016

²⁰ HFMA's Health of the Nation survey, 2016

²¹ HFMA's Health of the Nation survey, 2016

²² Grant Thornton's 2017 trend report

²³ HFMA's Health of the Nation survey, 2016

²⁴ HFMA's Health of the Nation survey, 2016



• 22% of people don't find it easy to find and research the right information on vitamins and supplements that they want to buy²⁵

Attitudes towards vitamins / supplements

- 22% of UK adults believe that vitamins and supplements truly work²⁶
- In the US, 56% believe that vitamins and nutritional supplements make a difference in long term health, and amongst those who use them, 66% agree that vitamins and nutritional supplements make a difference²⁷
- 80% of US consumers say they know that those supplements are just one part of a healthy diet and should not replace healthy eating or lifestyle habits²⁸
- However, another study from the US indicate that most users of supplements have little knowledge about the sources of the vitamins they take and are unaware of any risks associated with taking them alongside other medication²⁹

Views of industry

• Only 16% of people think that the industry is well regulated and safe³⁰

²⁵ HFMA's Health of the Nation survey, 2016

²⁶ HFMA's Health of the Nation survey, 2016

²⁷ Kantar Media 2017 MARS Consumer Health Study

²⁸ Consumer attitudes about the role of multivitamins and other dietary supplements: report of a survey (US, 2015) <u>https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4489202/</u>

²⁹ Public knowledge, use and attitude toward multivitamin supplementation: A cross-sectional study among general public, 2014 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4137646/

³⁰ HFMA's Health of the Nation survey, 2016



5.2 Omnibus questionnaire

Demographic questions from omnibus (as standard):

- Age
- Gender
- Government office region
- Social Grade
- Taken a foreign holiday in the last 3 years
- Tenure
- Number of cars in household
- Working status
- Disability
- Education level
- Main grocery shopper
- Ethnicity
- Religion
- Urban/rural
- Public/private sector worker
- Presence of children
- TV region
- Marital Status
- Household income (before tax)
- City

Food supplements explanation provided up front

A food supplement is defined as any food for the purpose of which is to supplement the normal diet and which is a concentrated source of a vitamin or mineral or other substance with a nutritional or physiological effect, alone or in combination. They are sold in dose form as pills, powders or liquids. Some examples of food supplements include: multivitamins; folic acid; fish oils; caffeine pills; and protein / whey powder.

- Do you ever take / have you ever taken food supplements such as vitamins? SINGLE CODE
 - a. I currently take food supplements / vitamins on a regular basis
 - b. I have previously taken food supplements / vitamins but no longer do
 - c. I have never taken food supplements / vitamins
- 2. PARENTS ONLY. Do you buy food supplements for your children? MULTI-CODE
 - a. Yes for my pre-schooler(s)
 - b. Yes for my child(ren) aged 5-10
 - c. Yes for my child(ren) aged 11-18



d. No

ASK IF CODED a, b or c AT Q2

3. What food supplements do you buy <u>for your children</u> on a regular basis? List as many as you can think of

4. What food supplements do <u>you</u> personally currently take on a regular basis? List as many as you can think of

I don't take any – SCREEN OUT

 What do you take these for? MULTICODE. RANDOMISE. ONLY SHOW OPTIONS WHEN SUB HEADER IS CLICKED.

PHYSICAL HEALTH AND WELLBEING

- a. To improve my overall health
- b. To maintain my overall health
- c. To maintain my immune system

MENTAL HEALTH AND WELLBEING

- d. To give me energy
- e. To relax
- f. To support restful sleep
- g. To aid mental agility
- h. To maintain my memory
- i. To support my mental health

WEIGHT MANAGEMENT

- j. To maintain a healthy metabolism
- k. To lose weight
- I. For weight gain

BEAUTY



- m. To improve / maintain my hair
- n. To improve / maintain my skin / complexion
- o. To improve / maintain my nails

SPORTS

- p. To build muscle
- q. As performance enhancement for sports

WOMEN'S HEALTH

- r. To ensure I get all the nutrients I need during pregnancy / trying to conceive
- s. To ensure I get all the nutrients I need while breastfeeding
- t. To ensure I get all the nutrients I need during the menopause
- u. To ensure I get all the nutrients a woman needs

MEN'S HEALTH

v. To ensure I get all the nutrients a man needs

DIET SUPPLEMENTATION

- w. To ensure I get all the nutrients I need as a vegetarian
- x. To ensure I get all the nutrients I need as a vegan
- y. To ensure I get all the nutrients I need because there are certain foods I can't / don't eat

OVER 65 HEALTH

- z. To help my body absorb nutrients as I get older
- aa. To maintain my health as I get older

OTHER [NB these would be separate options, not included within an 'other' category]

- bb. To maintain my sexual performance
- cc. To maintain healthy digestion
- dd. For my heart
- ee. For my eyes
- ff. Other PLEASE STATE______
- 6. Which of the following supplements have you ever taken?
- 7. And which do you currently take? MULTICODE. RANDOMISE.

	a) Ever taken	b) Currently take
a. Multivitamins		
b. Vitamin A		



C.	Vitamin B	
d.	Vitamin C	
e.	Vitamin D	
f.	Vitamin E	
g.	Calcium	
h.	Iron	
i.	Fish oils	
j.	Amino acids	
k.	Glucosamine	
Ι.	Garlic	
m.	Ginseng	
n.	Protein	
0.	Caffeine	
p.	Folic acid	
q.	Peppermint oil	
r.	Gingko Biloba	
S.	Magnesium	
t.	Eye health supplements	
u.	Weight loss supplement PLEASE STATE	
V.	Sports performance enhancer PLEASE STATE	
w.	Other(s) PLEASE STATE	

8a You said you currently use [answer to Q7b – up to two supplements]. What, if any, effects (either benefits or adverse effects) have you noticed from taking these?



8b You said you currently for [answer to Q7b – up to two supplements]. What, if any, effects (either benefits or adverse effects) have you noticed from taking these?

8. How long have you been taking [answer to Q7b]? SINGLE CODE

	Answer to Q7b (1 st answer)	Answer to Q7b (2 nd answer)
Less than 1 month		
1-6 months		
6-12 months		
1-2 years		
2-5 years		
5-10 years		
Over 10 years		

9. Where do you tend to buy [answer to Q7b]? MULTICODE. RANDOMISE.



	Answer to Q7b (1 st answer)	Answer to Q7b (2 nd answer)
Supermarkets		
Pharmacy e.g. Boots		
Health food store e.g. Holland & Barrett		
Gym		
Online marketplace e.g. Amazon, eBay		
Online specialist retailers e.g. Vitabiotics,		
Simply Supplements		
Mail order / catalogue		
Other PLEASE STATE		

10. When do you tend to use [answer to Q7b]? MULTICODE. RANDOMISE.

	Answer to Q7b (1 st answer)	Answer to Q7b (2 nd answer)
On a daily basis / as part of my regular routine		
Before a particular event		
When I feel like I'm coming down with something		
After I've been unwell		
When I remember		

ASK ALL

- To what extent do you agree or disagree with the following statements? SINGLE CODE. ROTATE ORDER OF STATEMENTS. Strongly agree Agree Neither agree nor disagree Disagree Strongly disagree
 - a. I am always careful to take the exact recommended dosage of the food supplements I consume



- b. I think carefully about taking more than one food supplement at a time in case they interact with each another
- c. I never take more than one type of food supplement at a time
- d. I think carefully about taking food supplements at the same time as medications in case they might interact with each other
- e. I am confident that I am buying food supplements from reputable retailers

ASK ALL WHO DISAGREE OR DISAGREE STRONGLY WITH STATEMENT (a) AT Q11

- 12. You disagreed with the statement "I am always careful to take the exact recommended dosage of the food supplements I consume." Which of the following is true:
 - a. I often take more than the recommended dosage of the food supplements I consume
 - b. I often take less than the recommended dosage of the food supplements I consume
 - c. I just don't pay much attention to the recommended dosage for food supplements I consume
- Which of the following apply to you? PLEASE TICK ALL THAT APPLY.
 MULTICODE. RANDOMISE. [If (a) is ticked (b) automatically applies; f & g and h & i = mutually exclusive; d is shown only to female respondents]
 - a. I am vegan
 - b. I am vegetarian
 - c. I am pregnant / trying to conceive
 - d. I am breastfeeding
 - e. I am on a diet / trying to lose weight
 - f. I am active
 - g. I am inactive
 - h. I am generally healthy
 - i. I am quite unhealthy
 - j. I have been diagnosed with an ongoing physical health condition
 - k. I have been diagnosed with a mental health condition