ITC INSIGHTS: SUPPLEMENT CONSUMER SURVEY 2020

PREBIOTIC CATEGORY ENHANCED REPORT

What is the ITC 2020 Survey?

Ingredient Transparency Center recently concluded its third annual consumer survey, involving 2000 consumers from the US, UK and Germany. Our multi-category insights drive understanding of supplement purchasing behaviors and decisions with an intense focus on emerging and important categories, placed into context by comparing these against more established and broader categories like probiotics, omega-3s, vitamin D and protein.

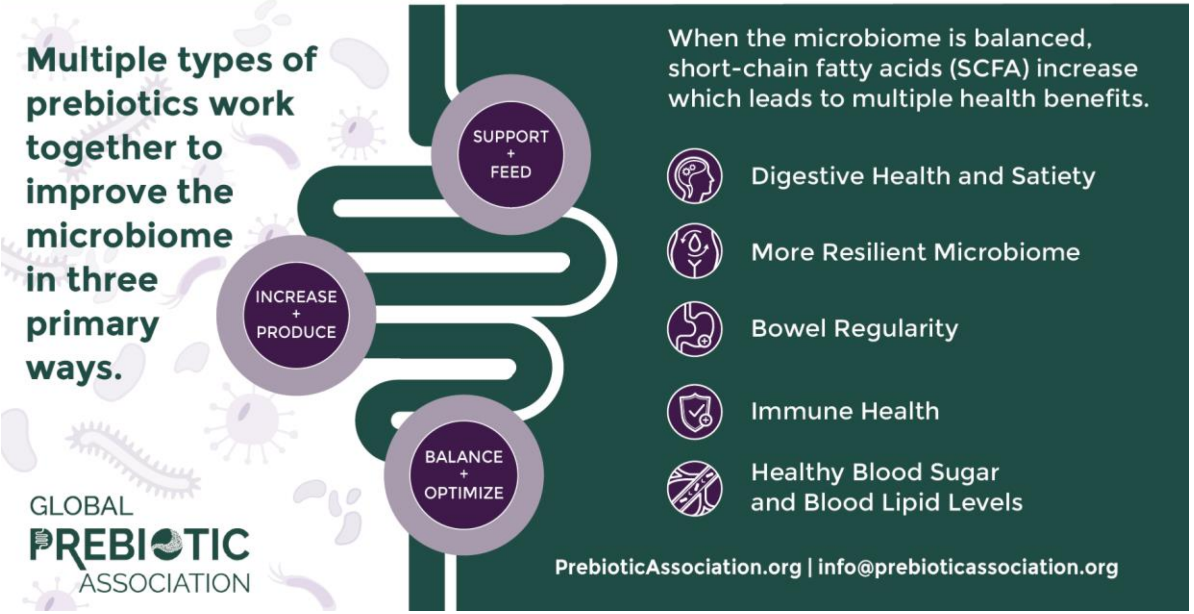
The emerging categories explored include astaxanthin, coenzyme Q10, collagen, curcumin/turmeric, glucosamine, prebiotics and vitamin K.

This is the first year that multiple countries have been included in our survey, allowing ITC to present comparisons across the US, UK and Germany in all these categories. We've also looked at year over year data in the US though some findings have been impacted by COVID which are noted.

Digging into prebiotics:

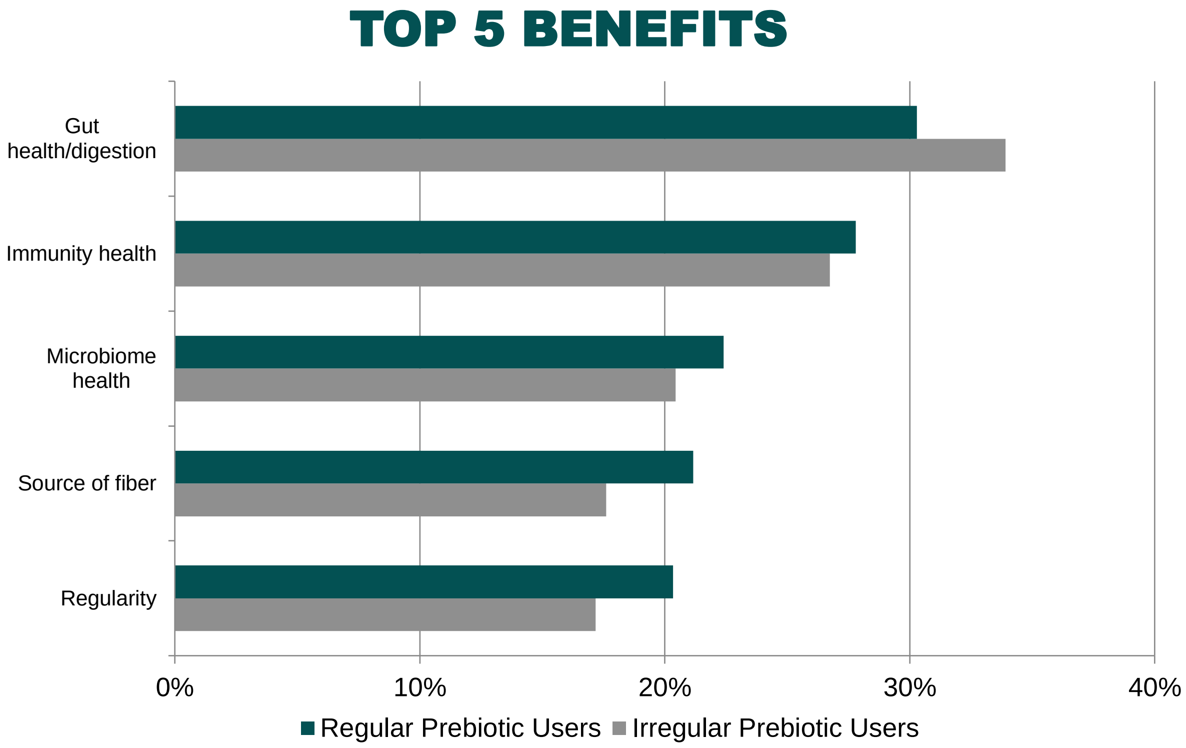
The Global Prebiotics Association (GPA),), the non-profit trade association representing the worldwide prebiotics category, defines a prebiotic as ***a nutritional product or ingredient selected to be utilized in the microbiome producing health benefits***.

There are several known mechanisms by which prebiotics act to confer health benefits, with new science allowing us to track what is happening even at receptor level within the microbiome. In simple terms, prebiotics act either chemically or physically, often but not always by interacting with gut microbes and generally serve to: support and feed, increase and produce and balance and optimize – all within the microbiome.



The prebiotic category has seen rapid growth over multiple years moving out of the shadow of probiotics for multiple health conditions and benefits: gut health and digestion; increasingly into overall immunity; and even more in areas such as mood and mental wellness as scientific research expands the prospects.

This acceleration and broadening of perceived and possible health benefits is clearly shown in the insights results as awareness is growing.
In the very early days of the prebiotic category, much of the emphasis was on fiber, with fiber frequently used instead of – or interchangeably with – the term ‘prebiotic’.



Consumers in all three countries surveyed (US, UK and Germany) are increasingly knowledgeable and discerning – illustrated by what they look for when buying prebiotic products.

This matches ITCs analysis of the marketplace, as product developers look to formulate with multiple prebiotic sources and new or emerging prebiotic ingredients like (XOS) xylo-oligosaccharides, pectin oligosaccharides, acacia fiber, arabinoxylan and beta-glucans , while the science base has broadened for well-documented ingredients such as resistant starch.

What Prebiotic Consumers Look For

Look that it is labelled as a prebiotic	39%
Look for a probiotic/prebiotic combination	31%
Look for fiber	30%

In the very early days of the prebiotic category, much of the emphasis was on fiber, with fiber frequently used instead of – or interchangeably with – the term ‘prebiotic’.

However, it is important to note that not all fibers are prebiotic – and there are many more food constituents shown to exhibit prebiotic activity than simple fiber sources.

While it remains true that many prebiotics are fibers, other prebiotic ingredients such as selected polyphenols and bacteriophages have been shown to be effective at relatively low doses, meaning product developers can more effectively create products in multiple delivery formats, including traditional dietary supplements formats such as tablets and capsules as well as functional foods and beverages. These lower dosages can also help to overcome the negative consequences of higher dose ingredients, whether that be gastric distress or taste issues.

PREBIOTIC TYPES

It should be noted, that while current ITC Insights work only surveys supplement consumers, rather than foods and beverage users, many of the findings do translate across all markets of functional food and drinks.

Overall awareness of prebiotics, in addition to what prebiotic consumers look for on product labels – such as a combination of a probiotic with a prebiotic (symbiotic) – clearly gives insights into broader consumer understanding and marketing tactics.

Emerging microbiome research is revealing roles for prebiotics in satiety, sleep, stress, inflammation and even new gut function mechanisms of action are coming to light.

This new research offers potential for product development across a variety of formats and for numerous conditions. Terms like the ‘gut-brain axis’ and ‘skin microbiome’ are quickly moving into the public realm, and with them nutrients like prebiotics that can make a difference.

To put market size in context, the current global human-use prebiotics market is worth approximately $3.5bn, according to market estimates, with the US market worth around one third of this. These numbers include fiber-based prebiotics across food, beverages and supplements, of which chicory root-sourced inulin remains the dominant prebiotic and major suppliers like Beneo, Sensus and Galam are all in the midst of output-boosting investments to meet rising demand, including for organic inulin.

The above numbers also include established and emerging ingredients such as alpha-amylase resistant starch, psyllium and other fiber/inulin positioned food-type offerings like fructo-oligosaccharides (FOS), galacto-oligosaaccharides (GOS), human milk oligosaccharide (HMOs), AXOS, chito-oligosaccharides, neoagaro-oligosaccharides, polyphenols and others, for uses in foods, beverages and supplements.

While conversations around fiber remain important in the wider context, it is important to note that a fiber-based, food-centric, market positioning of prebiotic ingredients is increasingly giving way to the use of more specific and specialist terms, in addition to greater use of the term prebiotic itself, and growing conversations around microbiome modulation.

Recent developments in life-stage nutrition have also seen prebiotics become increasingly important in infant and toddler nutrition, as well as in product development for active and aging populations.

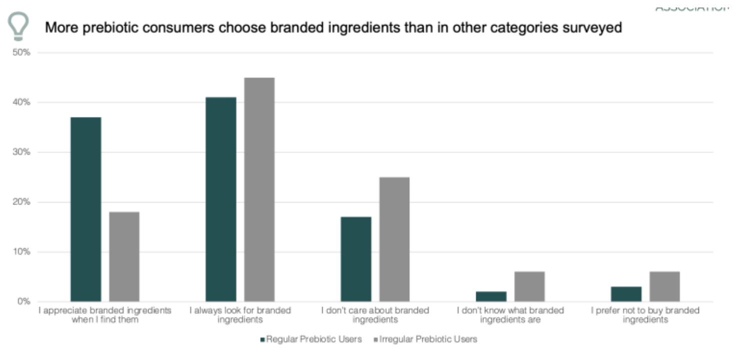
A growing value proposition

Across the natural products industry, core consumer ‘values’ drive much of their behavior and prebiotics are a perfect example – they can provide a food-based clean label functional or even multi-functional component such as ‘gut health’ along with moderate sweetening. Prebiotics also benefit from a gluten-free proposition, and can be a substitute for yeast.

Compared to other categories monitored by ITC Insights, prebiotic users also over-index on monthly spend and are more interested in sustainable solutions and offerings from their brands. Prebiotic users also pay more attention to labels than most other consumers, seeking signals of trust and identifiers of transparency.

In particular, the high interest of prebiotic users in sustainable solutions and transparent supply chains can be of benefit to brands and suppliers who may be able to use story-telling around strong supply chains and sustainable sources, given for example that many prebiotics are developed out of agricultural by-product streams.

Lastly, branded ingredients also impact the buying behaviors of these supplement consumers, with a strong recognition and appreciation of branded ingredients in the prebiotic space.



Future drivers of the category are expected to include broad education, learned from categories such as omega-3’s, probiotics and even to a certain extent, vitamin D. Meanwhile, the continued rise of synbiotics and holistic ‘microbiome solutions’ and ‘personalization’ all support ongoing category potential.

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Overall Supplement User Data

Prebiotic Supplement User Data

ITC INSIGHTS

CONSUMER SURVEY 2020

Fielded June-July 2020
- Fielded online by Dynata
- Analyzed by Ooyen Research & Trust Transparency Center

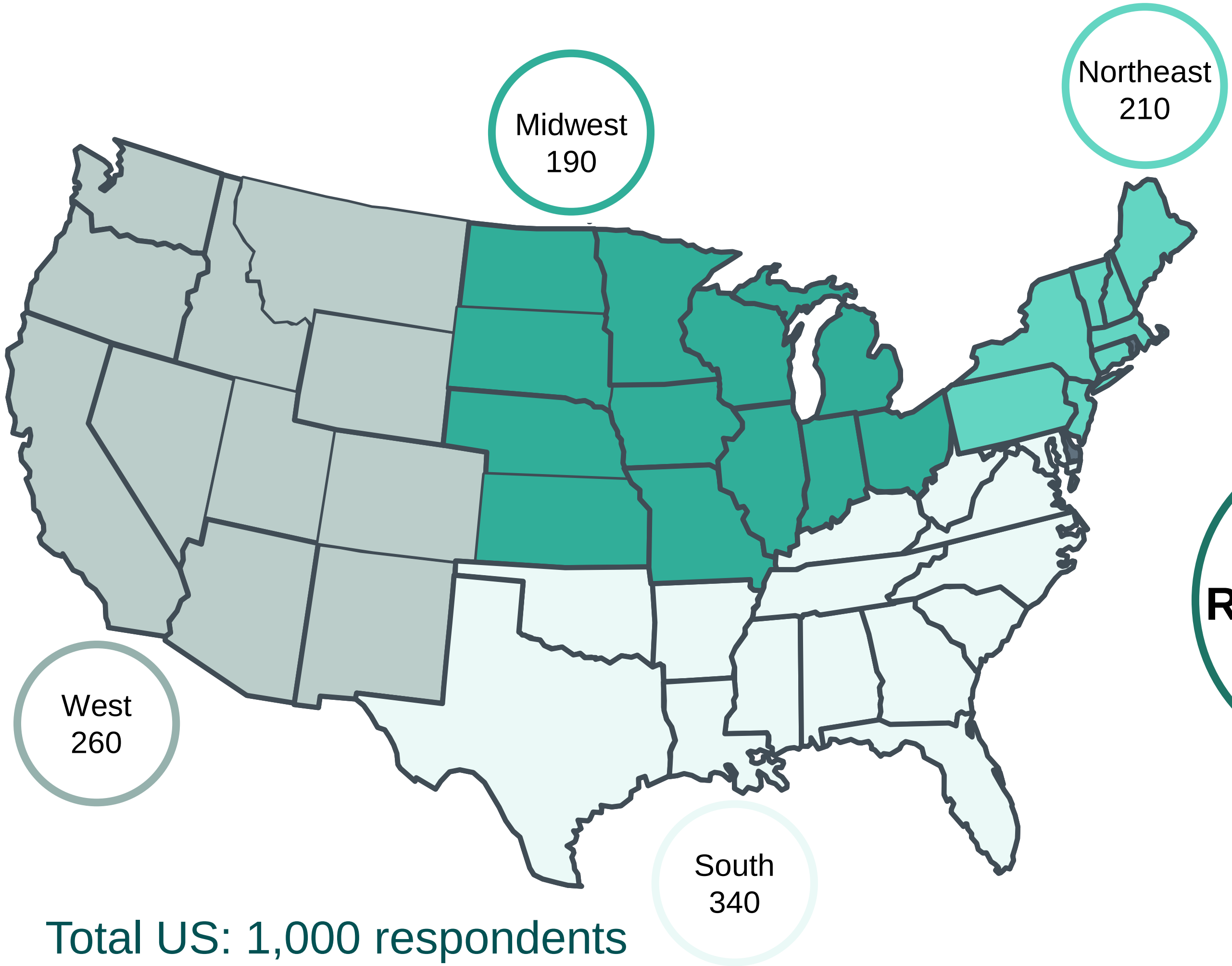
Surveyed opinions and habits of 2,004 consumers
- USA - 1,000 consumers
- UK - 501 consumers
- Germany (DE) - 503 consumers

General Criteria for Participation
- Supplement users, with sporadic users no more than 7% of sample (vs. the 5% limit in previous years)
- Disqualified poor quality responses and respondents who did not fit survey consumer profile parameters

The information in this presentation is for the recipient only and should not be share in its entirety. You may share components of this survey data with attribution:
Trust Transparency Center ITC Insights – Consumer Survey 2020

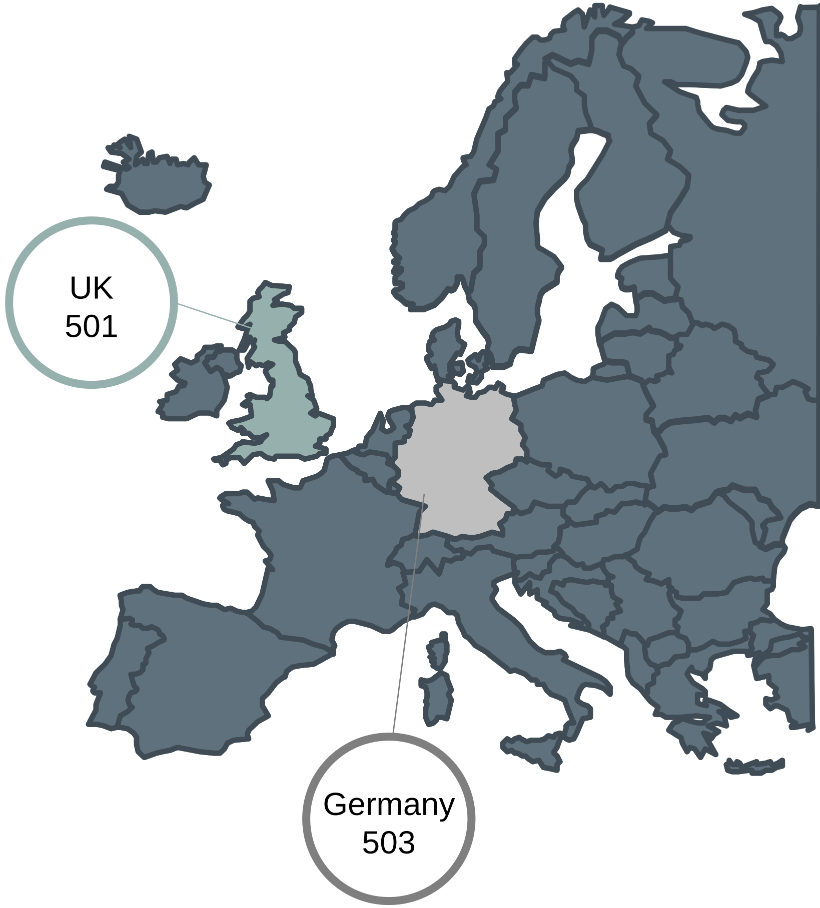
CORE DEMOGRAPHICS

GEOGRAPHIC OVERVIEW



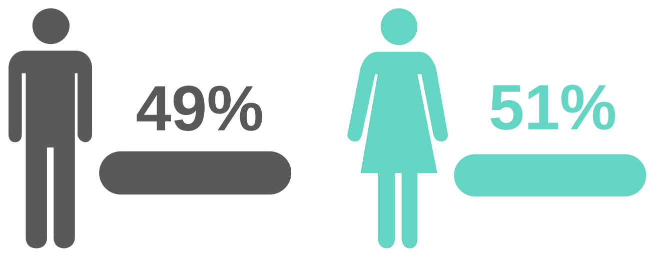
Total US: 1,000 respondents

Total Respondents: 2,004



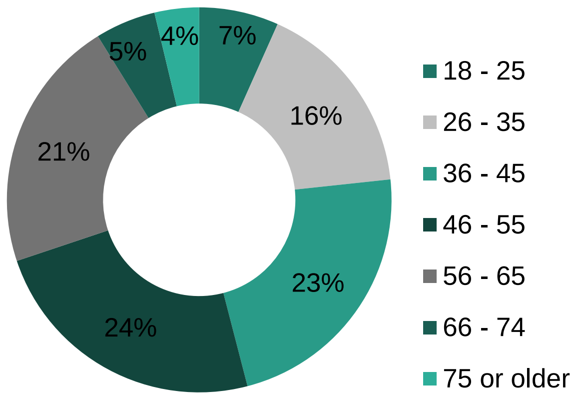
DEMOGRAPHICS

GENDER



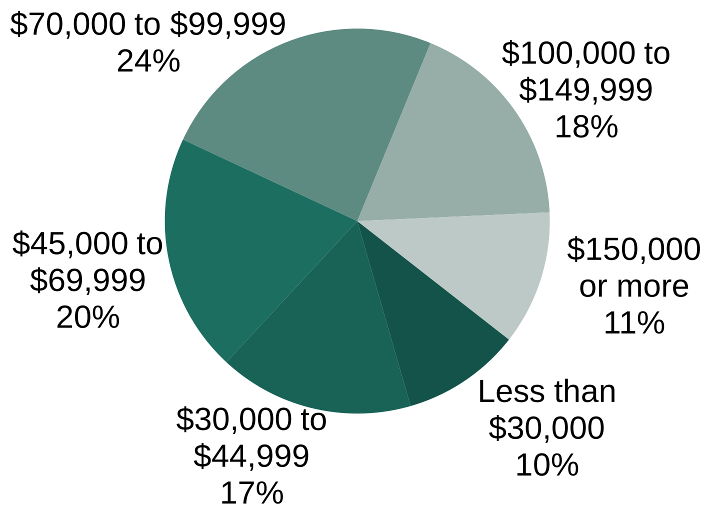
Even mix of men and women (USA limited to no more than 55% women, while UK 45% women and Germany 50% women fell out naturally from respondent pool)

AGE



Adult consumers, with consumers age 66+ no more than 10% of sample (German respondents younger with 28% 35 or younger)

INCOME



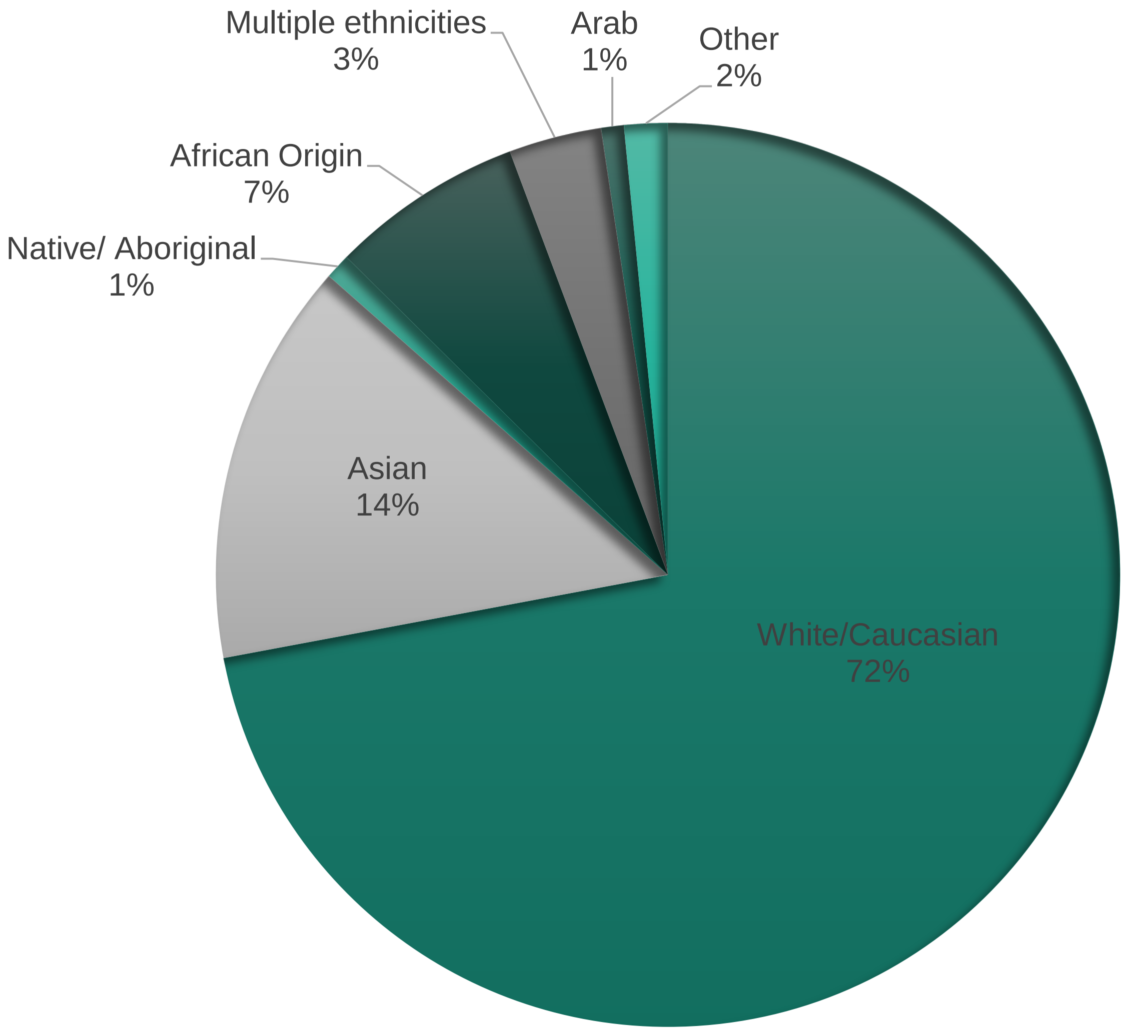
A diverse balance of all income groups. UK & Germany pushing average income lower than in previous years, with 30% under $45,000 per year vs. 23% in USA

**Converted to USD from original national currency*

ETHNIC BACKGROUND

GLOBAL PREBIOTIC ASSOCIATION

- Consumers had a diverse ethnic background over the three countries surveyed
- USA respondents were limited to no more than 70% white to ensure diversity in responses
- UK respondents were more diverse, with only 56% white
- A lack of diversity in the Germany survey sample required acceptance of 89% white respondents



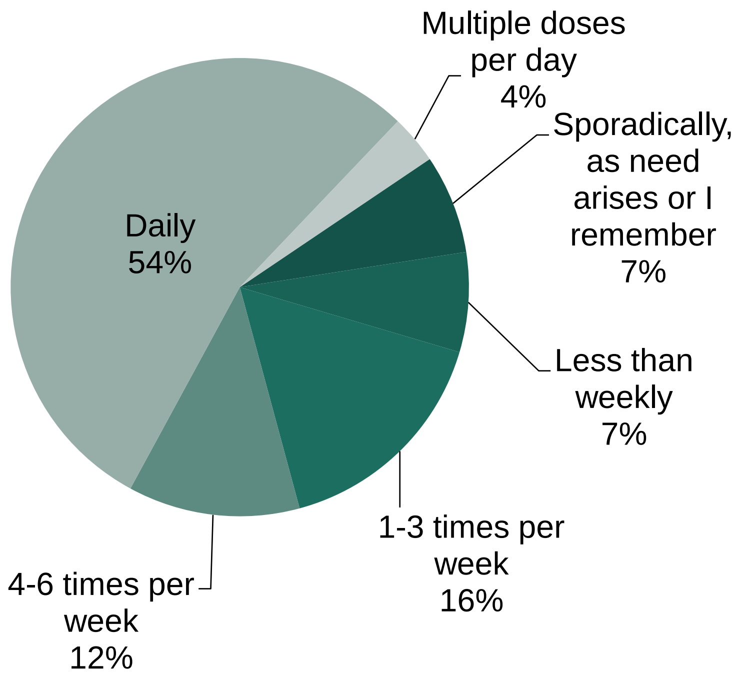
American Indian option only available in USA, Arab in UK and Germany

CONSUMER SUPPLEMENT DATA: GENERAL OVERVIEW

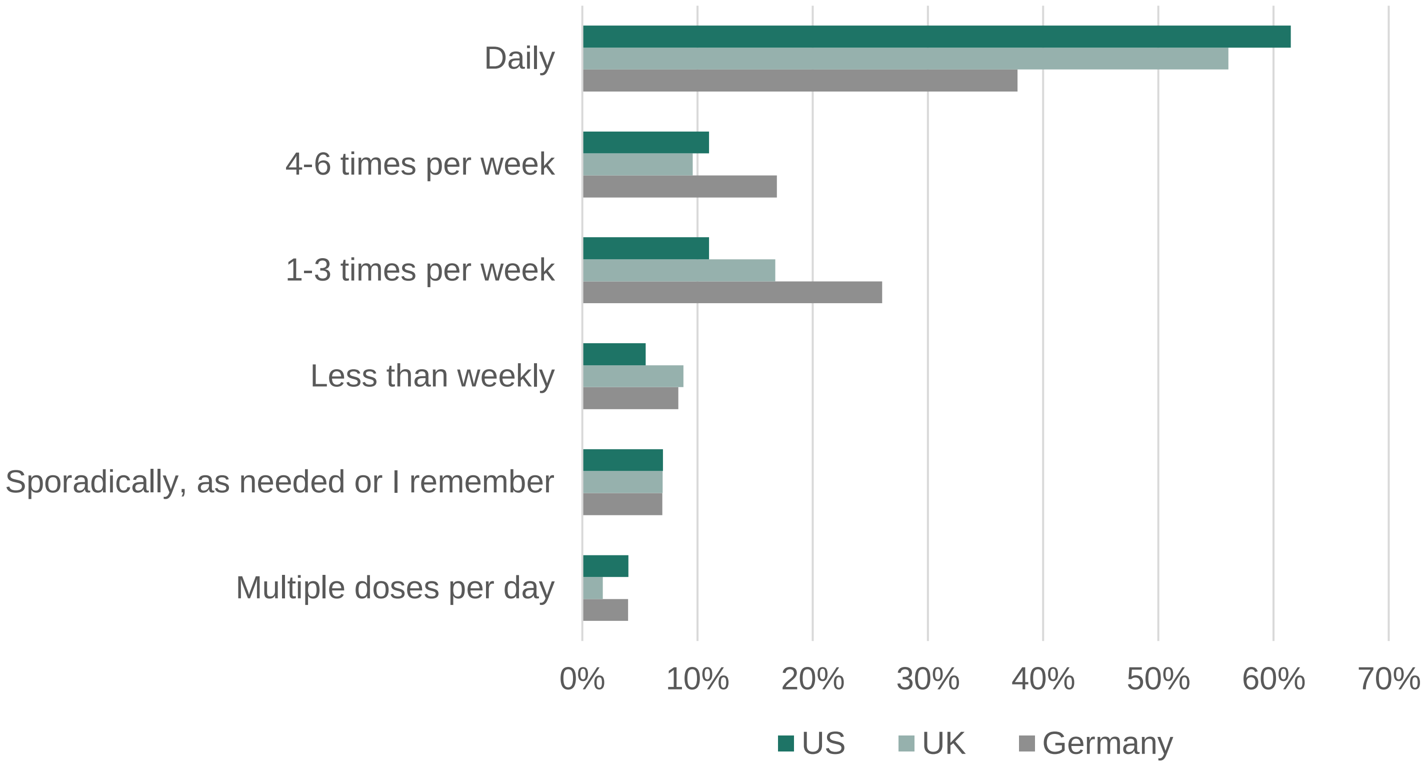
SUPPLEMENT USAGE LEVELS

KEY ITC INSIGHT: Most consuming supplements do so daily

All Respondents



By Country

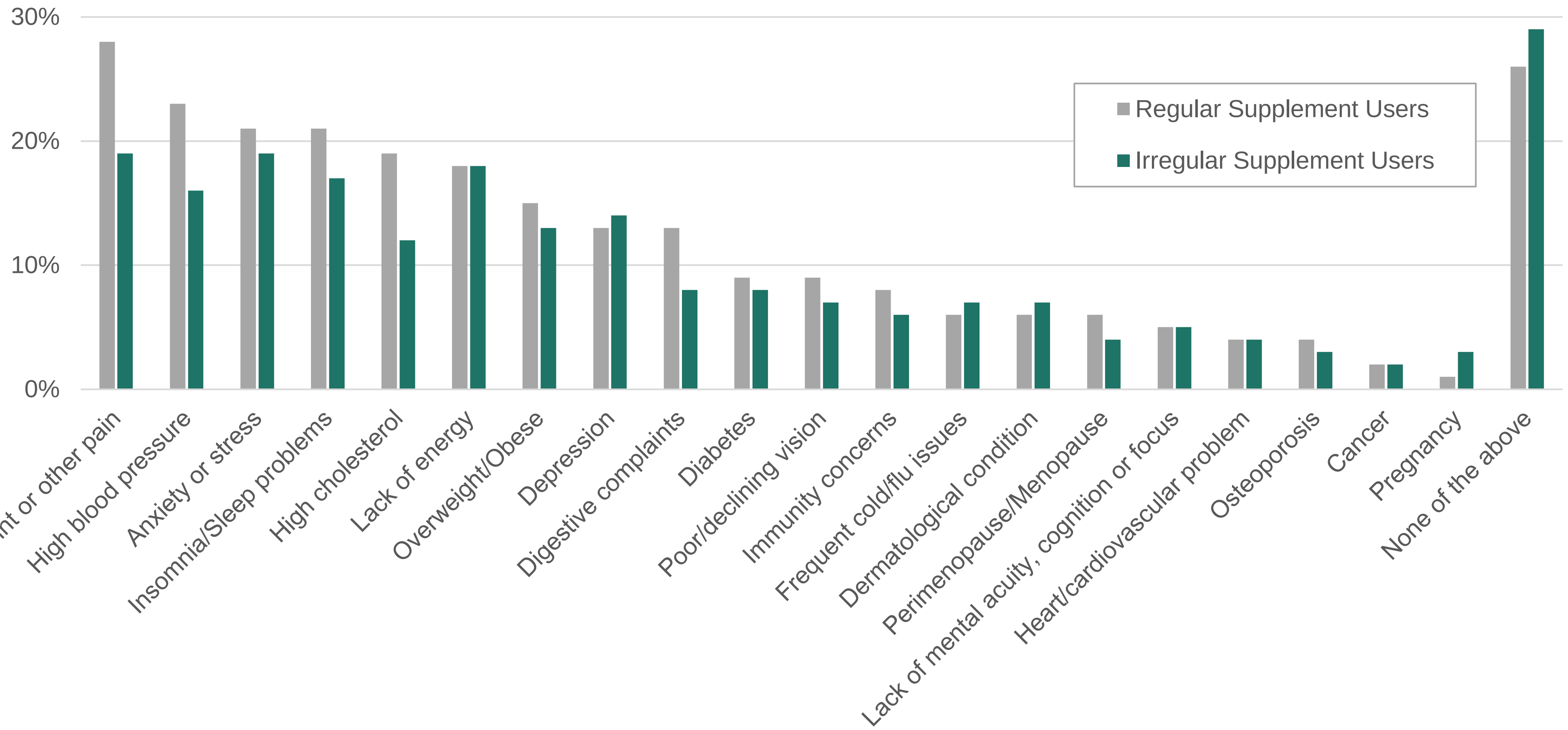


In Germany, fewer regular supplement users consume daily. While still the most popular, more also take supplements between 1 and 6 times per week

Question: "How often do you take vitamins, minerals, herbs or other dietary supplements?"

HEALTH CONCERNS: BY USAGE LEVEL

KEY ITC INSIGHT: Most are experiencing a variety of health issues



KEY ITC INSIGHT: Regular supplement users are more likely to be suffering from chronic health issues

Question: “Which of the following health conditions impact you currently or have impacted you within the past year?”

HEALTH CONCERNS: BY USAGE LEVEL

GLOBAL PREBIOTIC ASSOCIATION

All Respondents
- Joint or other pain
- High blood pressure
- Anxiety or stress

Regular Supplement Users
- Joint or other pain
- High blood pressure
- Insomnia/Sleep problems

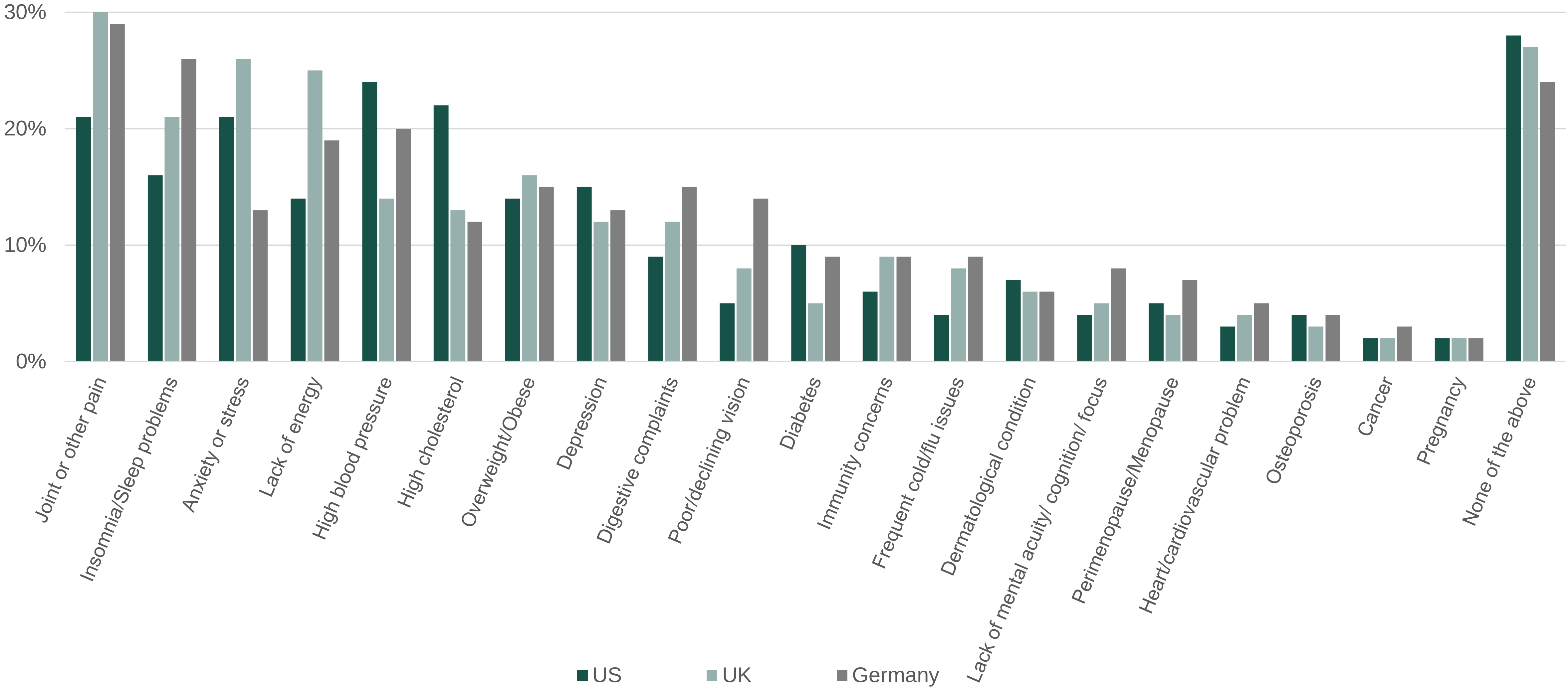
Irregular Supplement Users
- Anxiety or stress
- Joint or other pain
- Insomnia/Sleep problems

KEY ITC INSIGHT: Mental wellbeing, include stress and sleep issues, are leading health concerns for Irregular Users

Question: “Which of the following health conditions impact you currently or have impacted you within the past year?”

HEALTH CONCERNS: BY COUNTRY

GLOBAL PREBIOTIC ASSOCIATION



Question: "Which of the following health conditions impact you currently or have impacted you within the past year?" All Respondents

HEALTH CONCERNS: BY COUNTRY

KEY ITC INSIGHTS

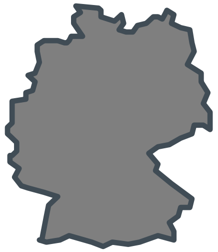
- Medicalized issues relating to blood pressure and cholesterol dominate US consumer concerns
- Concerns about lack of energy and mental well-being are high in the UK
- Concerns for joint pain remain high in all three countries, but are top priority in Europe

US Top 3 Health Concerns

- High Blood Pressure
- High Cholesterol
- Anxiety or Stress & Joint or Other Pain

UK Top 3 Health Concerns

- Joint or Other Pain
- Anxiety or Stress
- Lack of Energy

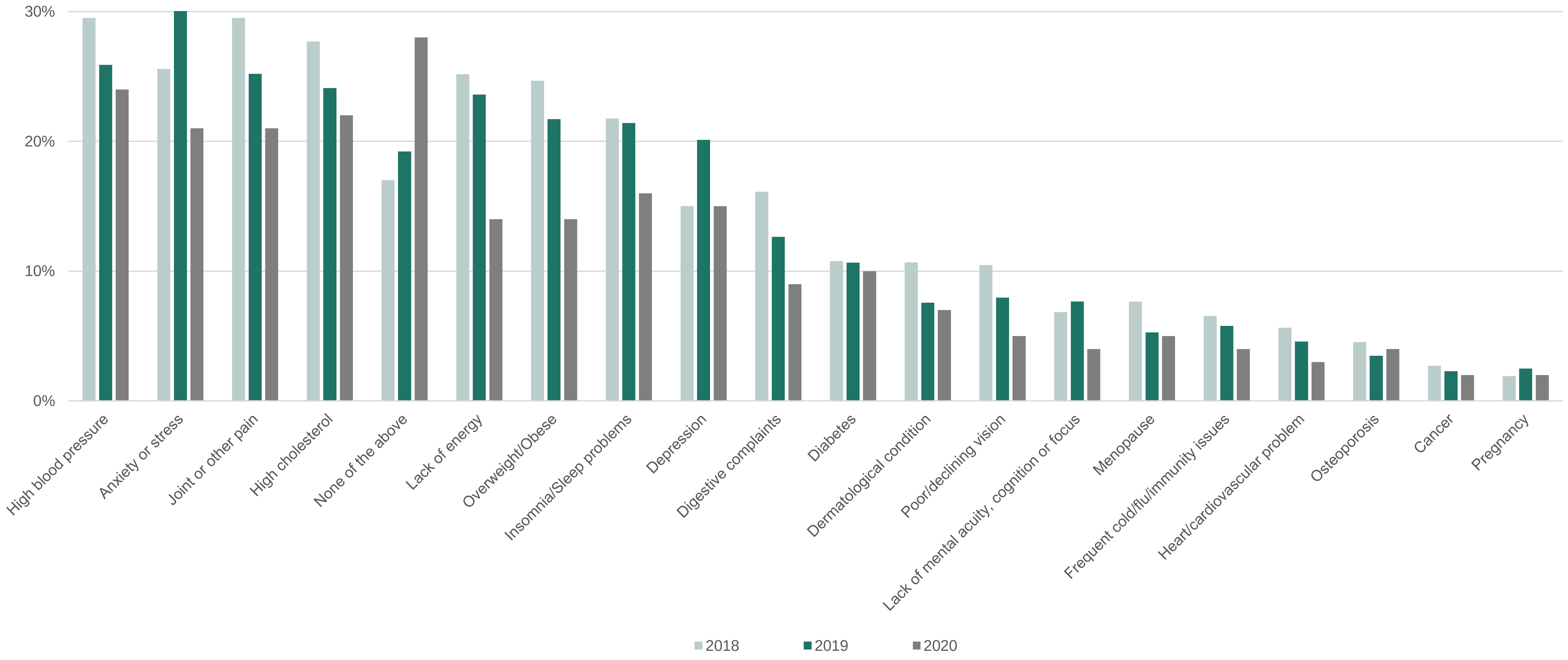


Germany Top 3 Health Concerns

- Joint or Other Pain
- Insomnia/ Sleep Problems
- High Blood Pressure

Question: “Which of the following health conditions impact you currently or have impacted you within the past year?” All Respondents

HEALTH CONCERNS: 2018-2020 (US DATA)



Question: “Which of the following health conditions impact you currently or have impacted you within the past year?”

HEALTH ATTITUDES

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS

- They are using supplements & other means to better manage their health
- German and UK consumers are much more proactive about managing their health, purchasing natural & organic food, and reading health articles than are USA consumers. The UK consumers are also exercising more
- Taking supplements, eating good food, exercising, and being proactive about health are all important to Regular Supplement Users

20%	I use/have used vitamins, minerals, herbs or other dietary supplements to help manage my health
19%	I believe that eating good food is important to maintaining good health
16%	I exercise for 30 minutes at least 3 times per week
15%	I am proactive about my health and take steps to lower health risks
12%	I regularly purchase at least some natural & organic foods

*Info based on All Respondents

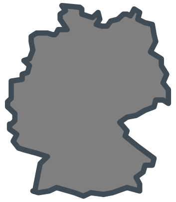
WHAT SUPPLEMENTS THEY TAKE (UNAIDED RESPONSES)

KEY ITC INSIGHTS:

- While multivitamins are at the top of the UK and US lists as expected, they are under indexed in
- B Vitamins top the list in Germany and are high in all three countries
- UK consumers are above average users of fish oil and glucosamine
- German consumers are above average users of Magnesium

US Top 7 Supplements	
Multivitamins	52.4%
Vitamin D	28.1%
Vitamin C	22.5%
B Vitamins	15.2%
Omegas	17.6%
Calcium	10.8%
Probiotics	7.4%

UK Top 7 Supplements	
Multivitamin	32.7%
Vitamin D	31.9%
Omegas	25.9%
B Vitamins	9.8%
Calcium	5.2%
Glucosamine	5.0%
Magnesium	4.2%



Germany Top 7 Supplements	
Magnesium	31.3%
B Vitamins	26.2%
Vitamin D	22.3%
Vitamin C	20%
Multivitamin	17.7%
Omegas	9.3%
Calcium	8.3%

SUPPLEMENT SPEND

KEY ITC INSIGHTS

- More than half of users (51%) spend less than $19.99 per month on supplements
- The average spend in the US remains similar year-on-year
- A small but significant part is willing to spend $40 or more on supplements

Individual Monthly Supplement Spend: All Respondents

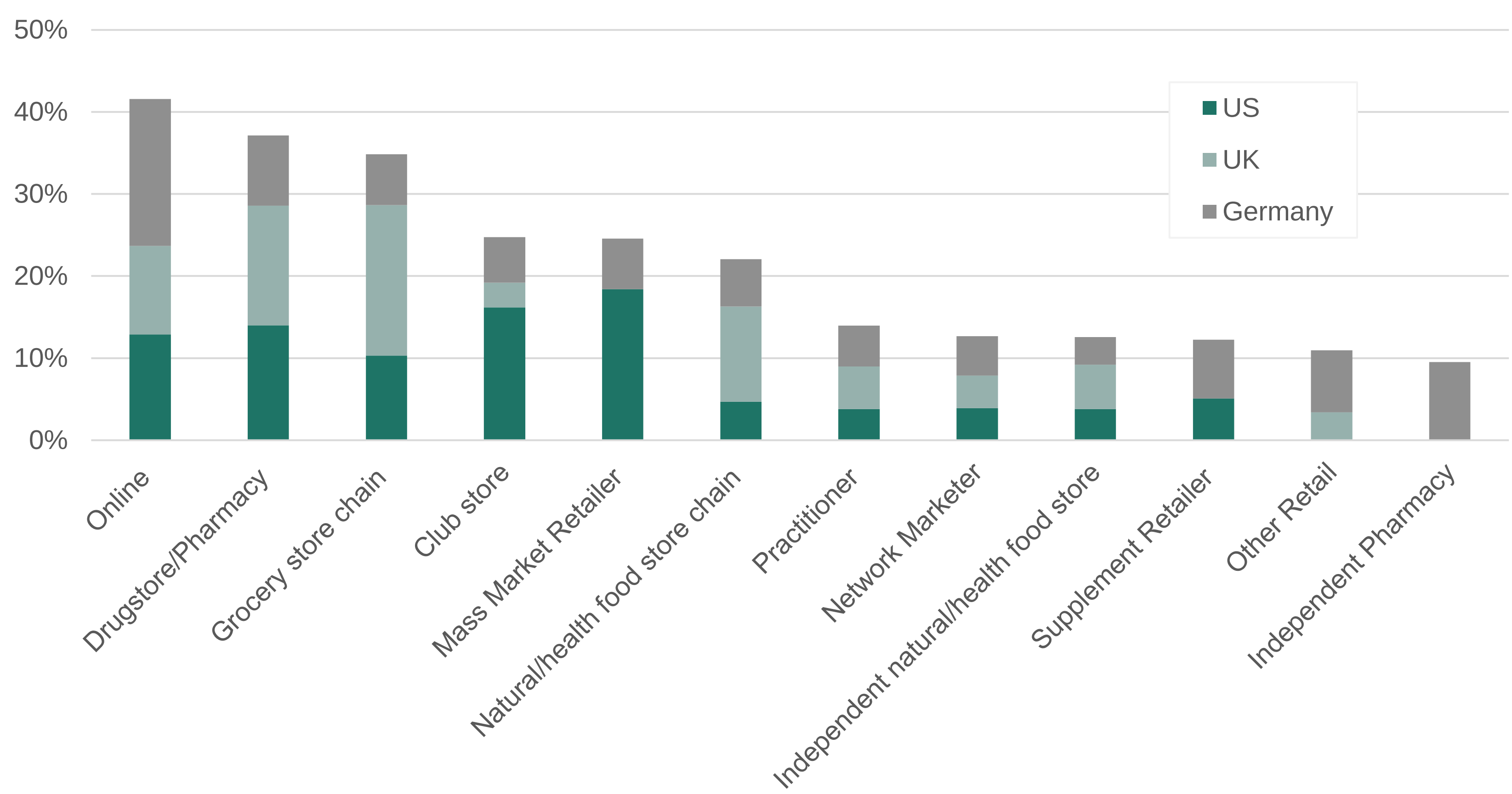
**Converted to USD from original national currency*

Question: "On average, how much do you spend monthly on vitamins, minerals, herbals, or other dietary supplements for just yourself?"

PURCHASE LOCATION

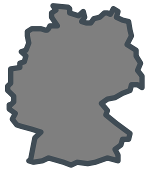
KEY ITC INSIGHTS

- Supplement users purchase at a diverse set of retail and online locations, with great variations by country
- The German market differs significantly from the US and UK markets, with greater online purchases and a focus on pharmacy channels



US Top 3 Channels
- Mass Market Retailer
- Club Store
- Drugstore/ Pharmacy

UK Top 3 Channels
- Grocery Store Chain
- Drugstore/Pharmacy
- Natural/Health Food Store



Germany Top 3 Channels
- Online
- Independent Pharmacy
- Drugstore/Pharmacy

Note: Purchase locations and examples varied by country. “Independent Pharmacy” & “Other Retail” option not available to US respondents, “Mass Market Retailer” & “Supplement Retailer” not shown for UK.

WHAT BRANDS DO PEOPLE BUY?

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS

- In all countries, supplement users purchase a wide range of brands, including private label and supermarket own-brand
- Many users may not be loyal to one specific brand
- UK consumers may be the most brand loyal, with only 7% suggesting they have no brand preference (10% US and 11% Germany)
- In all countries store brands are often purchased, with brands owned by retailers Holland & Barrett and Boots the most popular in the UK, and CVS store brands ranking in the US consumer top 10
- Only Pfizer owned brand Centrum is present in the top 10 for all three countries

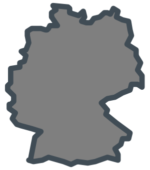
Note: Unaided list of brands they purchase. Question: “What three (3) brand names are you most likely to look for when purchasing a supplement?”

WHAT BRANDS DO PEOPLE BUY?

GLOBAL PREBIOTIC ASSOCIATION

- Nature Made
- Centrum
- Nature's Bounty
- One A Day
- Kirkland Signature
- Nature's Way
- GNC
- Sundown Naturals
- Spring Valley
- CVS pharmacy

- Holland & Barrett
- Boots
- Seven Seas
- Vitabiotics
- Centrum
- Tesco
- healthspan
- Sainsbury's
- Sanatogen
- ASDA



- Abtei
- Doppel herz
- tetesept:
- Kneipp
- Centrum
- Klosterfrau
- taxofit
- Veria
- dm
- ratiopharm

CONSUMER SUPPLEMENT DATA: FAMILIARITY

GLOBAL PREBIOTIC ASSOCIATION

FAMILIARITY WITH USAGE

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS:

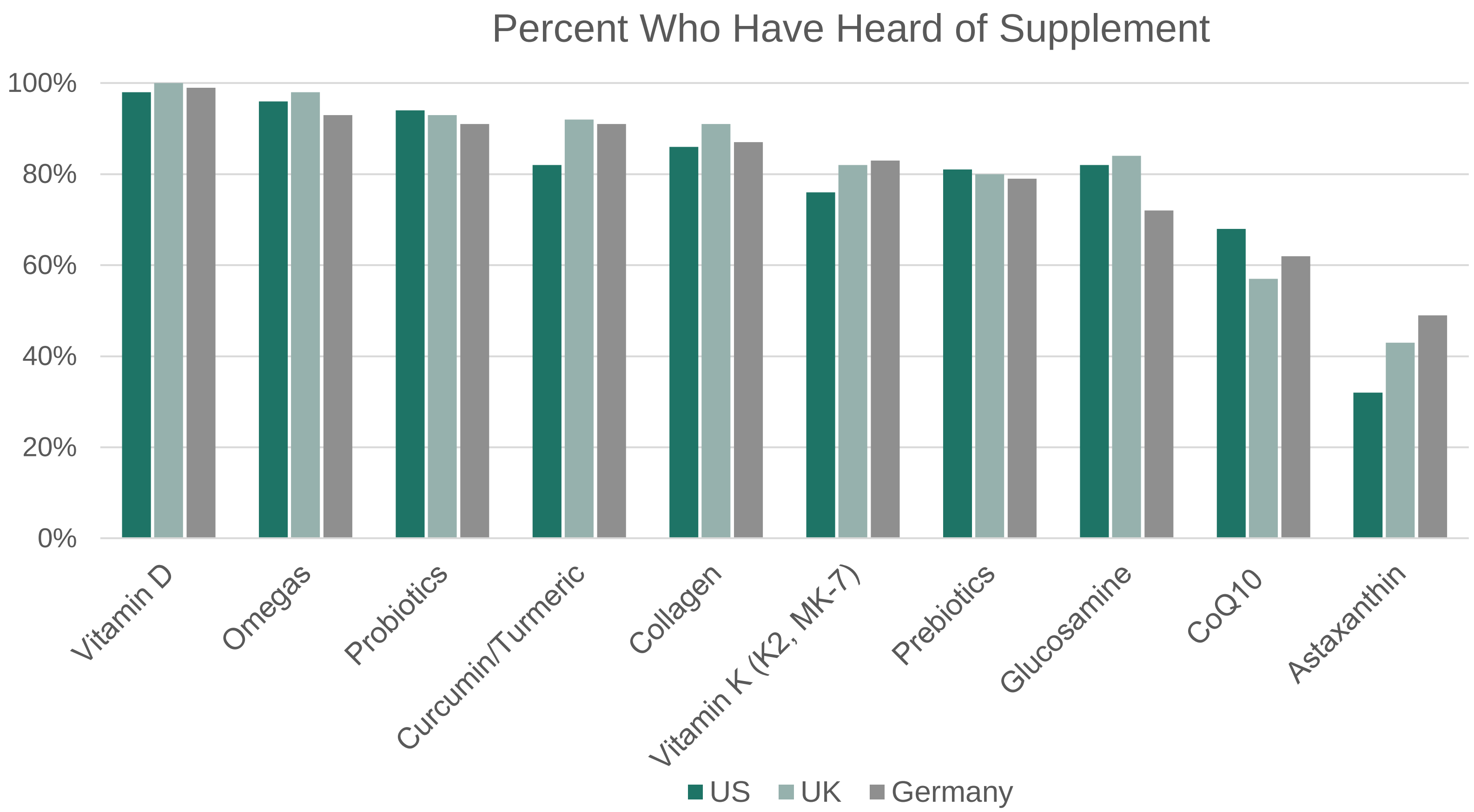
- Familiarity of supplement categories across US, UK and Germany is similar for most
- Vitamin D, Probiotics and Omegas have reached the high level of penetration that all supplements wish for
- There is a notable drop in familiarity with glucosamine in Germany
- Familiarity for Astaxanthin and CoQ10 differs between all three countries, with German consumers most familiar for Astaxanthin and US for CoQ10

Top 3

Vitamin D

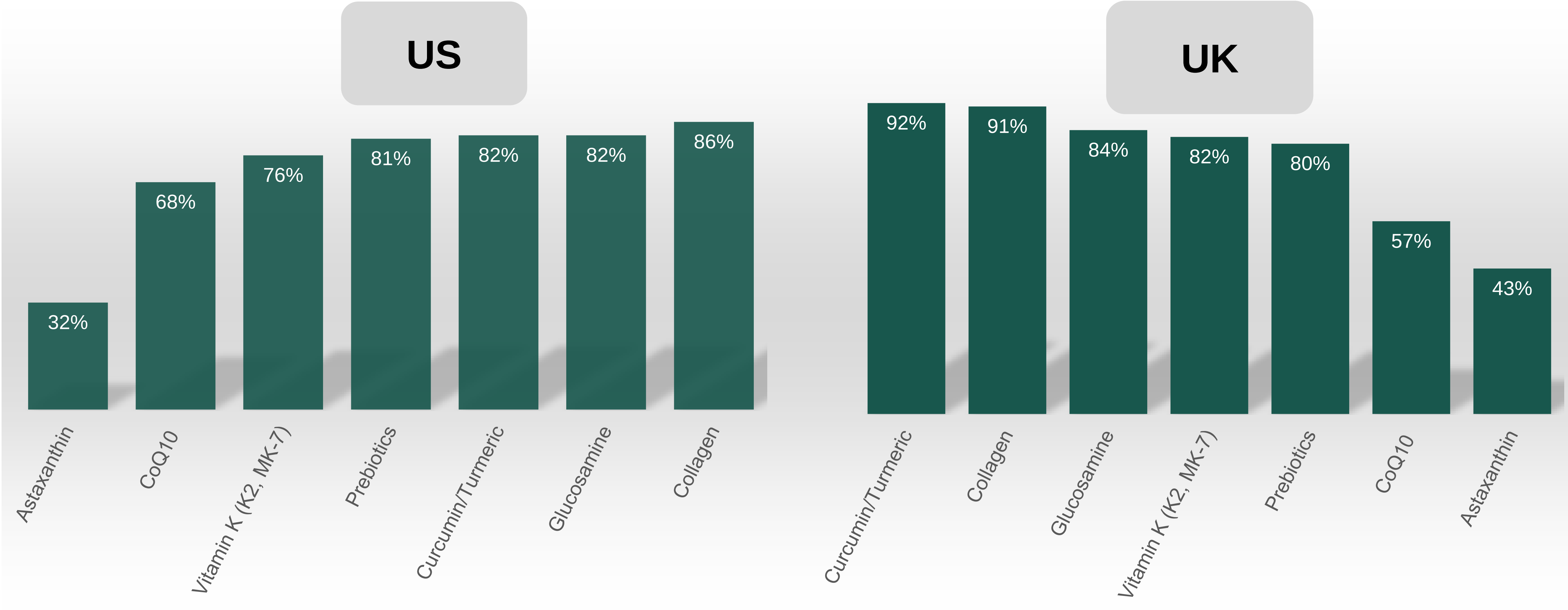
Omegas

Probiotics



Question: “How familiar would you consider yourself regarding the use of these supplements?”. Respondents who did not answer “Never Heard of It”

DIFFERENCES EMERGE WHEN EXCLUDING THE TOP 3 SUPPLEMENT TYPES

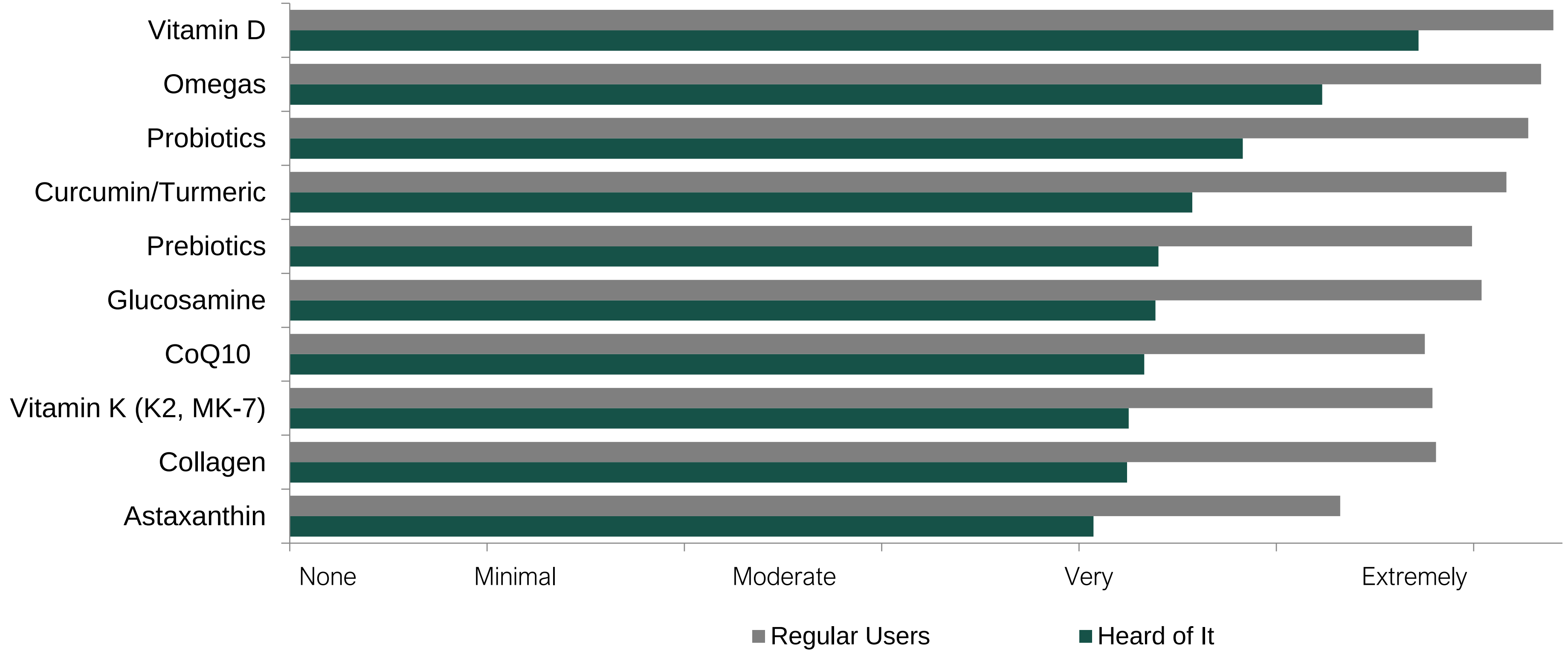


Question: “How familiar would you consider yourself regarding the use of these supplements?” Respondents who did not answer “Never Heard of It”

FAMILIARITY WITH USAGE

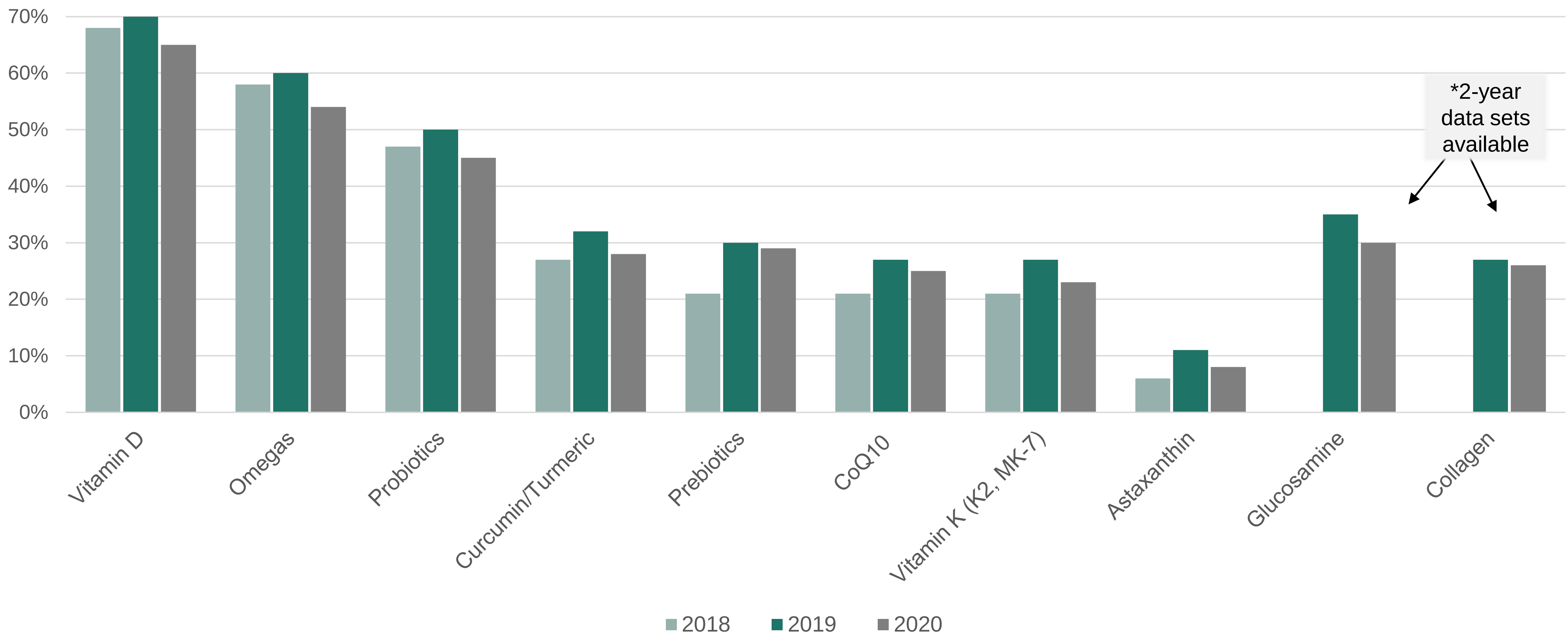
KEY ITC INSIGHTS

- Regular Users of a supplement are generally confident in their knowledge – even if they don't know everything they should/could
- Consumers feel most confident in their knowledge of the most widely used supplements – Vitamin D, Omegas, and Probiotics
- While many consumers have never heard of supplements like Astaxanthin, those who have generally feel they have good familiarity with it



Note: Regular Users of specific supplement indicated using supplement at least 4 times per week. Question: "How familiar would you consider yourself regarding the use of these supplements?"

FAMILIARITY: 2018-2020 (US DATA)

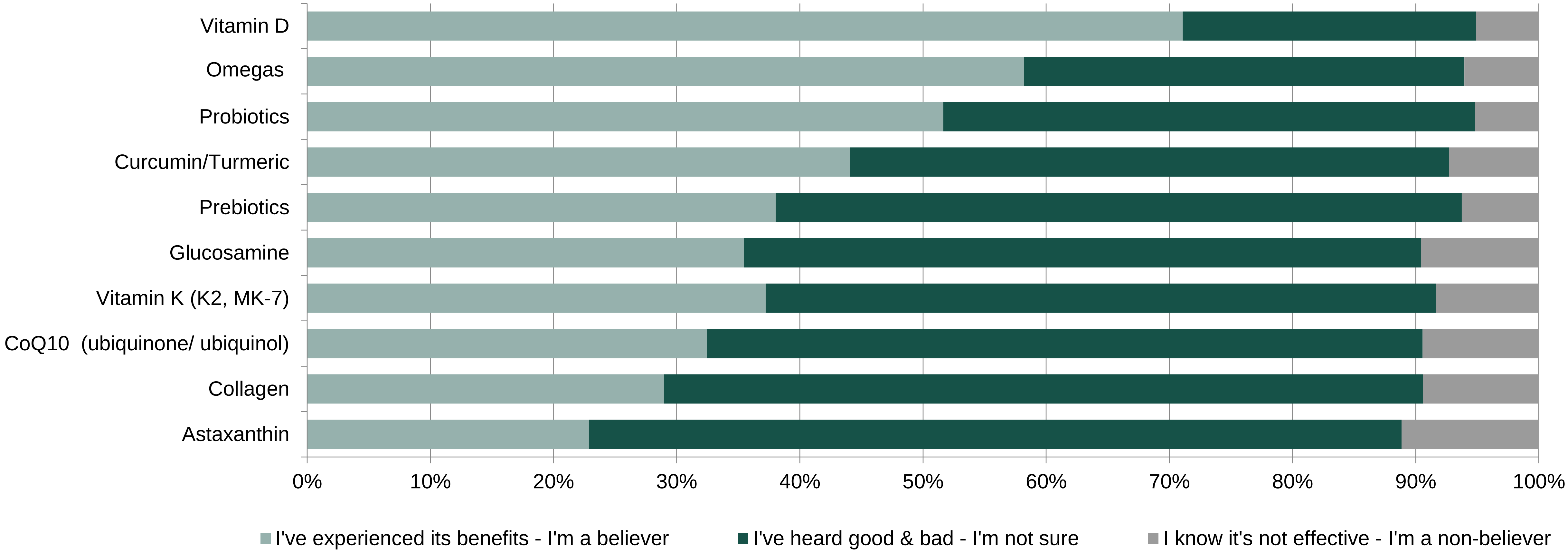


Note: US Regular Users of specific supplement indicated using supplement at least 4 times per week. Question: “How familiar would you consider yourself regarding the use of these supplements?”

PERCEIVED EFFECTIVENESS

KEY ITC INSIGHTS

- Many supplement users have concerns over the effectiveness of supplements
- Perceived effectiveness is closely tied to familiarity with usage



Note: Only consumers who had heard of the supplement answered this question for each specific supplement. Question: “What is your opinion of the effectiveness/benefit of each of these supplements?”

PERCEIVED EFFECTIVENESS
TOP 3 IN EACH CATEGORY

GLOBAL PREBIOTIC ASSOCIATION

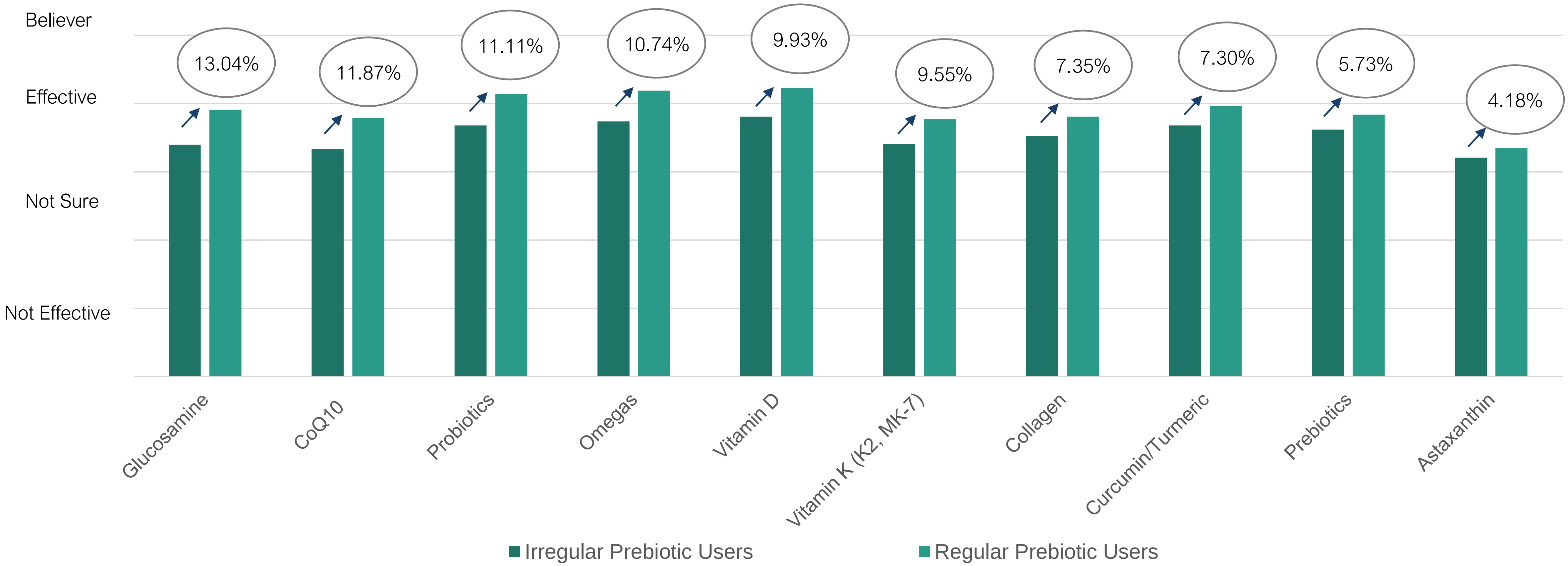
I've experienced its benefits - I'm a believer	I've heard good & bad - I'm not sure	I know it's not effective - I'm a non-believer
Vitamin D	Astaxanthin	Astaxanthin
Omegas	Collagen	Collagen
Probiotics	Prebiotics	Glucosamine

*Info based on All Respondents

PERCEIVED EFFECTIVENESS

KEY ITC INSIGHTS:

- Regular Users are far more convinced of all supplements' effectiveness (or more likely those who are convinced of supplement effectiveness become Regular Users)
- Irregular Users are likely to be trusting in effectiveness rather than having experienced benefits
- There is a clear need for consumer education on dosages required to experience benefits



Note: Regular Users of each supplement indicated using supplement at least 4 times per week. Question: "What is your opinion of the effectiveness/benefit of each of these supplements?"

CONSUMER SUPPLEMENT DATA:

USAGE & SPEND

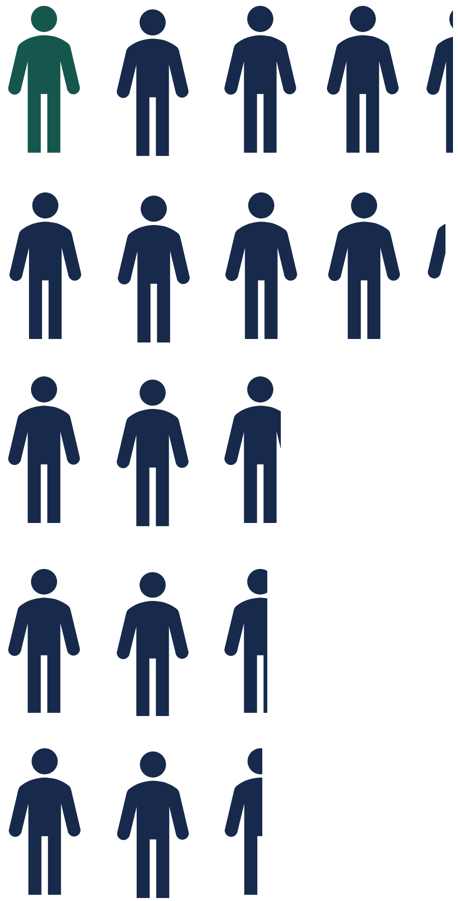
#1

Multivitamins continue to be the top supplement taken overall and most regularly

Vitamin D has taken the market by storm over the last decade with usage levels now similar to multivitamins

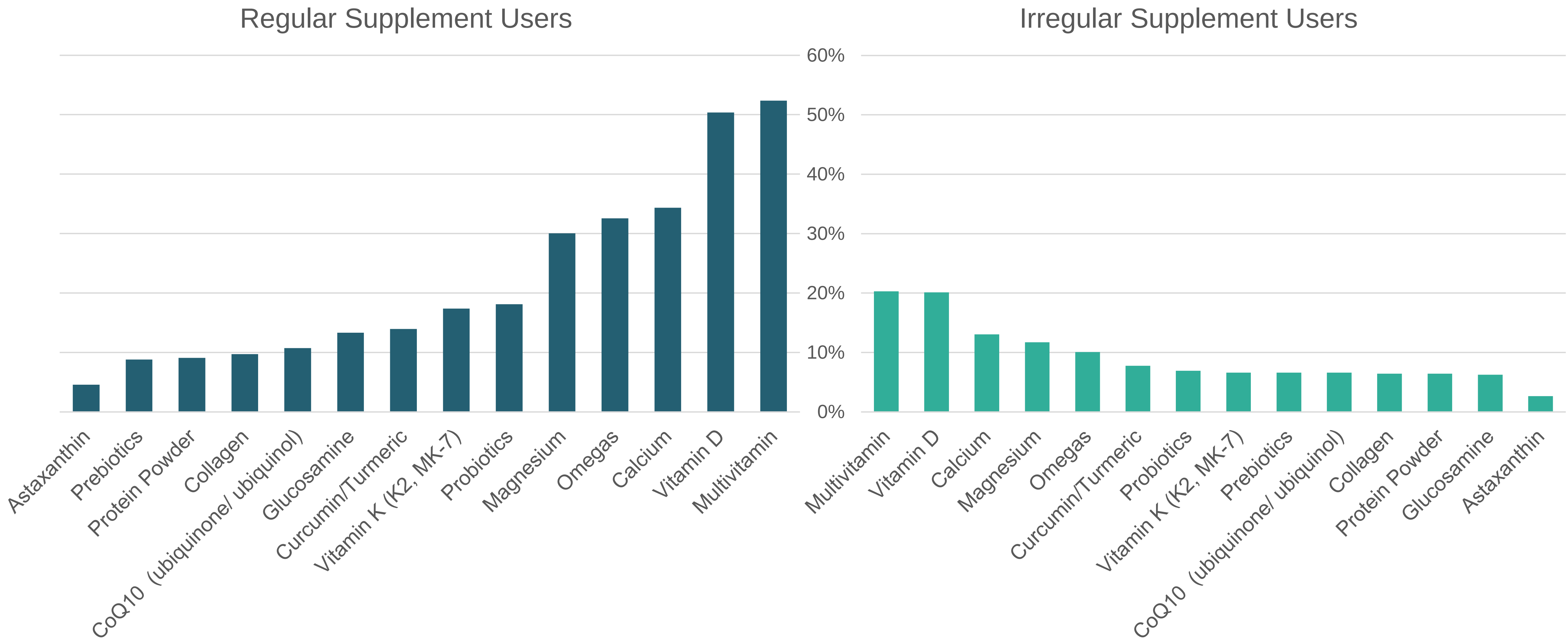
Top 5 Most Frequently Taken Supplements

43%	Multivitamin
41%	Vitamin D
28%	Calcium
26%	Omegas
25%	Magnesium



Note: All Users used for this data. Question "Which of the following best describes how frequently you are taking the following supplements?"

USAGE LEVELS

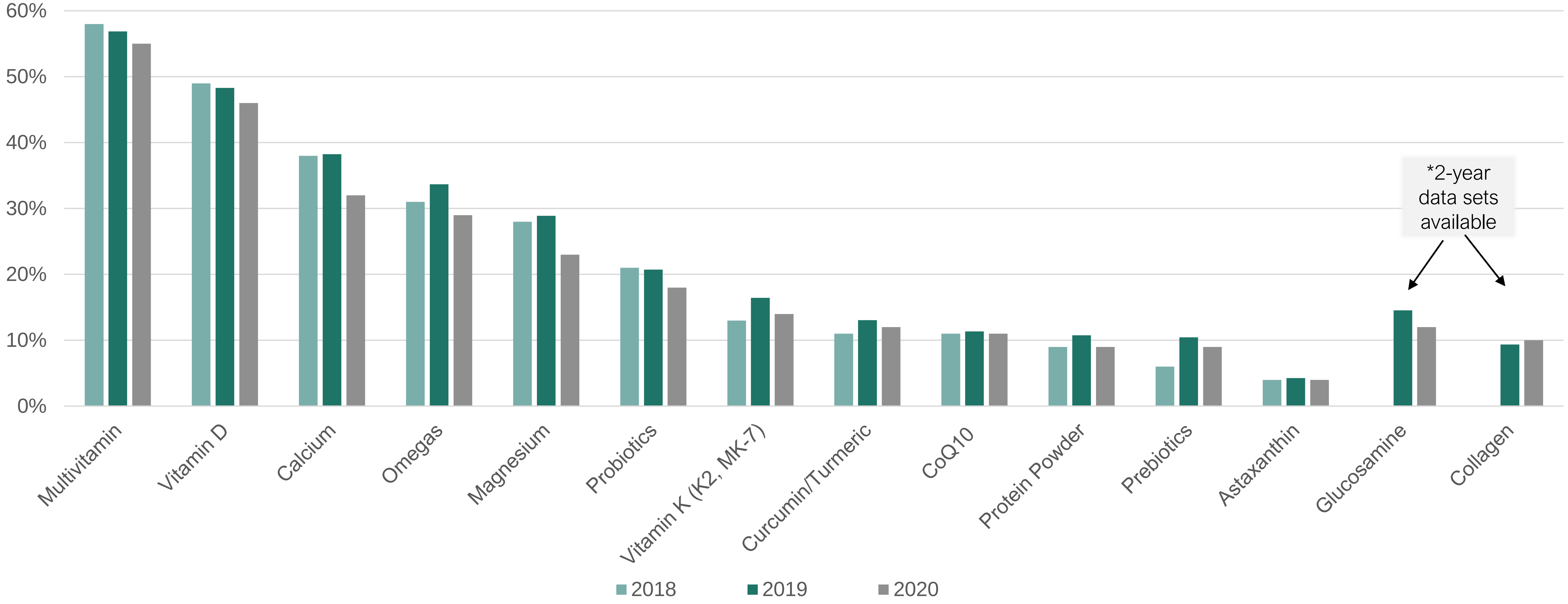


Note: Regular Users of each individual supplement indicated using supplement at least 4 times per week. Question "Which of the following best describes how frequently you are taking the following supplements?"

USAGE LEVELS: 2018-2020 (US DATA)

KEY ITC INSIGHTS:

- Usage of popular supplements including multivitamins and vitamin D continue to fall each year
- Use of certain 'hot' supplements including Turmeric, Prebiotics and Collagen continues to grow (albeit from lower bases)



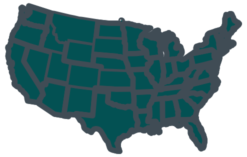
Question "Which of the following best describes how frequently you are taking the following supplements?" Info based on All US Respondents.

USAGE LEVELS BY COUNTRY

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS

- UK consumers are above average users of omegas and glucosamine
- German consumers are above average users of multiple supplement types, including Vitamin D, Calcium, Vitamin K, Collagen, Turmeric and Magnesium – with the use of Magnesium especially high compared to other countries

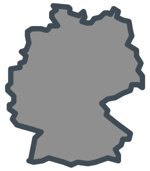


US Top 3 Supplements

- Multivitamin
- Vitamin D
- Calcium

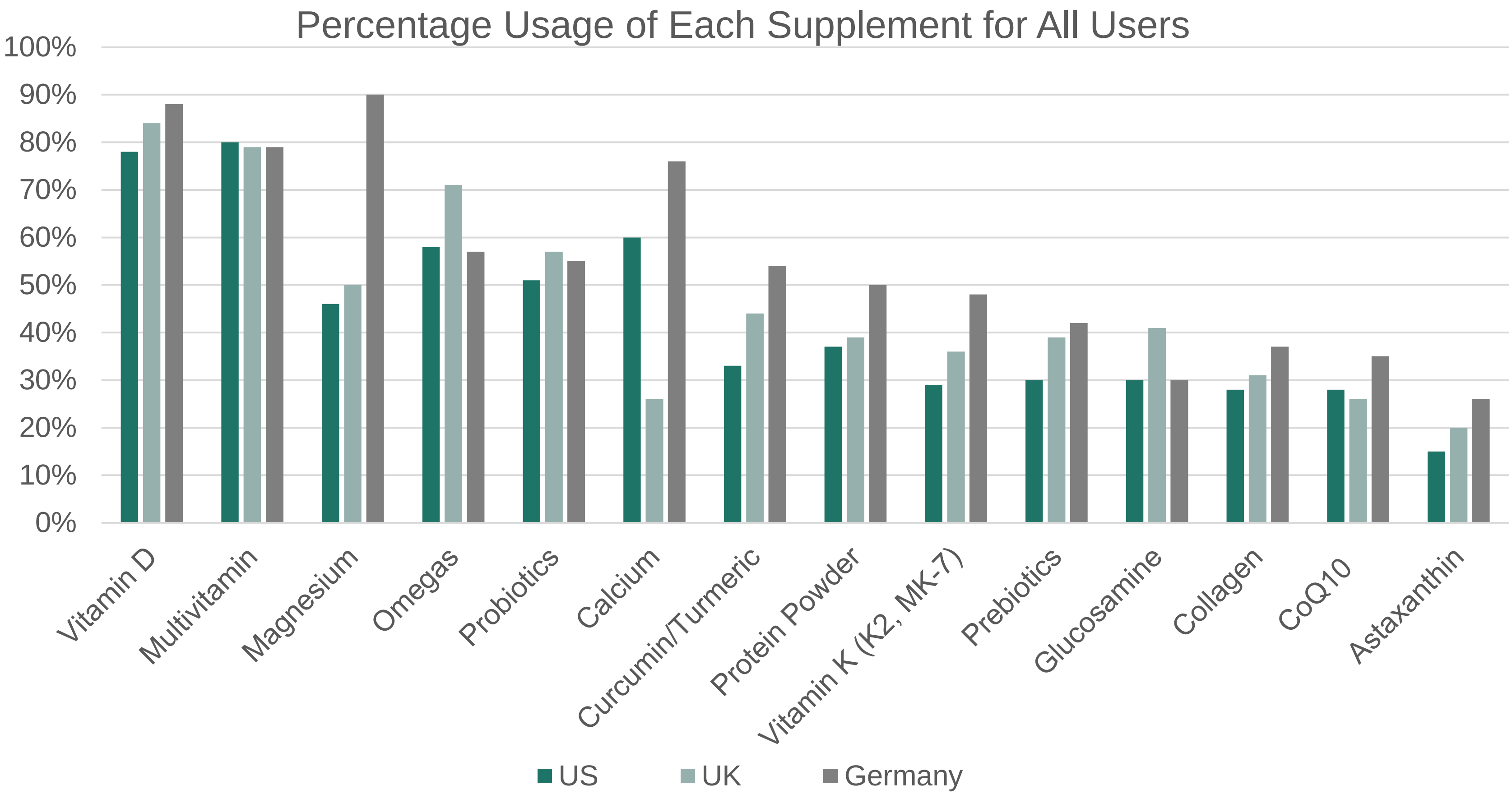
UK Top 3 Supplements

- Vitamin D
- Multivitamin
- Omegas



Germany Top 3 Supplements

- Magnesium
- Vitamin D
- Multivitamin



Note: Regular Users of each individual supplement indicated using supplement at least 4 times per week. Question “Which of the following best describes how frequently you are taking the following supplements?”

CHANGE IN USAGE LEVELS

KEY ITC INSIGHTS:

- Most usage changes were consistent across countries
- A small but significant number of consumers are taking significantly more supplements – across all categories, including mainstays like multivitamins, vitamin D and calcium
- Usage levels of lesser-known supplements are rising more rapidly than mainstays

Increased Use: Top 3
- Vitamin D 12%
- Multivitamin 8%
- Omegas 7%

Stayed the Same: Top 3
- Multivitamin 52%
- Vitamin D 50%
- Calcium 42%

Decreased Use: Top 3
- Multivitamin 11%
- Omegas 11%
- Protein Powder 10%

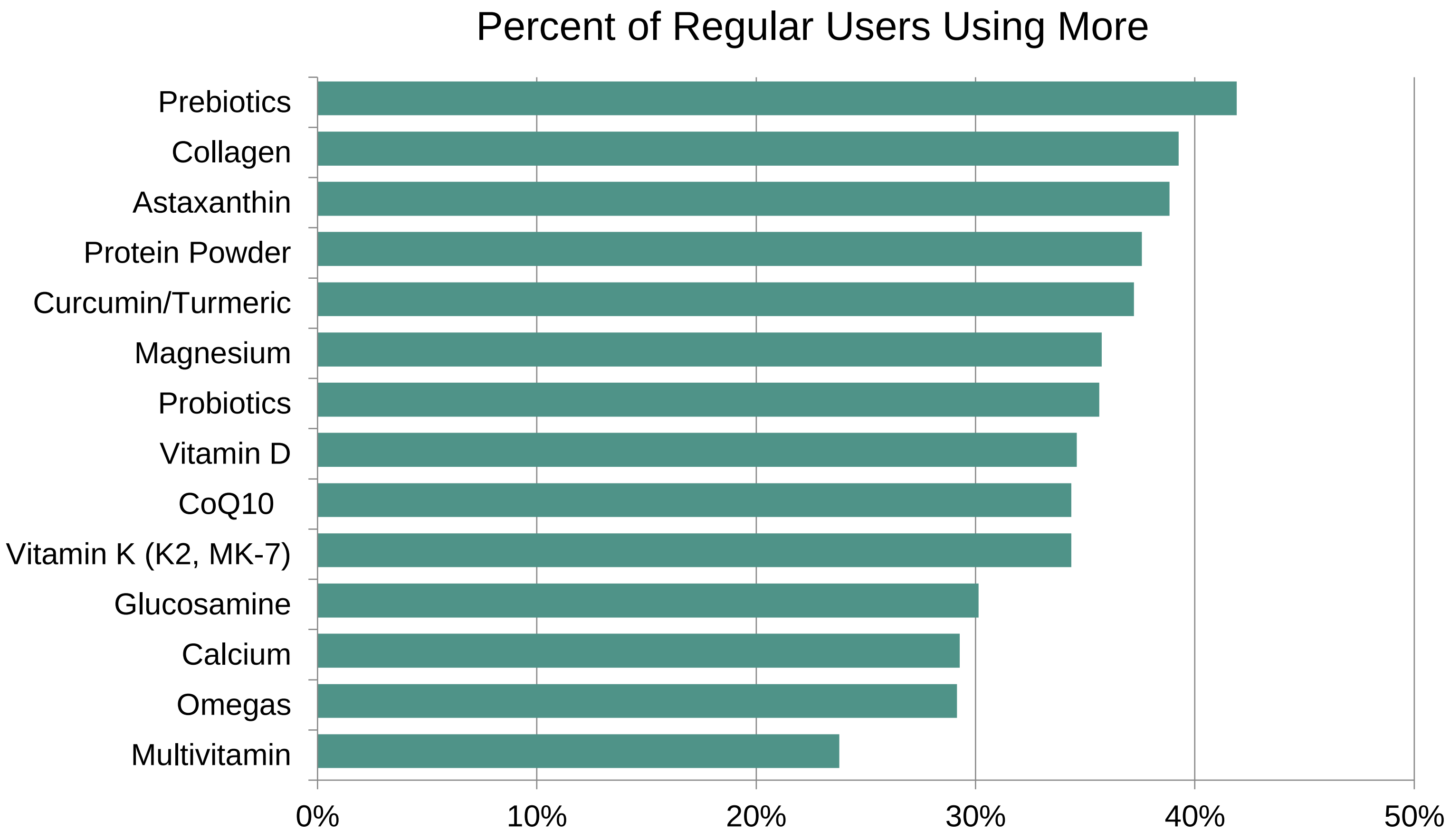
Info based on All Respondents. Question "Which of the following best describes how your use of each of these supplements compares to your usage 1 year ago?"
Increased use: sum of "Just Started Taking" and "Significantly More", Decreased use: sum of " Significantly Less" and "Stopped Taking."

CHANGE IN USAGE LEVELS

Many supplements are seeing increases in usage, especially among Regular Users

Usage levels are remaining steadier for supplements like Multivitamins and Omegas that have more established user bases

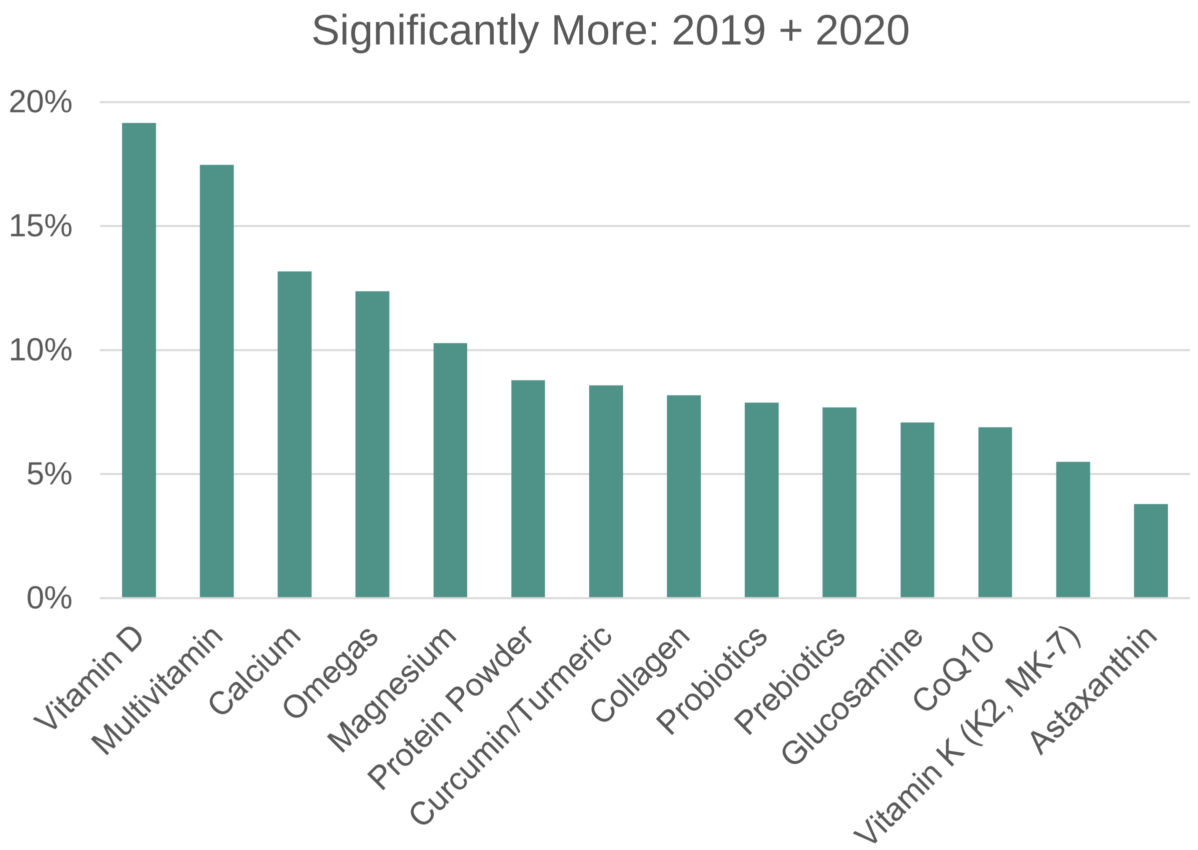
Prebiotics and Collagen are recognized "hot" ingredients and increased usage follows this trend

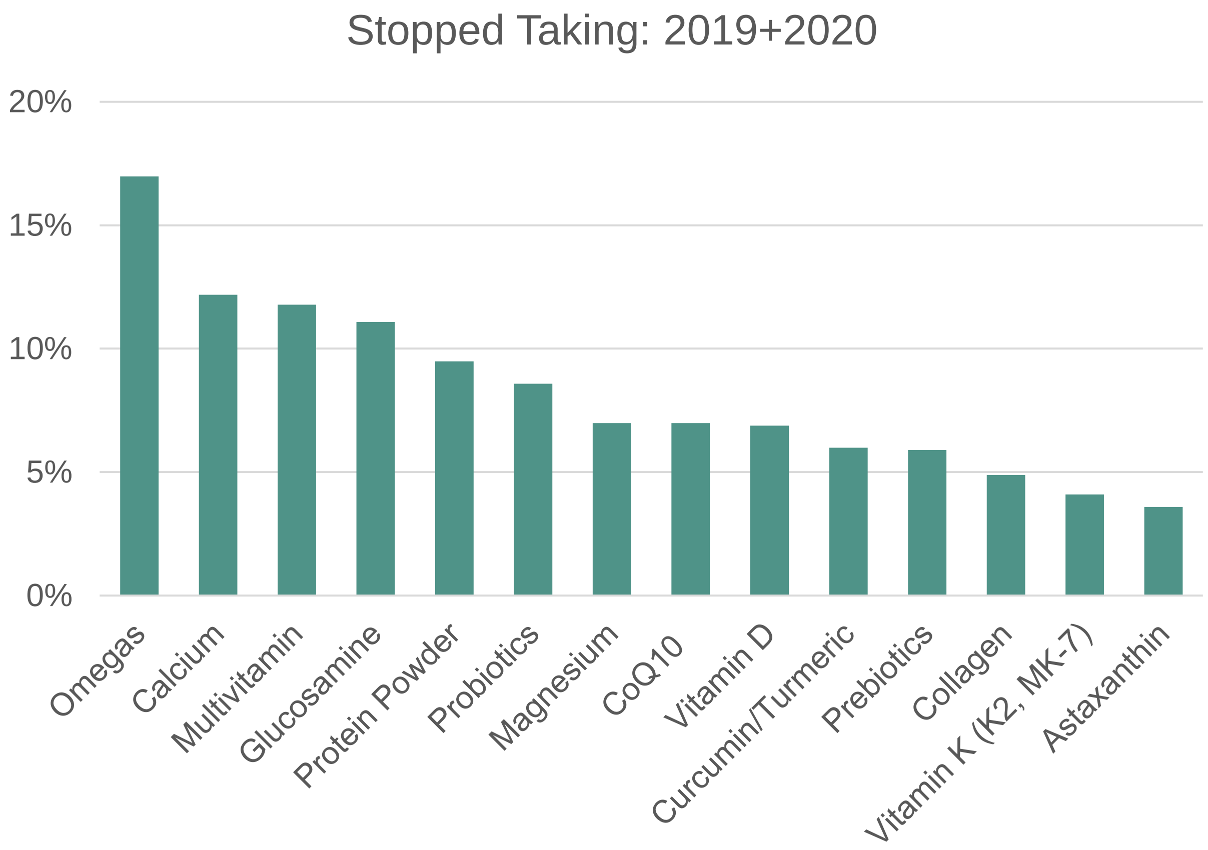


Note: Regular Users of each individual supplement indicated using supplement at least 4 times per week. Question "Which of the following best describes how your use of each of these supplements compares to your usage 1 year ago?"

CHANGE IN USAGE LEVELS: 2 YEAR TREND

KEY ITC INSIGHT: Vitamin D, Multivitamins, and calcium are among the supplements people are taking significantly more





US All Respondents, 2019 + 2020. Question “Which of the following best describes how your use of each of these supplements compares to your usage 1 year ago?”

KEY ITC INSIGHT: COVID-19 IS DRIVING INCREASED USE

Many of the supplements are on the rise during Covid-19

28%

consumers increased supplement usage as COVID-19 became a major health concern

Vitamin D saw significant increases across the board

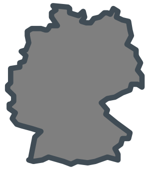
(US 10%, UK 18%, Germany 14%)

Increases in Vitamin K usage were double the US rate (2%) in Europe (UK 4% / Germany 5%)

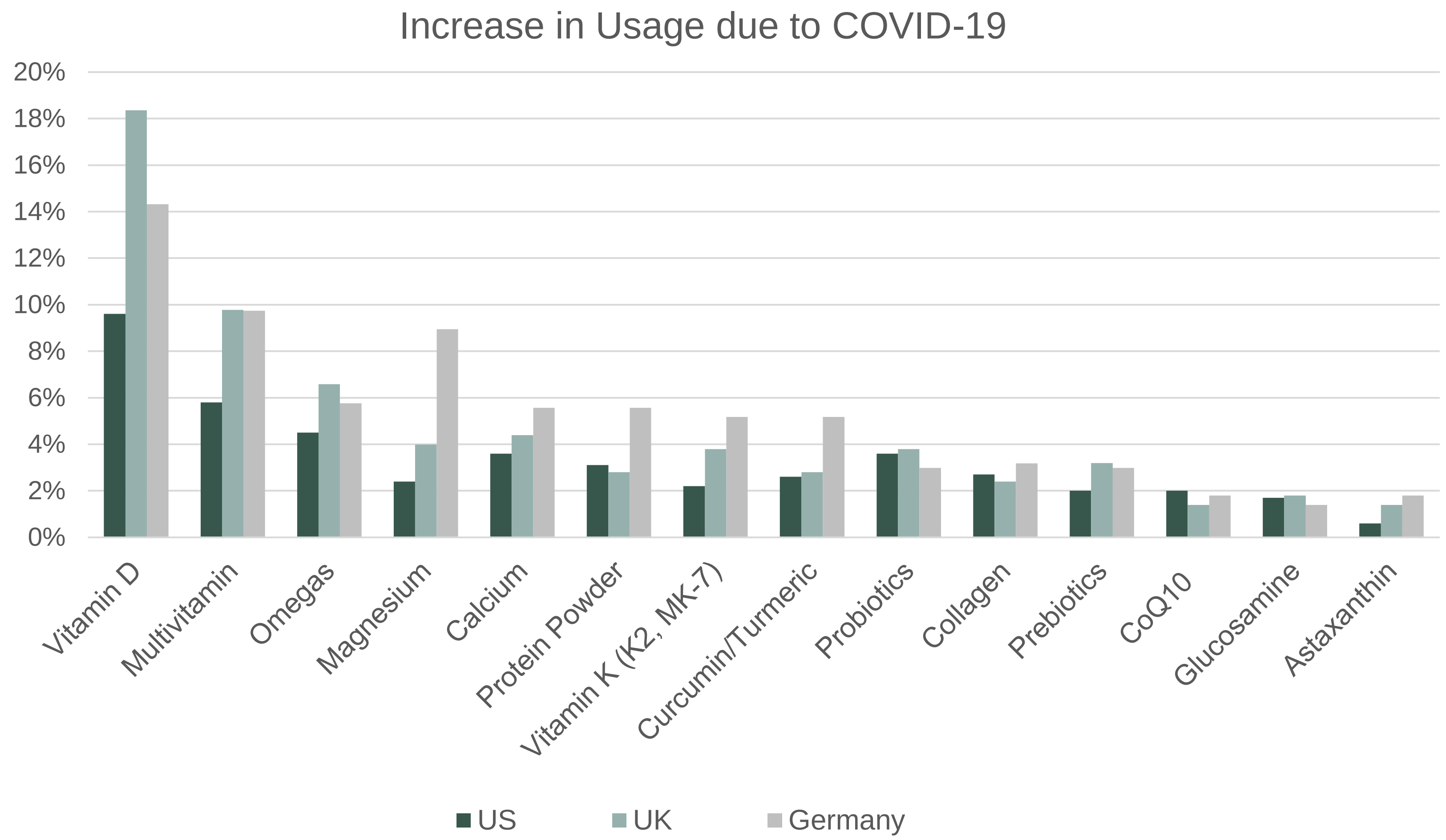
CHANGE DUE TO COVID-19

US Top 3 Supplements
- Vitamin D
- Multivitamin
- Omegas

UK Top 3 Supplements
- Vitamin D
- Multivitamin
- Omegas



Germany Top 3 Supplements
- Vitamin D
- Multivitamin
- Magnesium

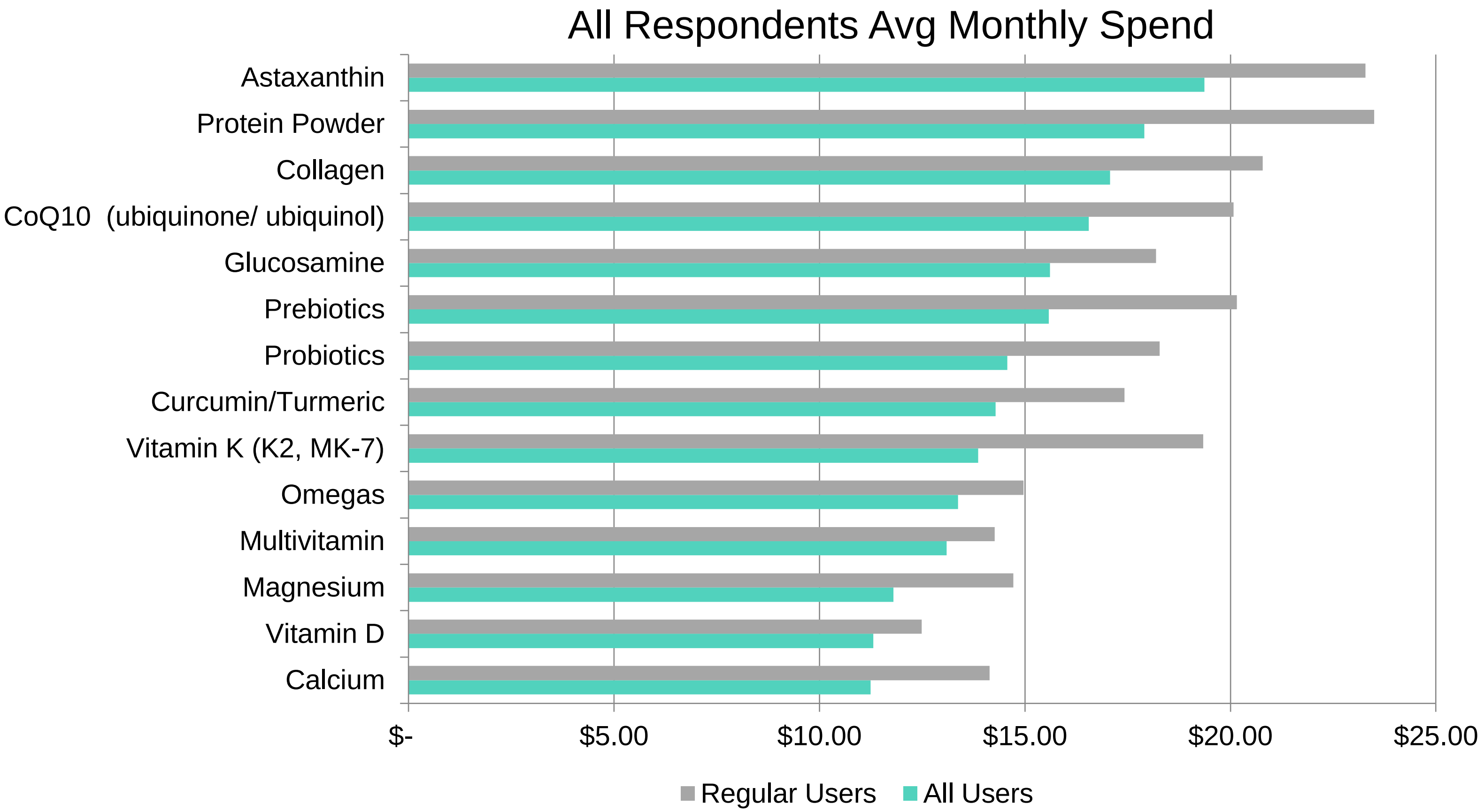


Question: “Have you increased your usage of any of these supplements due to COVID-19 (coronavirus) concerns?”

AVERAGE MONTHLY SPEND

KEY ITC INSIGHTS

- Regular Users spend more per month on supplements than Irregular Users (46% more on average)
- Protein powders are widely used and have high average monthly spend
- While astaxanthin and collagen are used at lower rates, consumers are willing to spend significant amounts on them
- Protein powders, Vitamin K, and Prebiotics see the biggest change in spend between Regular and Irregular users.



Biggest Change Between Users

	All Users	Regular Users
Protein Powder	$17.90	$23.50 (+$5.59)
Vitamin K	$13.86	$19.34 (+$5.48)
Prebiotics	$15.58	$20.15 (+$4.58)

**Converted to USD from original national currency*

Note: Regular Users of each individual supplement indicated using supplement at least 4 times per week. Question "Approximately how much per month do you spend on each of these supplements?"

AVERAGE MONTHLY SPEND

KEY ITC INSIGHTS:
- Regular Users spend more per month on supplements than Irregular Users (46% more on average)
- Protein powders are widely used and have high average monthly spend
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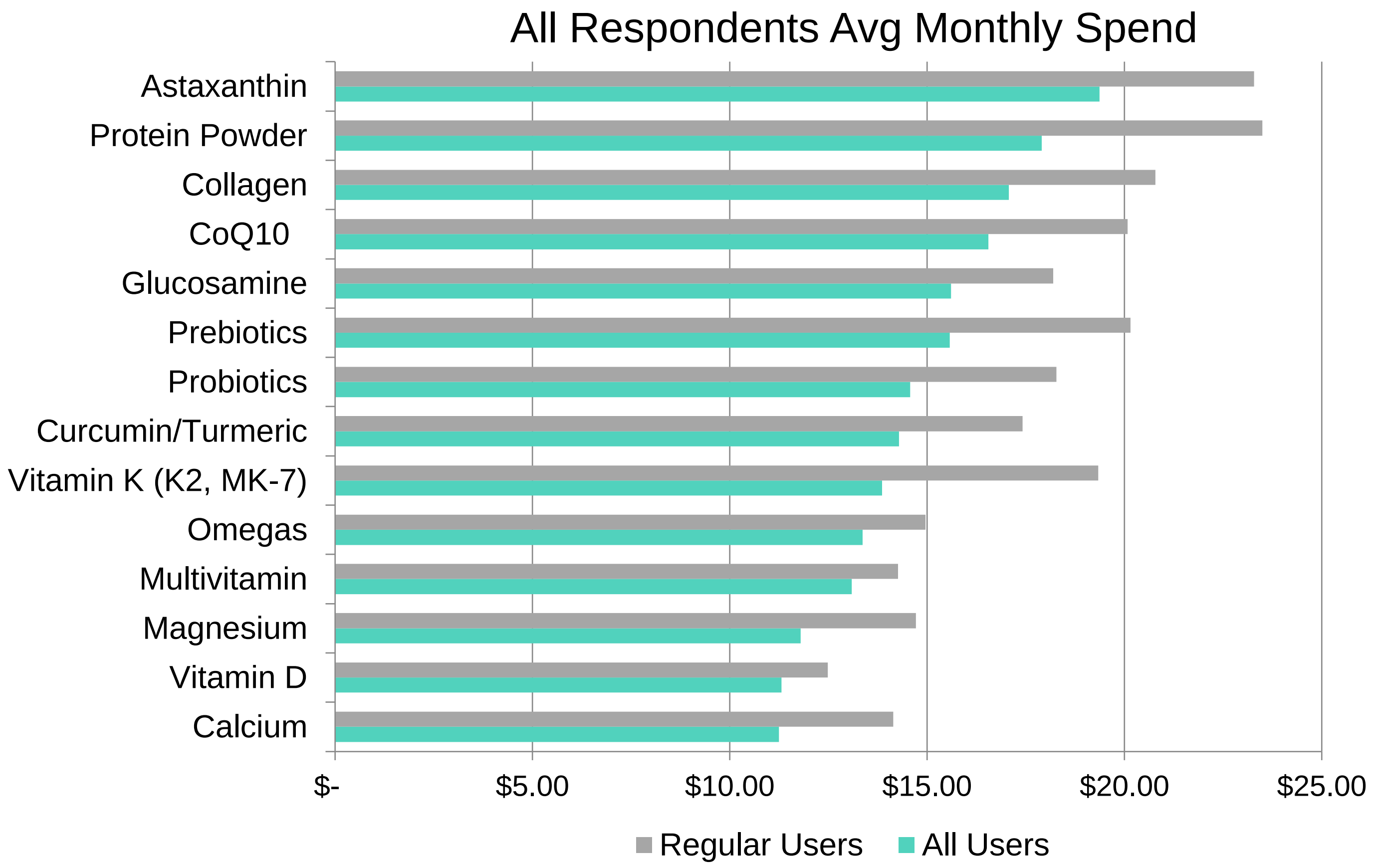


Biggest Change Between Users

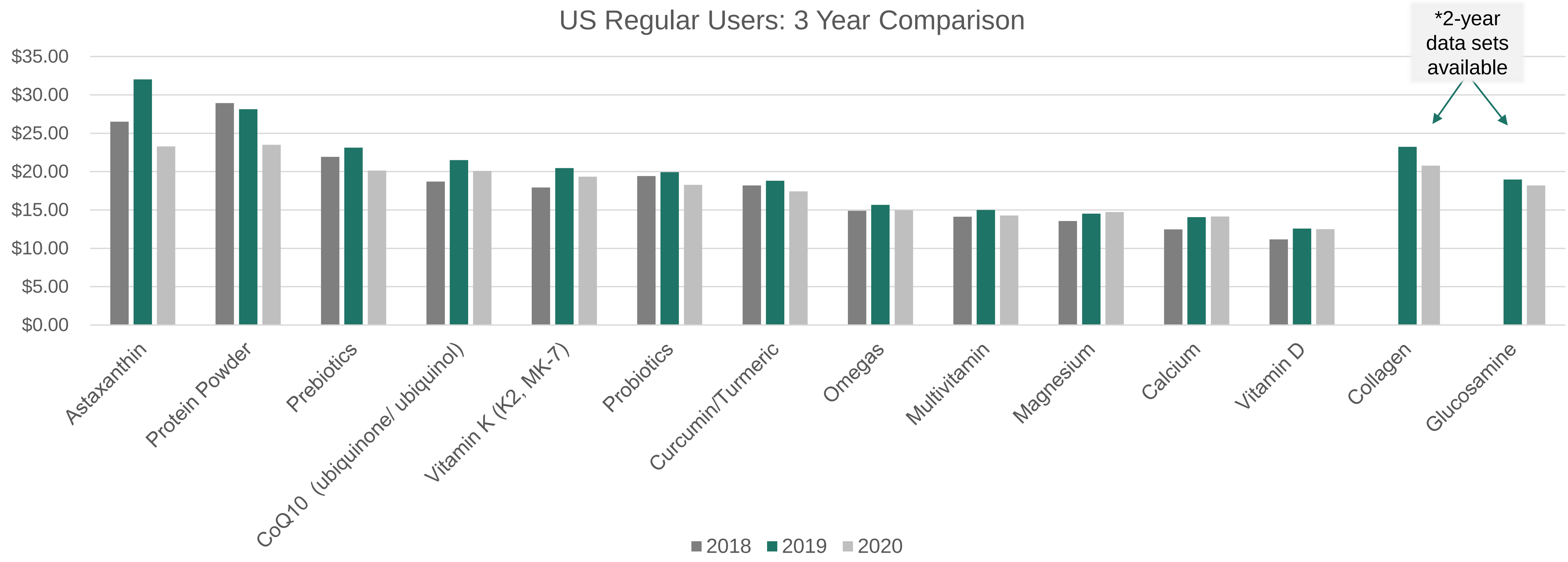
	All Users	Regular Users ($)	Percent Increase
Protein Powder	$17.90	$23.50 (+$5.59)	31.2%
Vitamin K	$13.86	$19.34 (+$5.48)	39.5%
Prebiotics	$15.58	$20.15 (+$4.58)	29.4%
Astaxanthin	$19.37	$23.29 (+$3.92)	20.2%
Probiotics	$14.57	$18.28 (+$3.70)	25.4%
Collagen	$17.07	$20.79 (+3.71)	21.7%

Note: Regular Users of each individual supplement indicated using supplement at least 4 times per week. Question “Approximately how much per month do you spend on each of these supplements?”

AVERAGE MONTHLY SPEND

KEY ITC INSIGHT:

- Almost all monthly supplement spending went down in 2020, except for magnesium, calcium, and vitamin D



Note: Regular US Users of each individual supplement indicated using supplement at least 4 times per week. Question "Approximately how much per month do you spend on each of these supplements?"
Glucosamine and Collagen do not have 2018 data.

GLOBAL PREBIOTIC ASSOCIATION

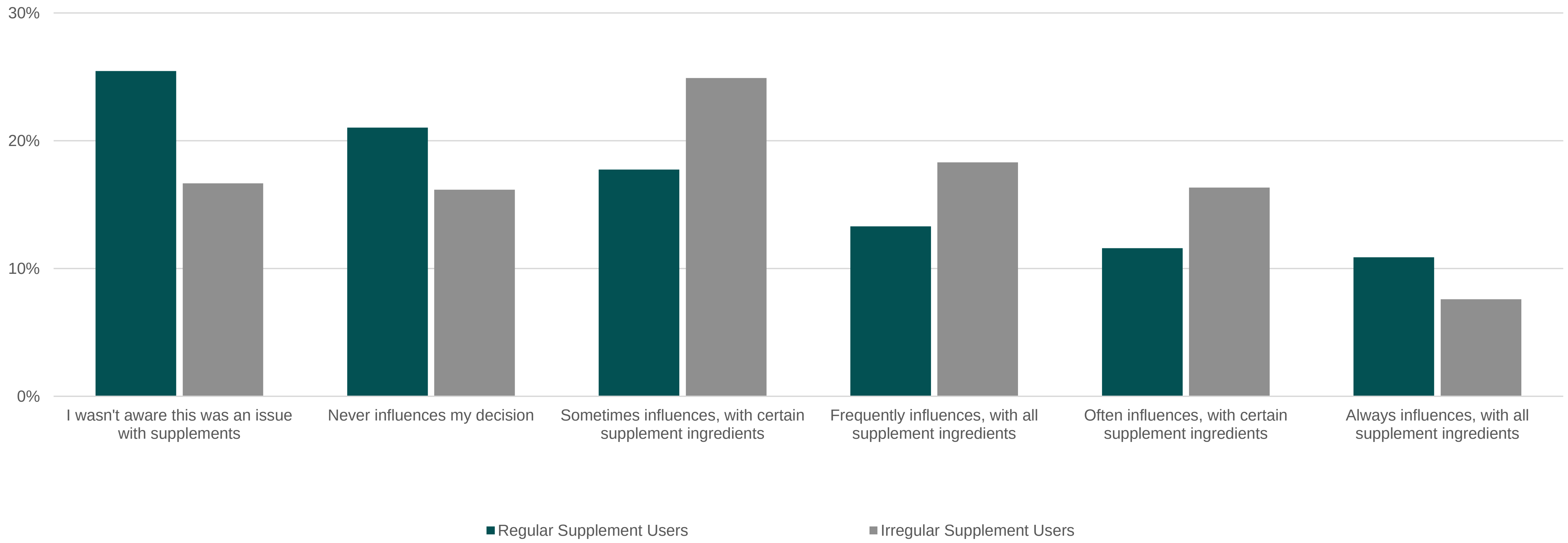
CONSUMER SUPPLEMENT DATA:

SHOPPING BEHAVIOR DRIVERS

IMPORTANCE OF SUSTAINABILITY

KEY ITC INSIGHTS

- Sustainability is not considered an important consideration for most supplement users
- Many are unaware that supplements have sustainability issues
- Sustainability is a bigger consideration for Irregular users
- Regular users may be more loyal to specific brands and therefore may not consider sustainability as a driver of purchase



Note: Regular Users indicated using supplements in general at least 4 times per week. Question: “When deciding which supplements to purchase, to what degree does the sustainability/environmental impact of a supplement ingredient influence your purchasing decision?”

IMPORTANCE OF SUSTAINABILITY

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS:

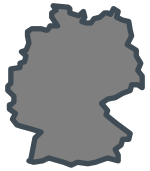
- US consumers are less aware of sustainability issues related to supplements
- German consumers are the most influenced by sustainability issues

US Top 3

- Wasn't aware 27%
- Never influences 22%
- Sometimes influences 20%

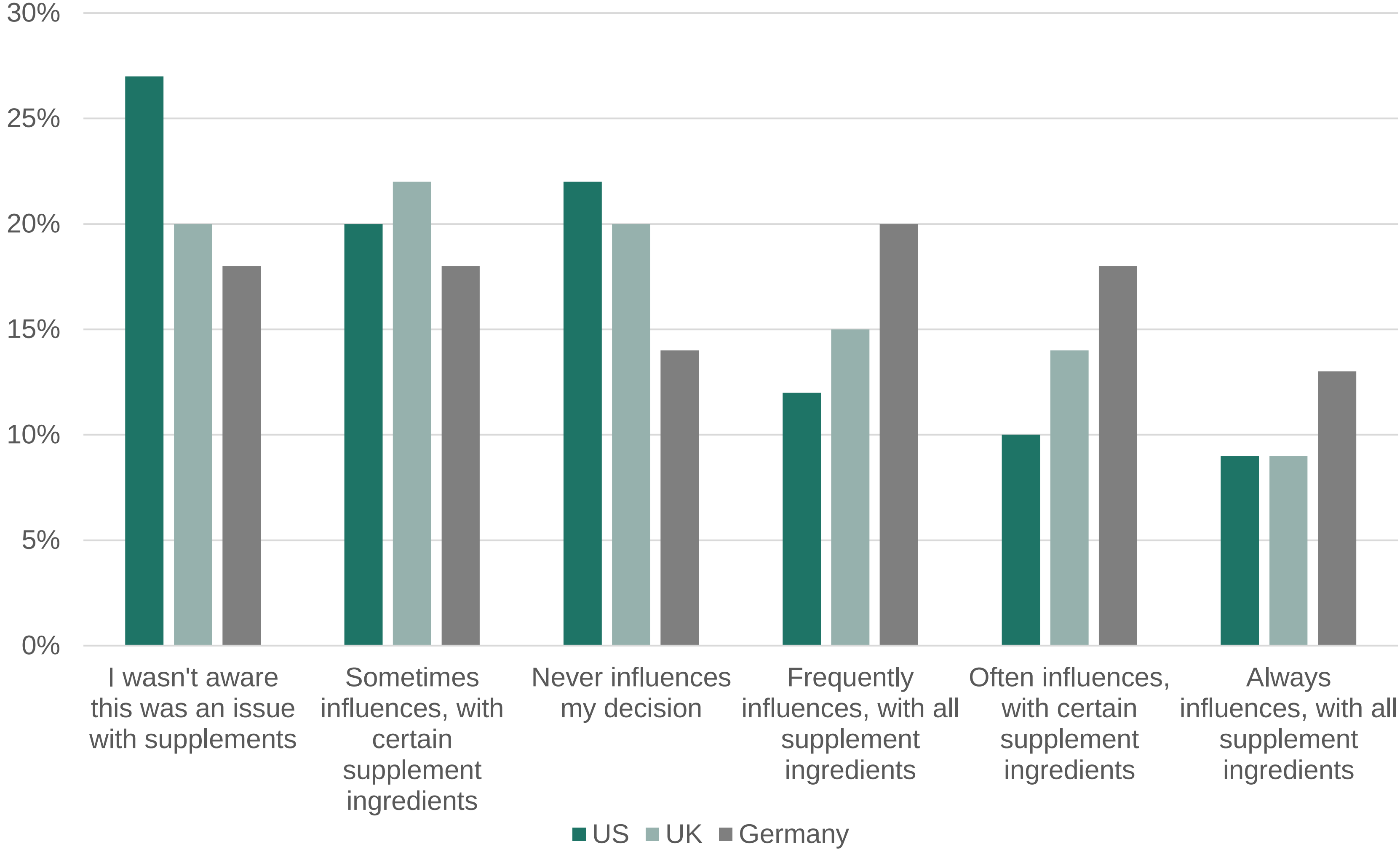
UK Top 3

- Sometimes influences 22%
- Never influences 20%
- Wasn't aware 20%



Germany Top 3

- Frequently influences 20%
- Sometimes influences 18%
- Often influences 18%



Question: "When deciding which supplements to purchase, to what degree does the sustainability/environmental impact of a supplement ingredient influence your purchasing decision?"

IMPORTANCE OF SUSTAINABILITY

More German consumers are influenced by sustainability (50%) vs. USA (31%) or UK (38%)

Consumers who are impacted by sustainability are more likely to have used alternative health care (39% vs. 26%)

Younger consumers are more influenced by sustainability (60% under 46 vs. 46% overall)

Consumers who are more focused on sustainability regularly purchase natural and organic foods (68% vs. 54%)

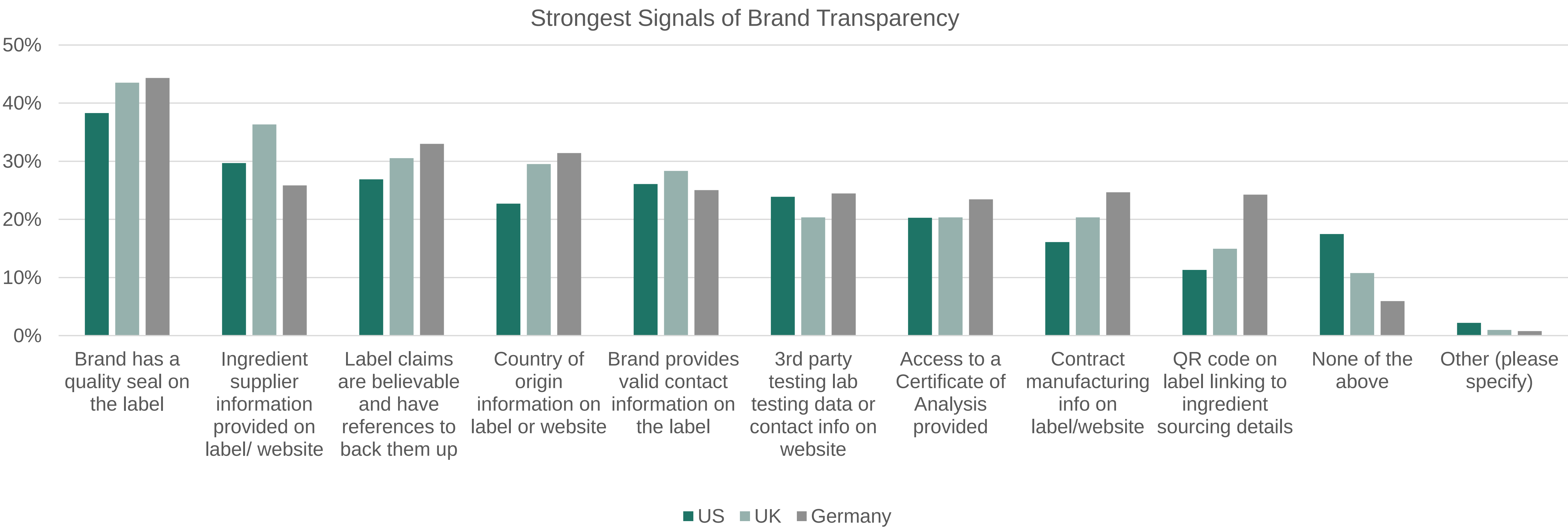
Consumers concerned about sustainability frequently or always read articles about health & wellness (59% vs. 45%)

SIGNALS OF BRAND TRANSPARENCY

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS

- Quality seals on the label are clearly important to all consumers
- Regular Users in Germany are most appreciative of transparency signals, with USA consumers least excited, and UK falling in the middle
- Ingredient supplier information is especially appreciated by Regular Users in the UK (40%)

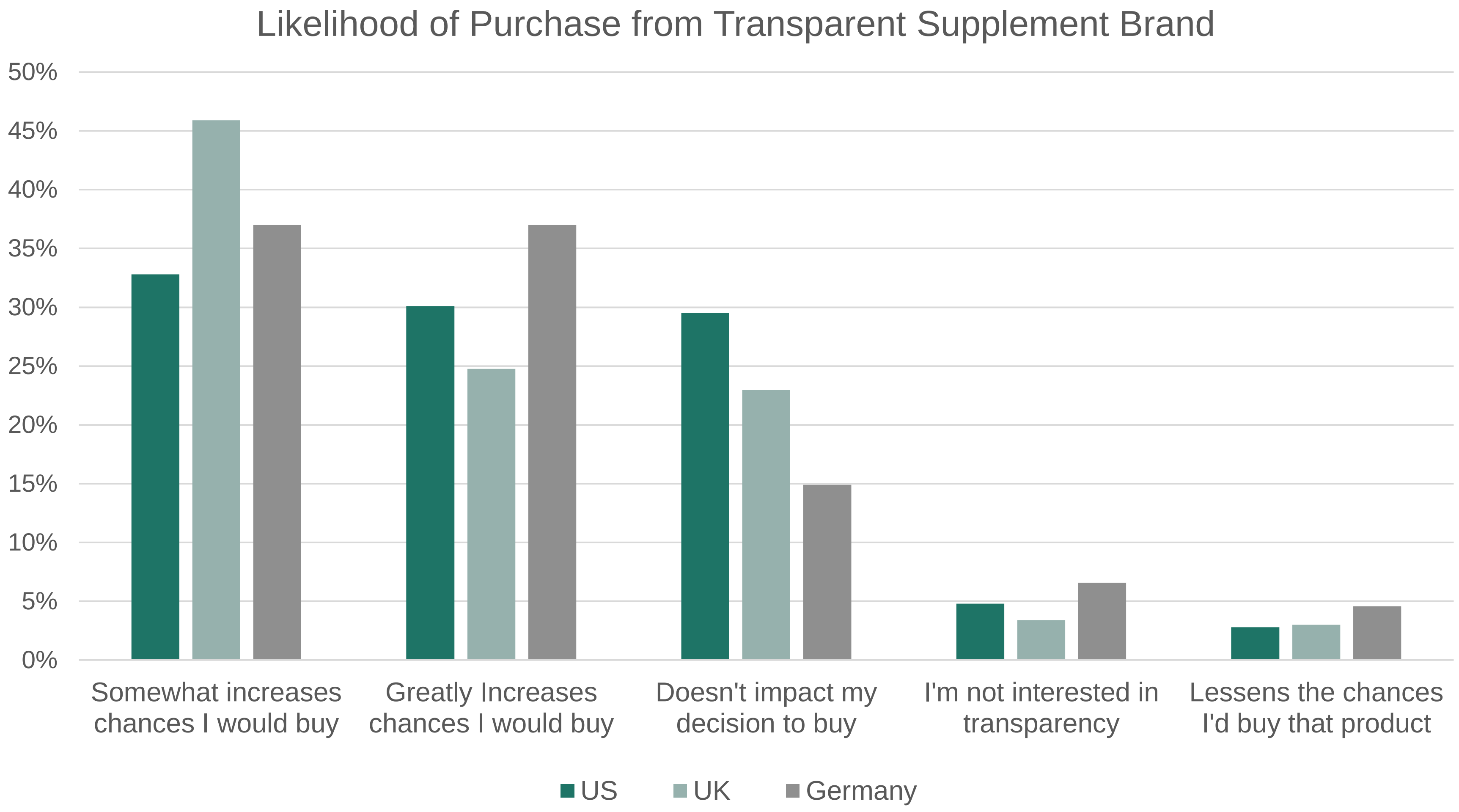


Note: Regular Users indicated using supplements in general at least 4 times per week. Question: "Which of the following items are the strongest signals that a supplement brand is operating transparently?"

TRANSPARENCY PURCHASE INFLUENCE

KEY ITC INSIGHTS

- Transparency clearly encourages consumers to purchase a brand (especially Regular Users)
- 44% of Regular Users in Germany say transparency would greatly increase the chances of buying a brand (vs. 28% UK and 31% US)



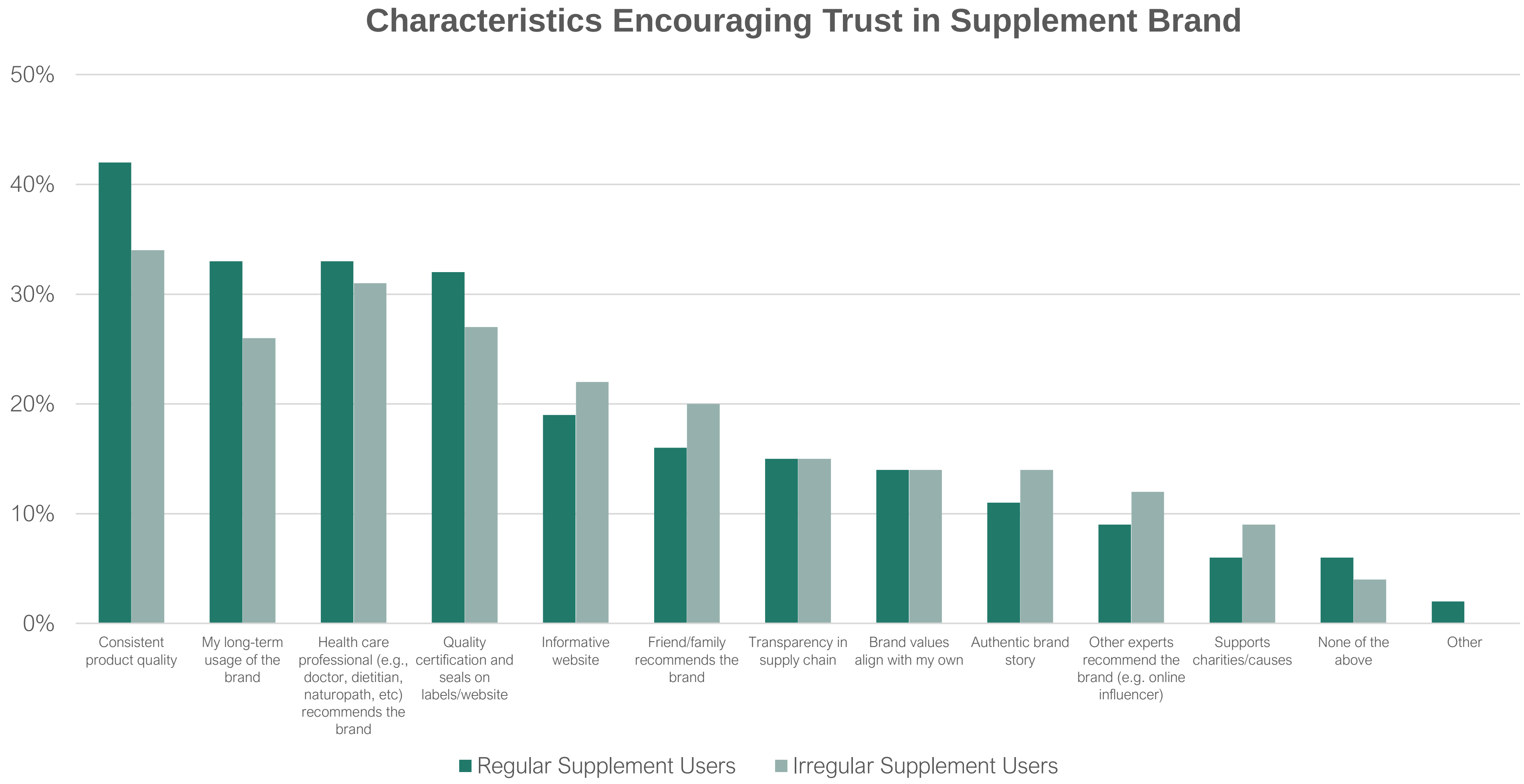
Question: How likely are you to purchase supplements from a manufacturer that provides transparency information on its label or website?

REASONS FOR TRUST

Consistent product quality is the biggest driver of trust, especially for Regular Users (42%)

The top 4 drivers of trust are the same across countries

German Regular Users appreciate quality certifications and seals (39%) more than those in UK (29%) and USA (31%)

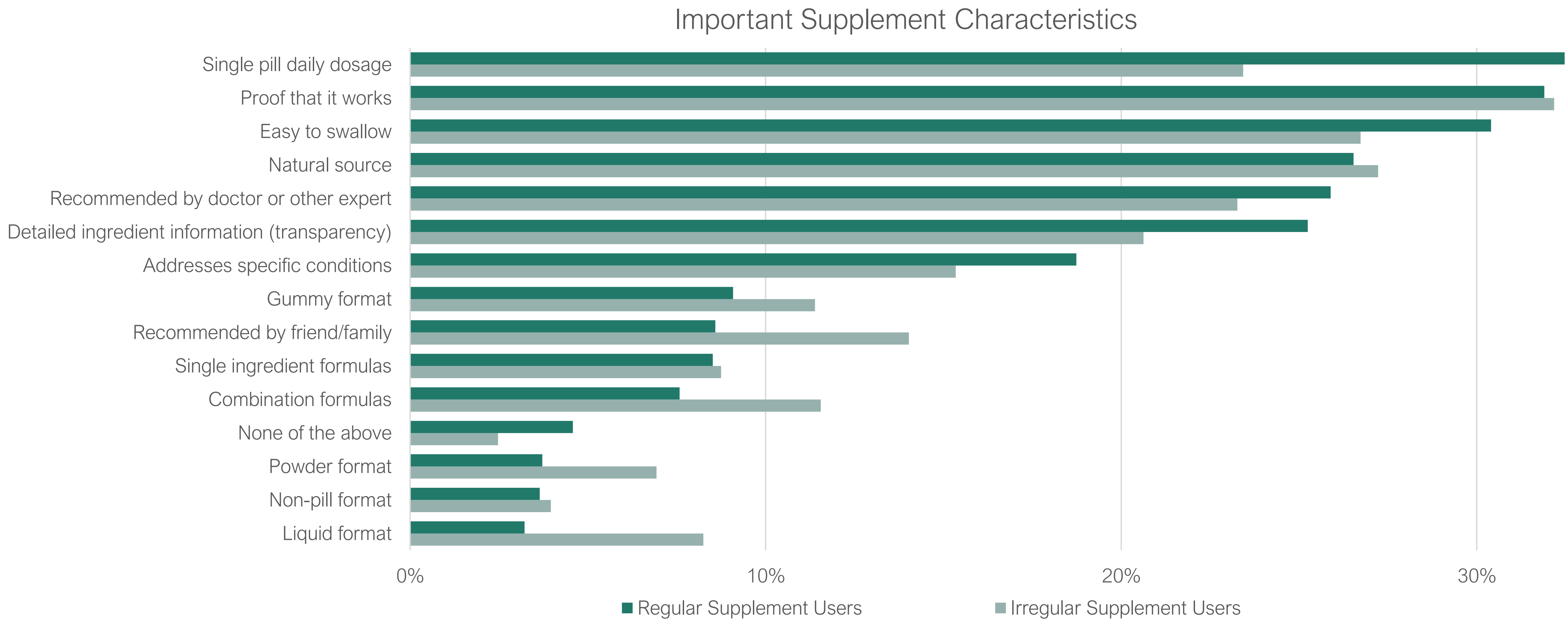


Note: Regular Users indicated using supplements in general at least 4 times per week. Question: “What characteristics most encourage you to trust a supplement brand?”

SUPPLEMENT SELECTION CRITERIA

KEY ITC INSIGHTS

- Single pill daily dosage, proof of efficacy, easy to swallow, and natural source are all top characteristics
- There is no one characteristic that is important to all supplement users, and importance doesn't change much for Regular vs. Irregular Users



Note: Regular Users indicated using supplements in general at least 4 times per week. Question: "Which of the following characteristics are most important when choosing which supplement product to purchase?"

SUPPLEMENT FORMAT PREFERENCES

GLOBAL PREBIOTIC ASSOCIATION

Regular Users Preference		VS.	Irregular Users Preference	
Single Pill	32%		Single Pill	23%
Gummy	9%		Gummy	11%
Powder	4%		Liquid	8%
Liquid	3%		Powder	7%

*Info based on All Respondents

IMPORTANT SUPPLEMENT CHARACTERISTICS

KEY ITC INSIGHTS:

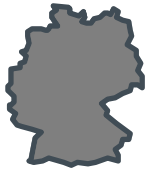
- Drivers of purchase differ greatly between country
- Proof of efficacy is most important to German users (43%) along with a focus on natural sources (38%)
- Single dose and easy to swallow pills are the top characteristics for UK and US users

US Top 3

- Single pill dose
- Easy to swallow
- Proof it works

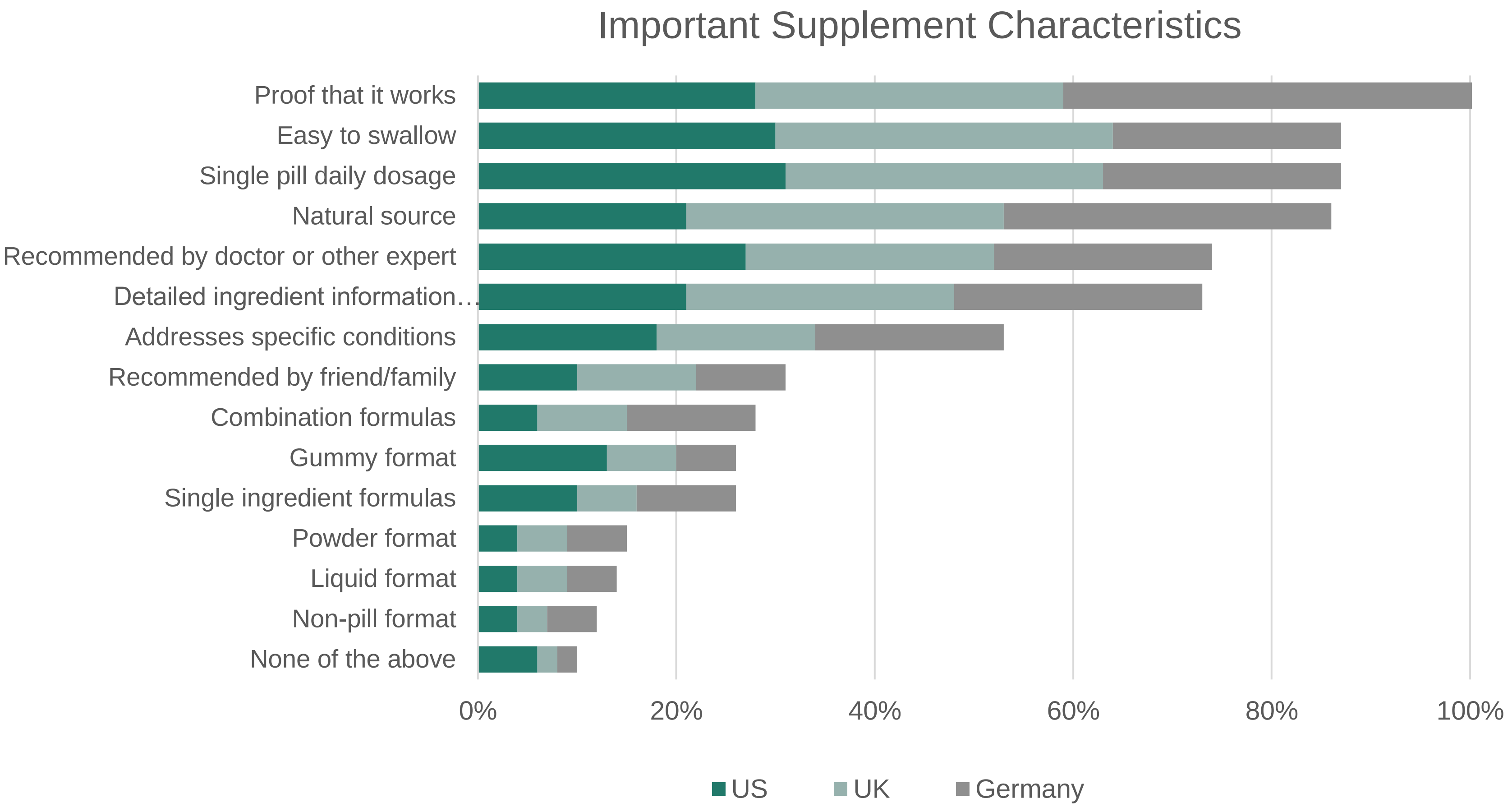
UK Top 3

- Easy to swallow
- Single pill dose
- Natural source



Germany Top 3

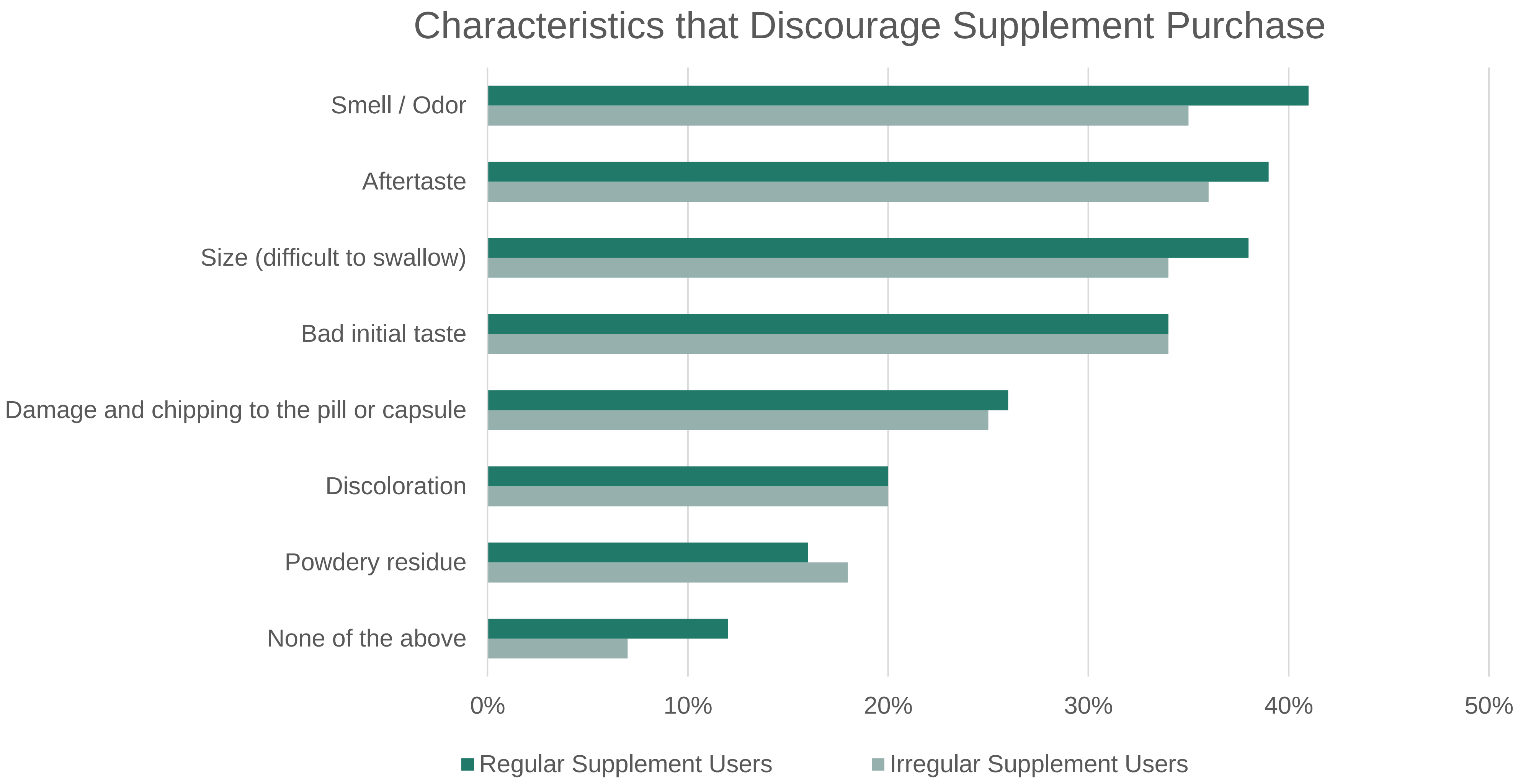
- Proof it works
- Natural Source
- Detailed ingredient info (transparency)



Question: "Which of the following characteristics are most important when choosing which supplement product to purchase?"

DISCOURAGING PURCHASE

GLOBAL PREBIOTIC ASSOCIATION



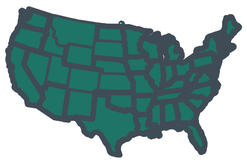
Note: Regular Users indicated using supplements in general at least 4 times per week. Question: “Which of these characteristics are most likely to discourage you from purchasing/repurchasing a supplement product or brand?”

DISCOURAGING PURCHASE

KEY ITC INSIGHTs:

- Bad tastes and smells can be the most off-putting characteristics of supplements
- Regular Users in UK and USA care much more about odor (45% and 40%) than those in Germany (33%)

GLOBAL PREBIOTIC ASSOCIATION

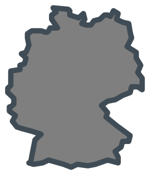


US Top 3

- Smell/ odor
- Size
- Aftertaste

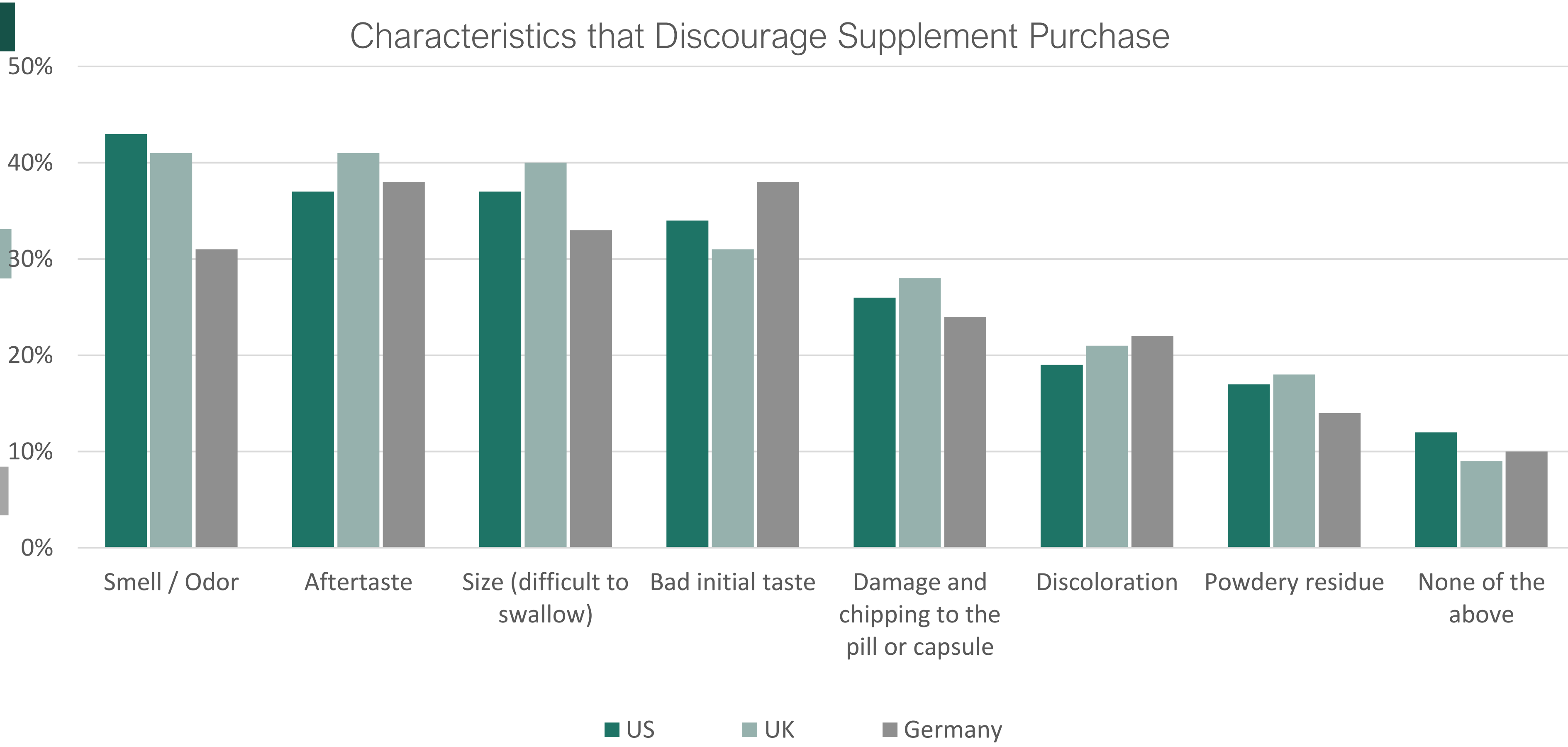
UK Top 3

- Aftertaste
- Smell/ Odor
- Size



Germany Top 3

- Bad initial taste
- Aftertaste
- Size



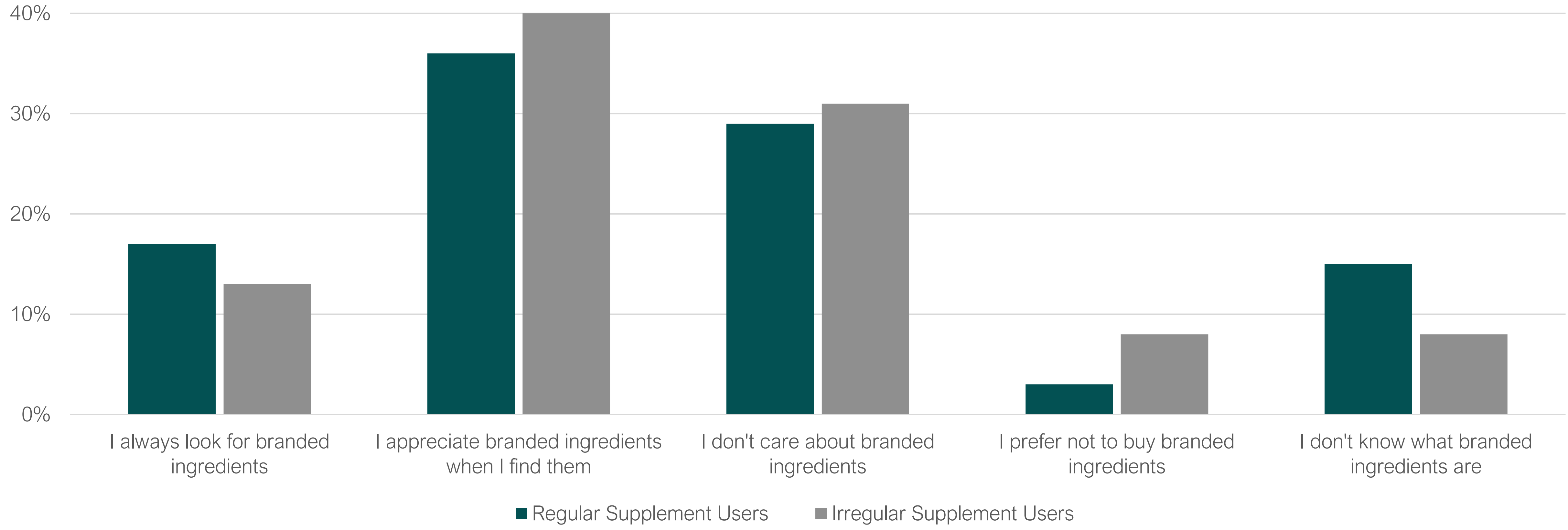
Question: “Which of these characteristics are most likely to discourage you from purchasing/repurchasing a supplement product or brand?”

IMPORTANCE OF BRANDED INGREDIENTS

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS:

- Knowledge that branded ingredients exist is strong (very few do not know what a branded ingredient is)
- Most general supplement users aren’t searching out branded ingredients, but many do appreciate them when they find them



Note: Regular Users indicated using supplements in general at least 4 times per week. Question: “When deciding which supplements to purchase, how important is the inclusion of branded or proprietary ingredients?”

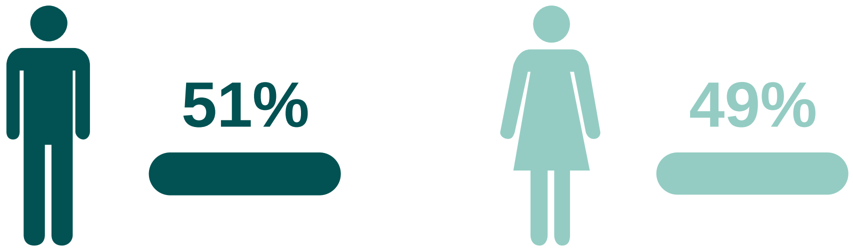
ITC TRENDS RECAP: EDUCATION NEED

- 2020 data shows consumer usage trends between the USA, UK, and Germany are often quite similar, however we see important differences in ‘reason for use’ – suggesting different drivers and understanding of benefits
- There is a clear need for better consumer education at all usage levels
- Differences in the perceived benefits of supplement types across countries highlights the importance of consumer education, which clearly drives higher usage for a wide array of reasons
- Media coverage and consumer education can quickly raise the bar on supplement awareness, knowledge, and usage;
    - ✓ Vitamin D is a poster child in this area
    - ✓ Turmeric & curcumin are on the journey
    - ✓ Categories like astaxanthin have a long way to go
- Regular Users can serve as prime examples of how education and experience leads to loyal customers; there is a strong correlation between supplement knowledge, experience of benefits and usage levels – **feeling is believing**
- It is important that usage is increased in conjunction with education in order to better ensure long term usage

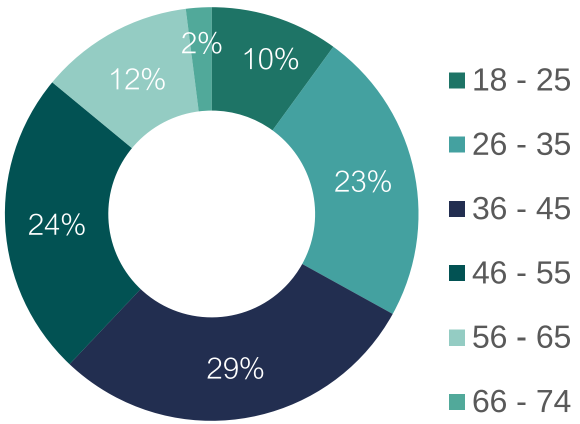
PREBIOTICS SURVEY DATA

PREBIOTIC USER GENERAL DEMOGRAPHICS

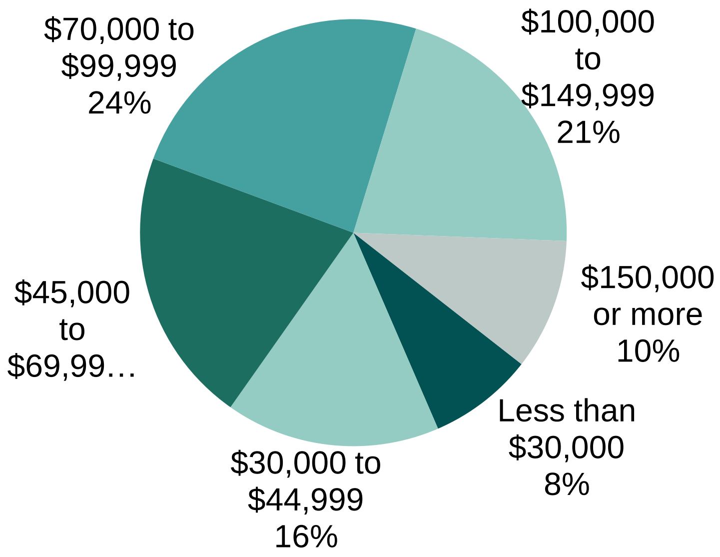
GENDER



AGE



INCOME



*Converted to USD from original national currency

Regular Users vs. Irregular Users - similar across age, gender and income

Take prebiotics at all, N=701

81% OF SUPPLEMENT USERS HAVE HEARD OF PREBIOTICS

Source: ITC Insights 2020 Consumer Survey

GLOBAL PREBIOTIC ASSOCIATION

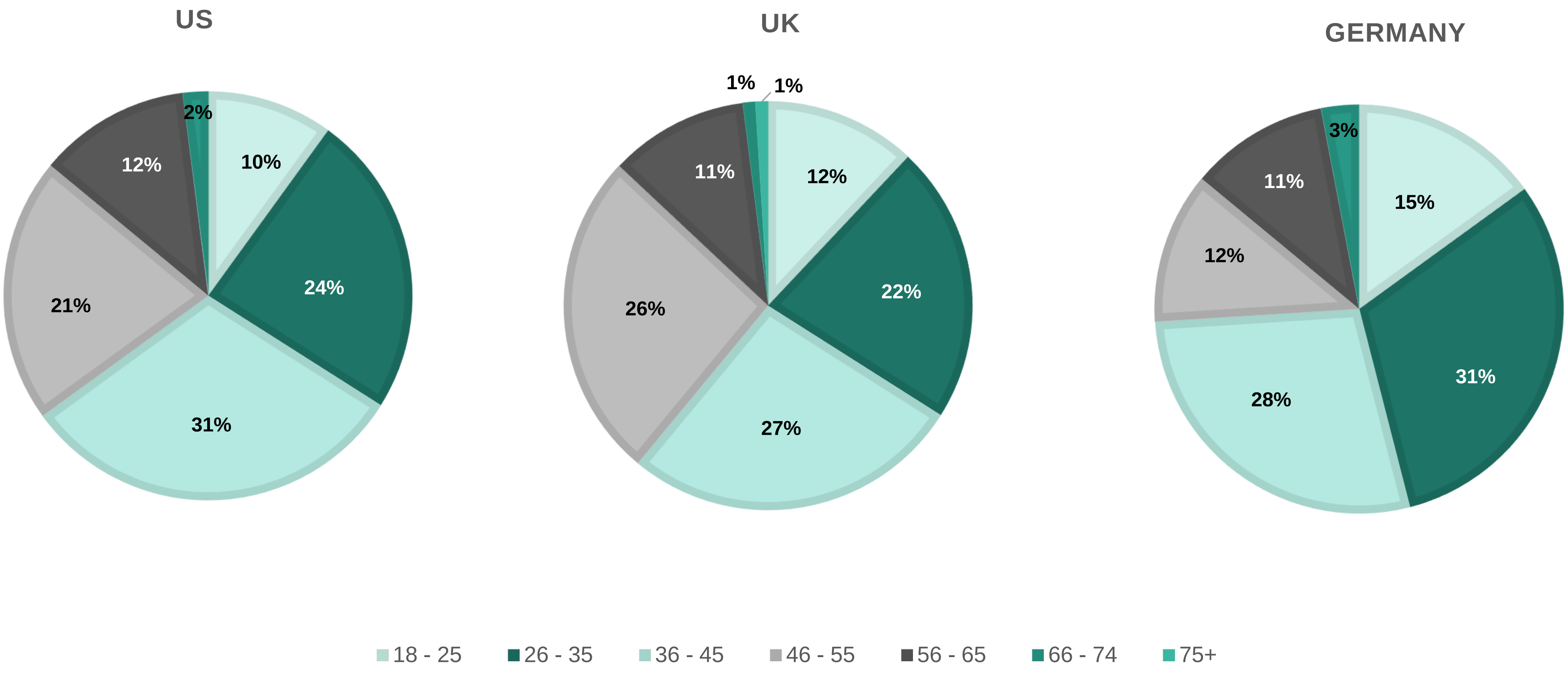
GENDER DEMOGRAPHICS: BY COUNTRY

Note: Take prebiotics at all= regular and irregular users. US N=297, UK N=194, DE N=210. Question: “How do you identify your gender?”

AGE DEMOGRAPHICS: BY COUNTRY

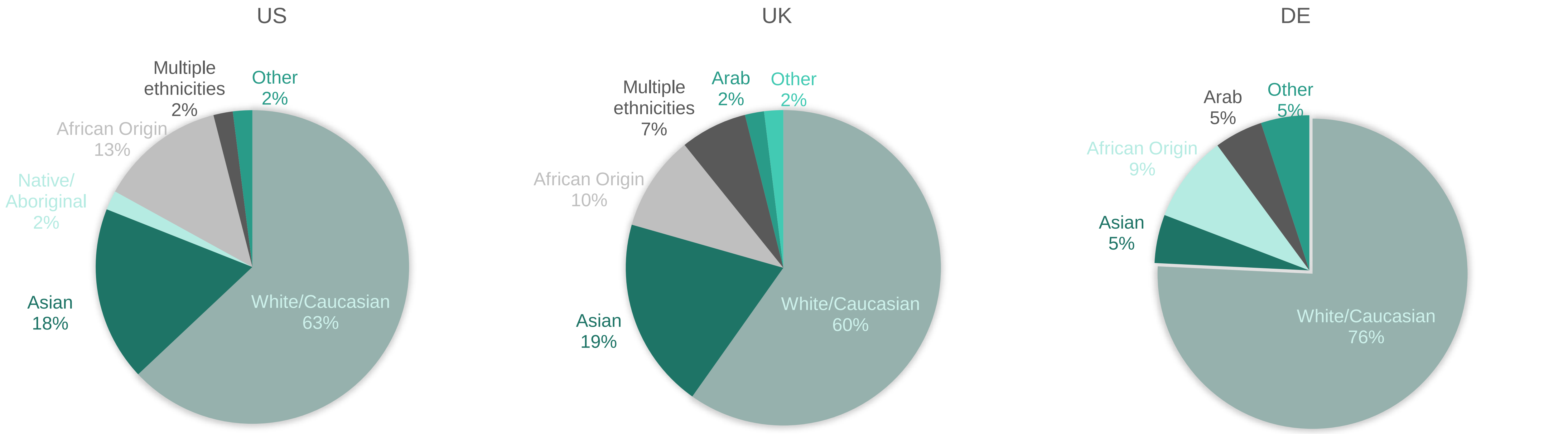
GLOBAL PREBIOTIC ASSOCIATION

ITC KEY INSIGHT: All prebiotic users tend to be younger than average supplement user (62% under 46 vs. 46% overall)



Note: Take prebiotics at all= regular and irregular users. US N=297, UK N=194, DE N=210. Question: "How old are you?"

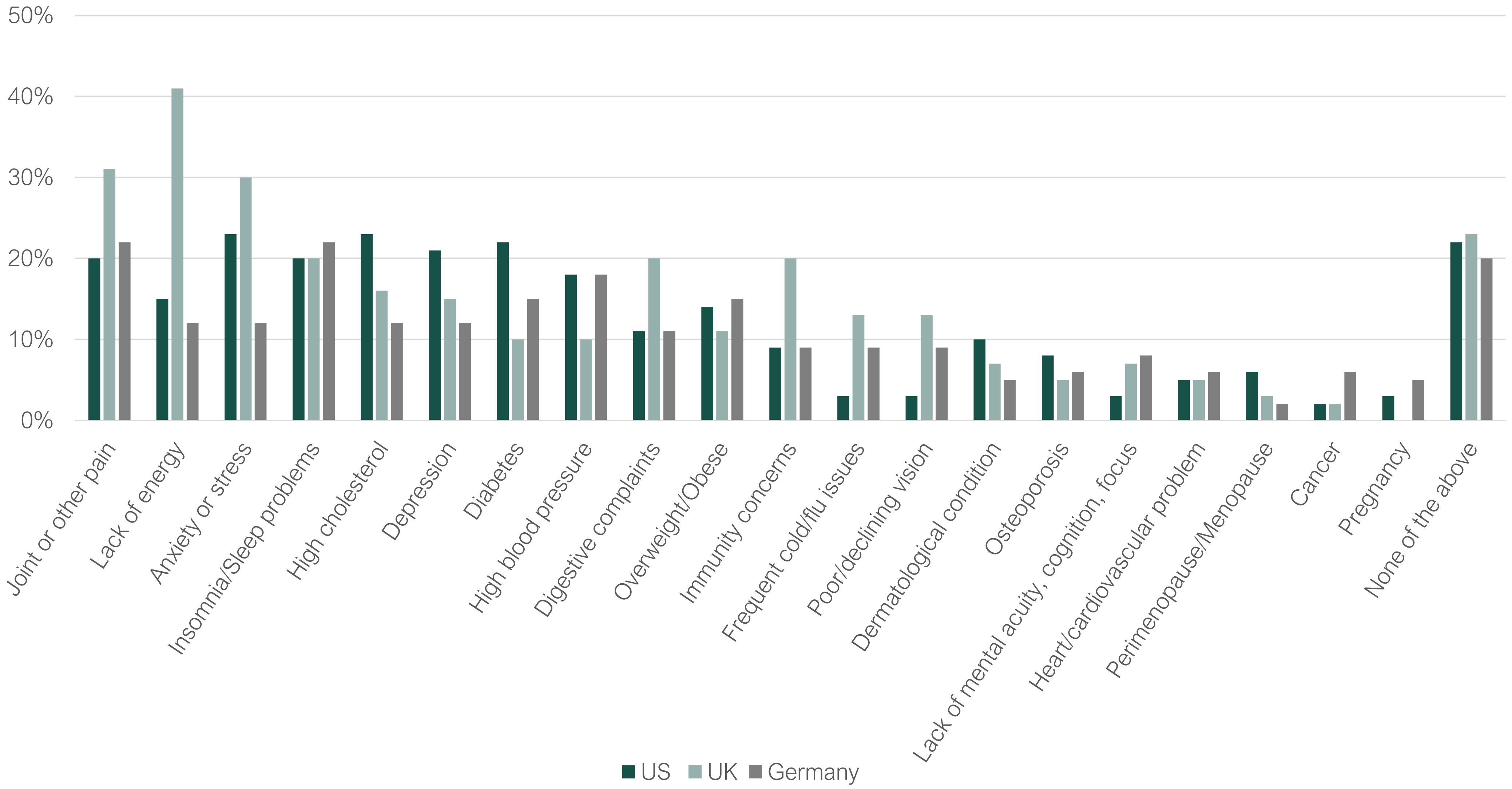
ETHNIC BACKGROUND: BY COUNTRY



Note: Take prebiotics at all= regular and irregular users. US N=297, UK N=194, DE N=210. Question: “How do you identify your primary ethnicity origin/race?”

HEALTH CONCERNS: PREBIOTICS USERS BY COUNTRY

GLOBAL PREBIOTIC ASSOCIATION



Note: Regular Users indicated using supplement at least 4 times per week. US N=115, UK N=61, DE N=65.
Question: Which of the following health conditions impact you currently or have impacted you within the past year?

TOP 3 HEALTH CONCERNS 2020

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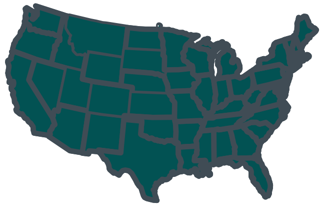
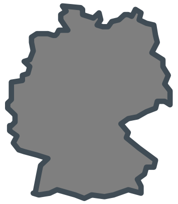




All Those Who Take Supplements

US
Top 3 Health Concerns

- High Blood Pressure
- High Cholesterol
- Anxiety or Stress & Joint or Other Pain

UK
Top 3 Health Concerns

- Joint or Other Pain
- Anxiety or Stress
- Lack of Energy

Germany
Top 3 Health Concerns

- Joint or Other Pain
- Insomnia/ Sleep Problems
- High Blood Pressure

Regular Prebiotic Users

US
Top 3 Health Concerns

- High Cholesterol
- Anxiety or stress
- Diabetes

UK
Top 3 Health Concerns

- Lack of Energy
- Joint or other pain
- Anxiety or stress

Germany
Top 3 Health Concerns

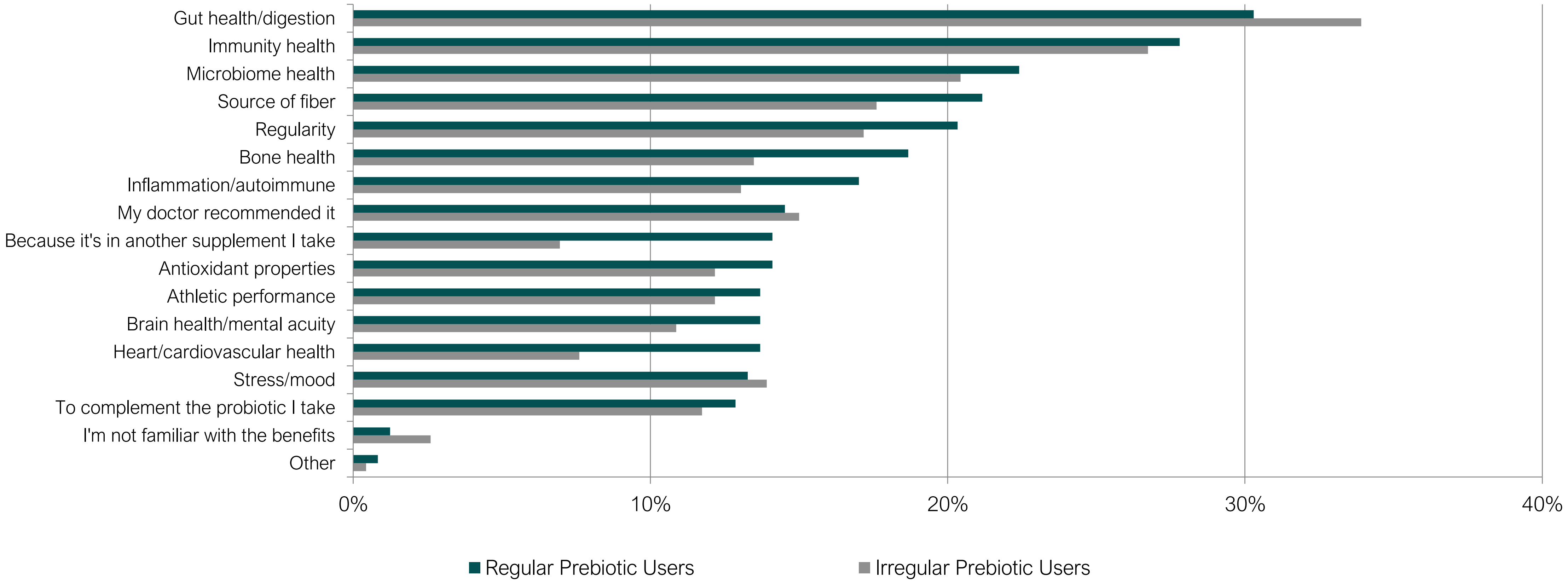
- Joint or other pain
- Insomnia/ Sleep problems
- High Blood Pressure

All respondents vs. All reg prebiotic users. All Question: Which of the following health conditions impact you currently or have impacted you within the past year?

BENEFITS, FAMILIARITY AND USAGE

BENEFITS OF PREBIOTICS

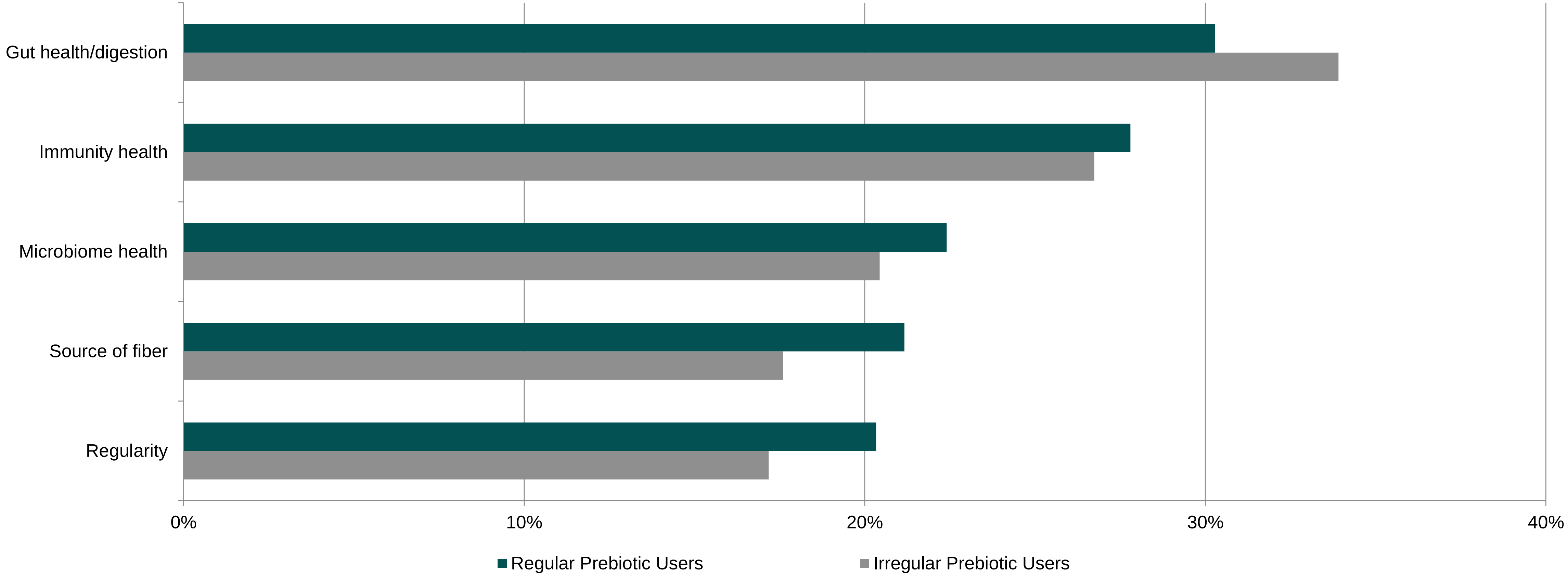
- Gut health clearly remains a top benefit, with microbiome health also showing strong recognition
- Immunity health has seen a steady gain and is now clearly recognized as a benefit
- Regular Users are much more likely to recognize the more wide-ranging benefits of prebiotics such as fiber source or bone health
- Many non-users aren't familiar with the benefits of prebiotics, thus highlighting the need for further consumer education



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: "Why are you taking/What have you heard are the benefits of taking a prebiotic supplement?"

BENEFITS OF PREBIOTICS: TOP 5

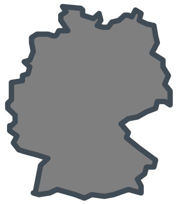
Gut and immunity are the top reasons across all ages and income levels.



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: "Why are you taking/What have you heard are the benefits of taking a prebiotic supplement?"

WHY THEY TAKE PREBIOTICS: BENEFITS BY COUNTRY

GLOBAL PREBIOTIC ASSOCIATION



US Regular Users	
Gut health/digestion	36%
Immunity health	29%
Source of fiber	21%
Regularity	20%
Inflammation/autoimmune	18%

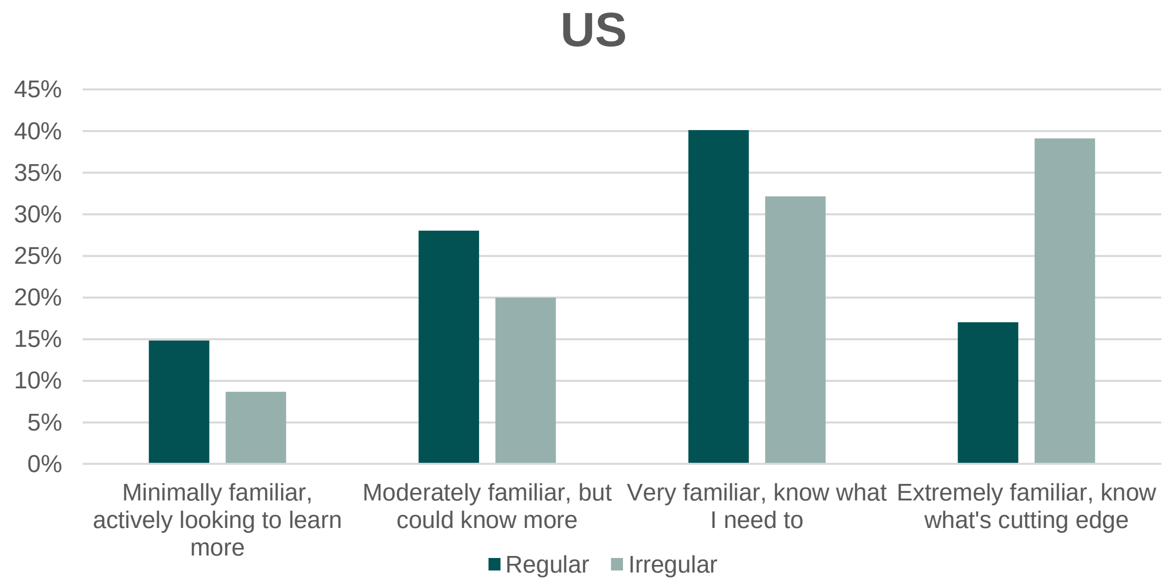
UK Regular Users	
Microbiome health	34%
Immunity health	28%
Source of fiber	26%
Gut health/digestion	26%
Bone health	25%

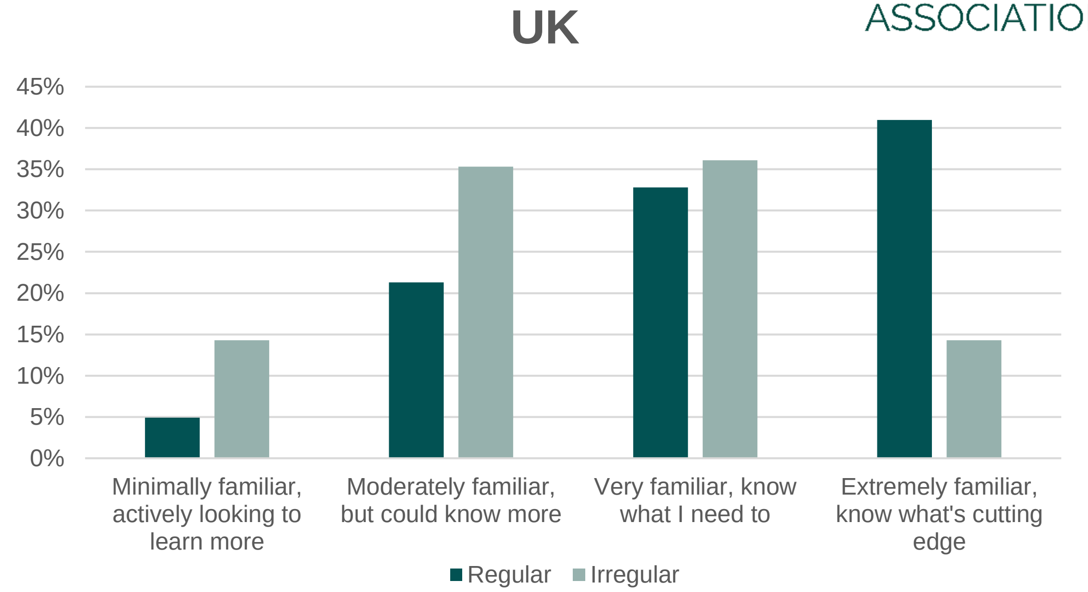
Germany Regular Users	
Immunity health	26%
Gut health/digestion	25%
Regularity	25%
Microbiome health	22%
Athletic performance	22%

Varies by geography, but there are patterns that emerge…

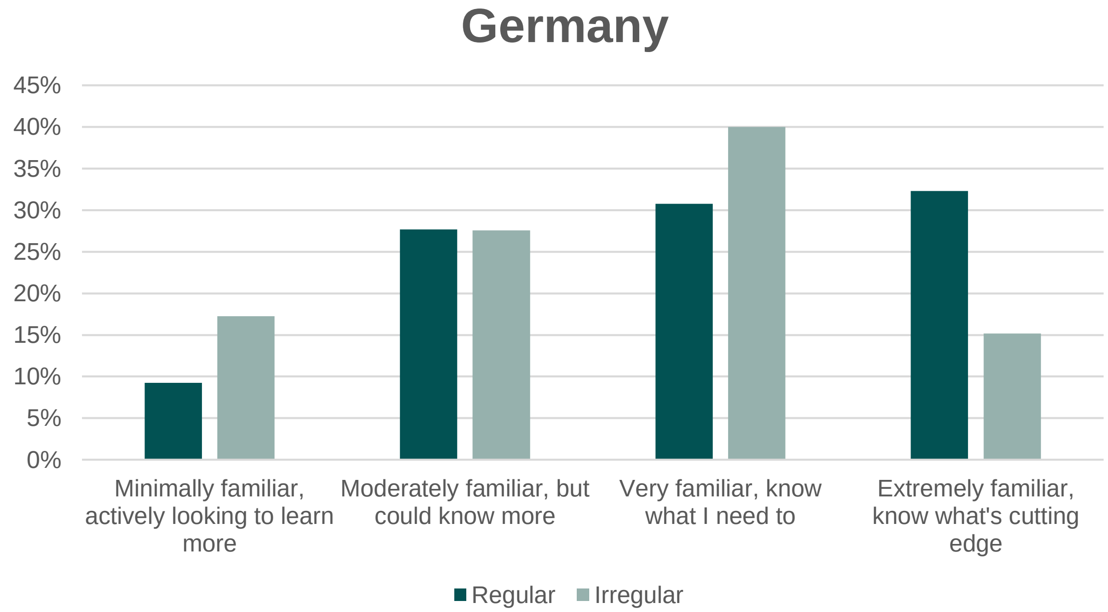
Note: Regular Users indicated using supplement at least 4 times per week. N=115 for USA, N=61 for UK, N=65 for Germany. *Note small sample sizes for individual countries due to low usage. Question: "Why are you taking/What have you heard are the benefits of taking a prebiotic supplement?"

PREBIOTIC USER FAMILIARITY LEVELS

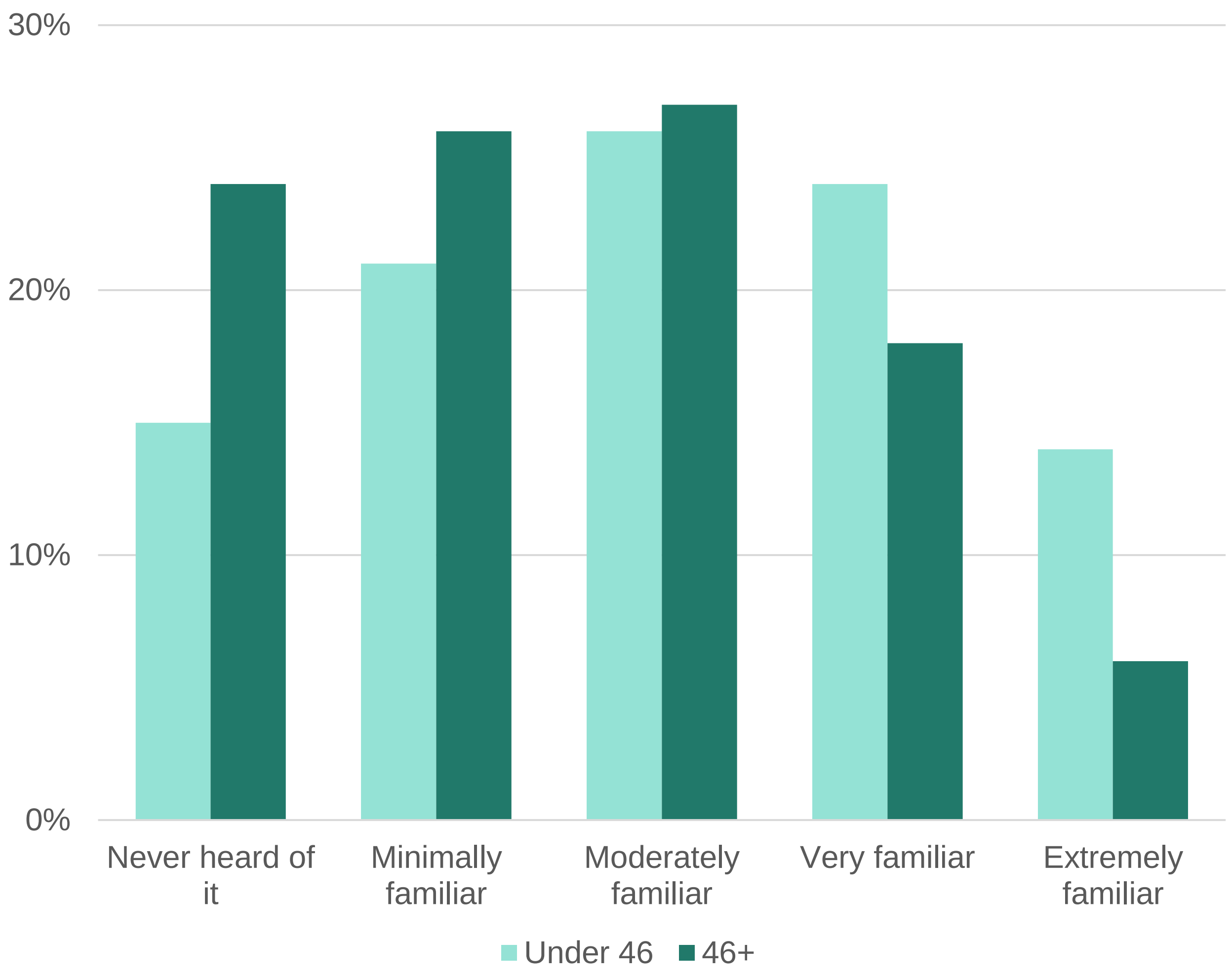


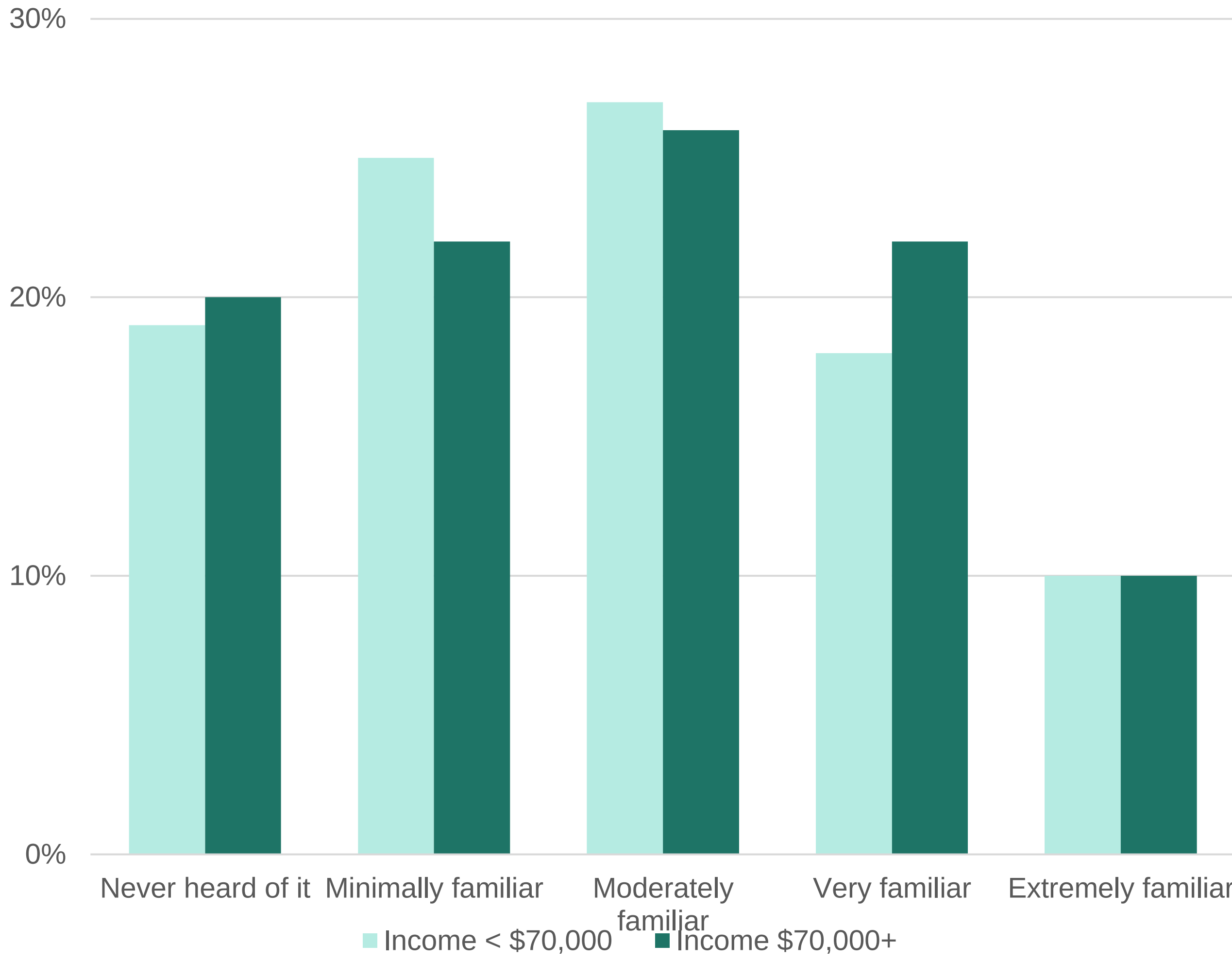


Regular Prebiotic Users in the USA and UK are most likely to be very/extremely familiar with use, while Germans are less sure



FAMILIARITY BY AGE AND INCOME

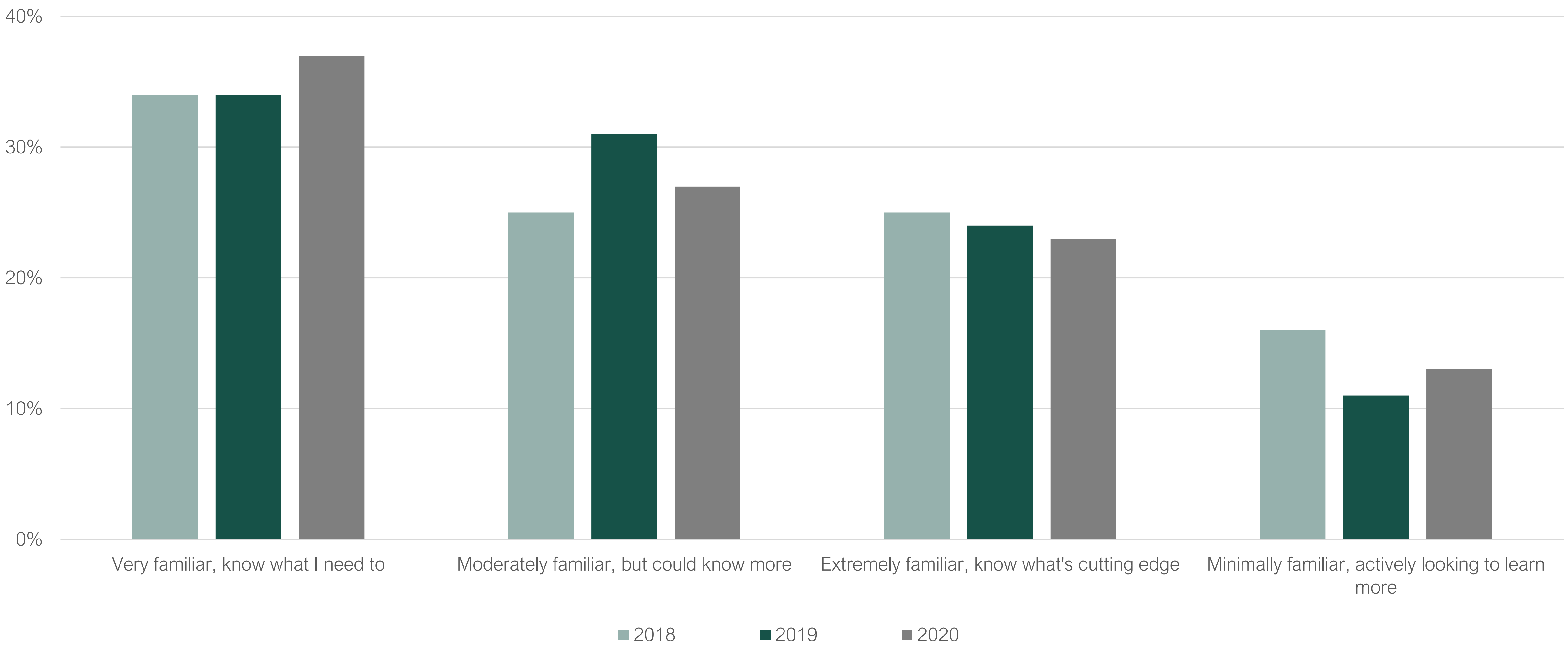




**Converted to USD from original national currency*

All prebiotic users. Under 46 N=921, 46+ N=1083, Income <70 N= 930, Income 70+ N=1074. Question: “How familiar would you consider yourself regarding the use of prebiotics?”

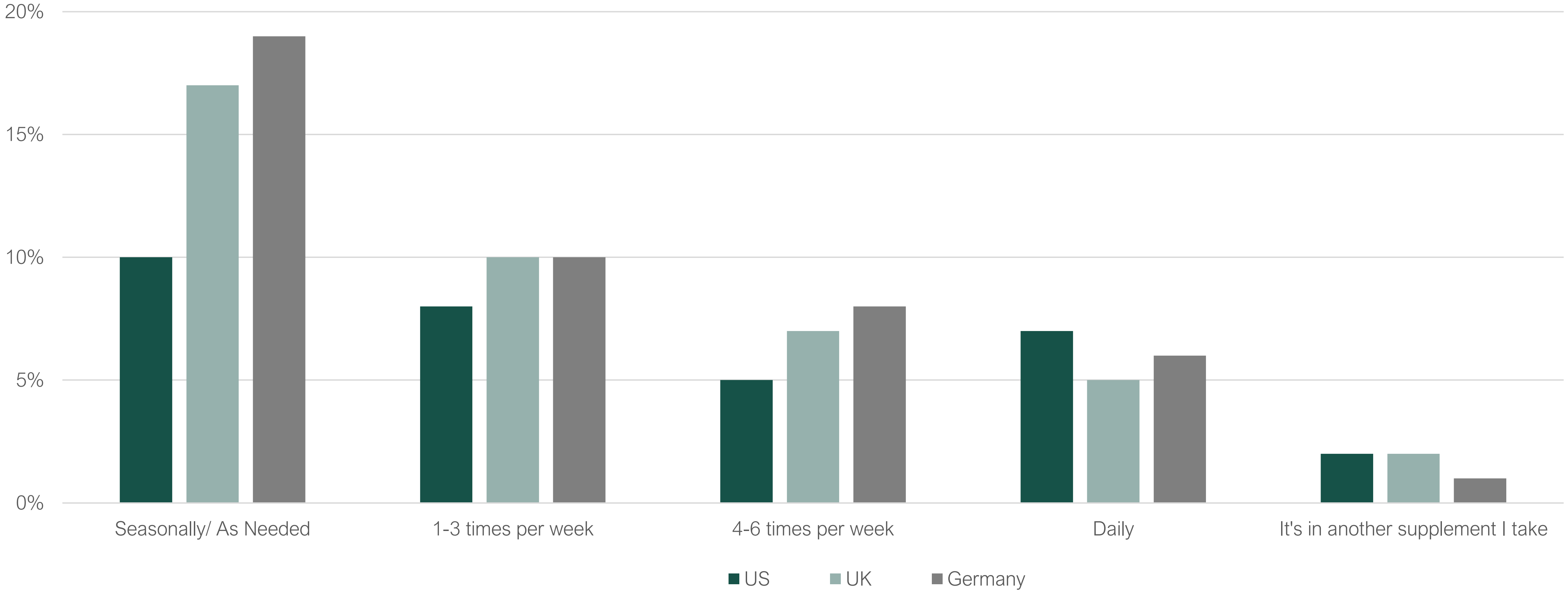
FAMILIARITY: 2018-2020 (US DATA)



Note: US, take prebiotic at all. Question: “How familiar would you consider yourself regarding the use of these supplements?”

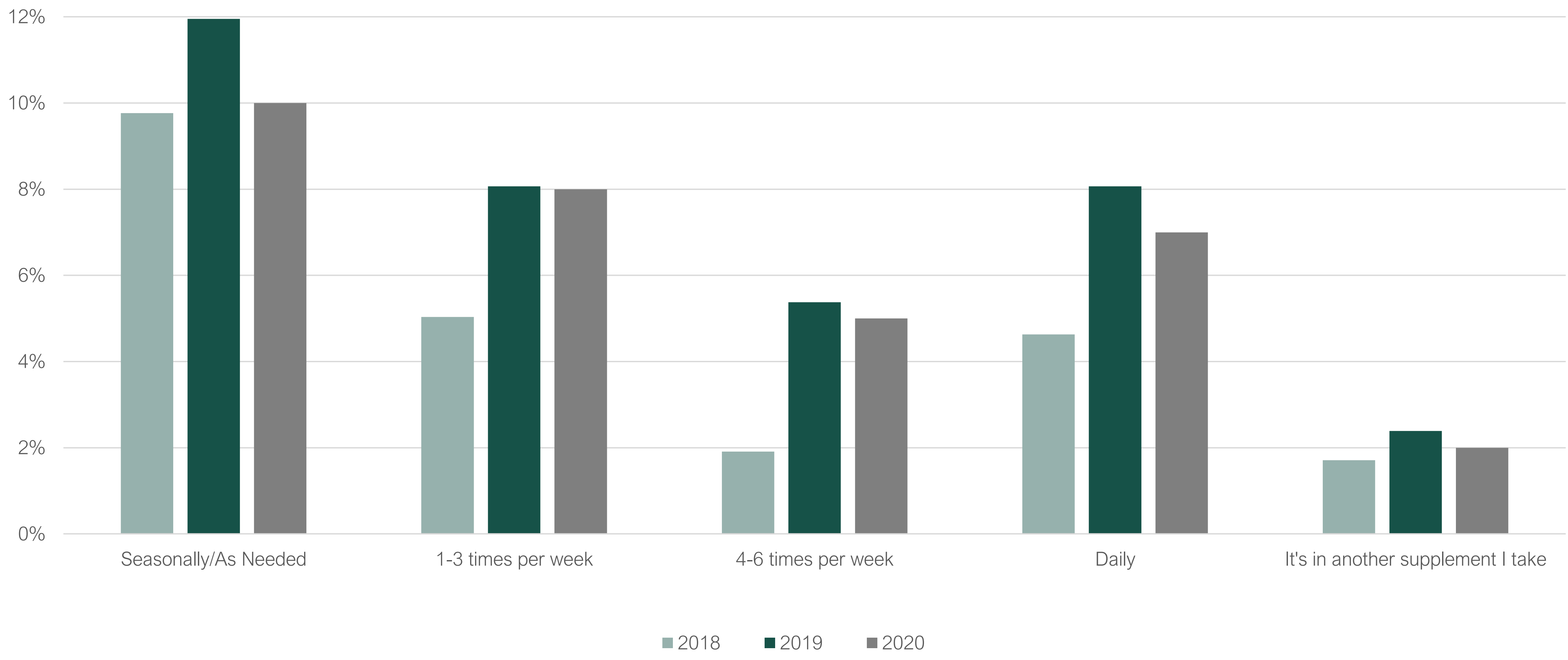
PREBIOTICS USAGE: BY COUNTRY

- 35% of surveyed supplement users are using Prebiotics at some level
- Prebiotics usage is stronger globally than in US: 30% of USA supplement users are using Prebiotics vs. 39% in UK & 42% in Germany
- 34% of Prebiotic Users are Regular Users(4+ times per week), including 39% in the US and 31% in UK & Germany



Note: All Respondents. Question: “Which of the following best describes how frequently you are taking the following supplement?”

PREBIOTICS USAGE: 2018-2020 (US DATA)



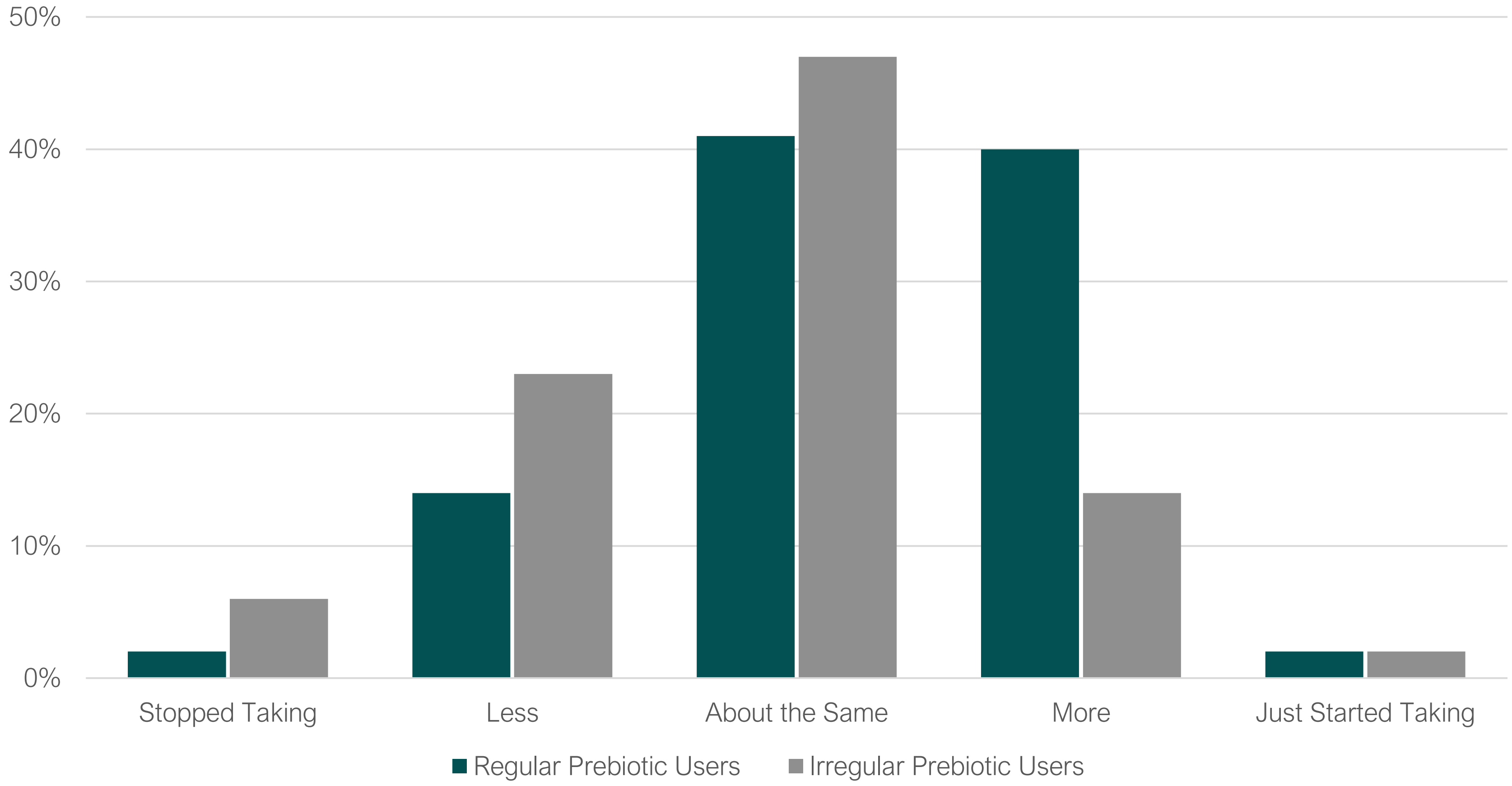
All US respondents, 2020 N=1000, 2019 N=1004, 2019 N=993. Question: “Which of the following best describes how frequently you are taking the following supplements?”

PREBIOTIC USAGE CHANGE

GLOBAL PREBIOTIC ASSOCIATION

KEY ITC INSIGHTS

- 42% of Regular Prebiotic Users indicated that they have just started taking or increased their usage in the last year, with 20% indicating “significantly more” usage
- 30% of Irregular Prebiotic Users indicated that they are using prebiotics less or have stopped taking in the last year
- Changes in usage are similar across countries

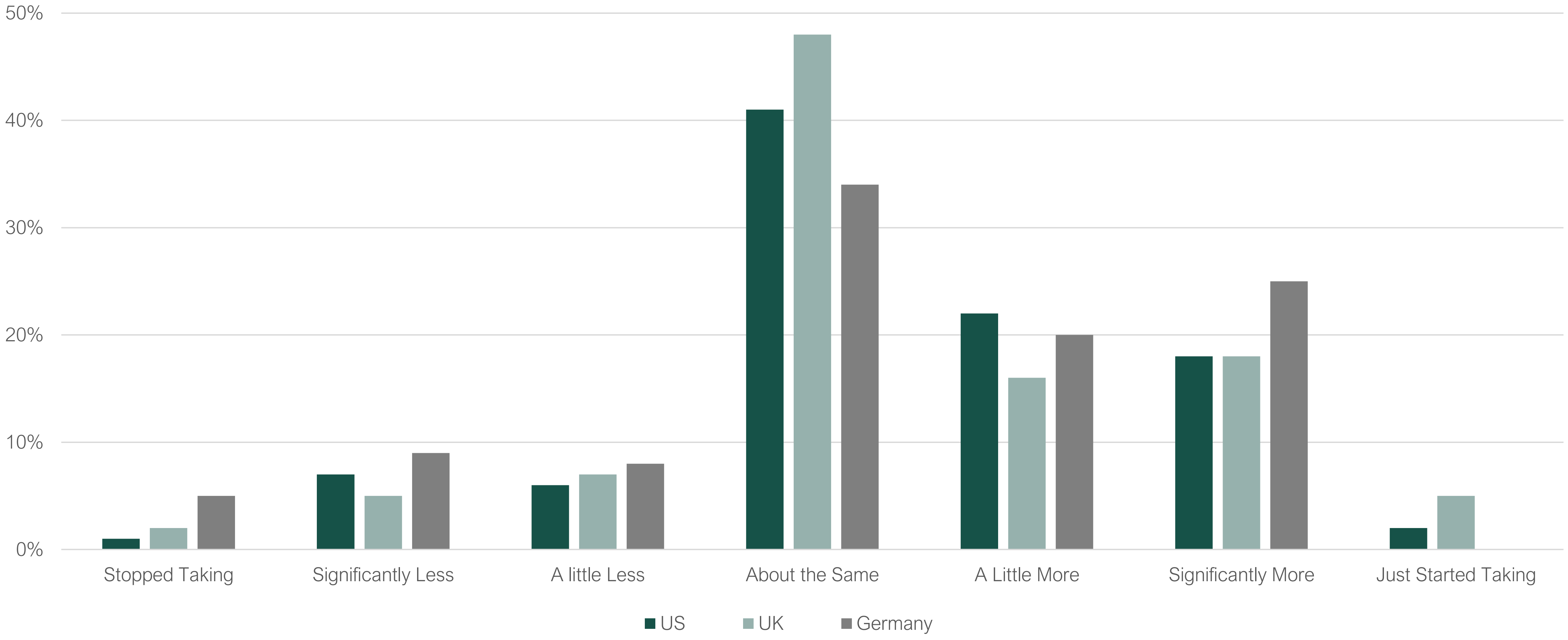


Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: “Which of the following best describes how your use of each of this supplement compares to your usage 1 year ago?” Global Responses

CHANGE IN USAGE LEVELS: BY COUNTRY

GLOBAL PREBIOTIC ASSOCIATION

- 25% of German regular prebiotic users are taking significantly more vs. US and UK (both 18%)
- 9% of German regular prebiotic users are taking significantly less vs. US (7%) and UK (5%)

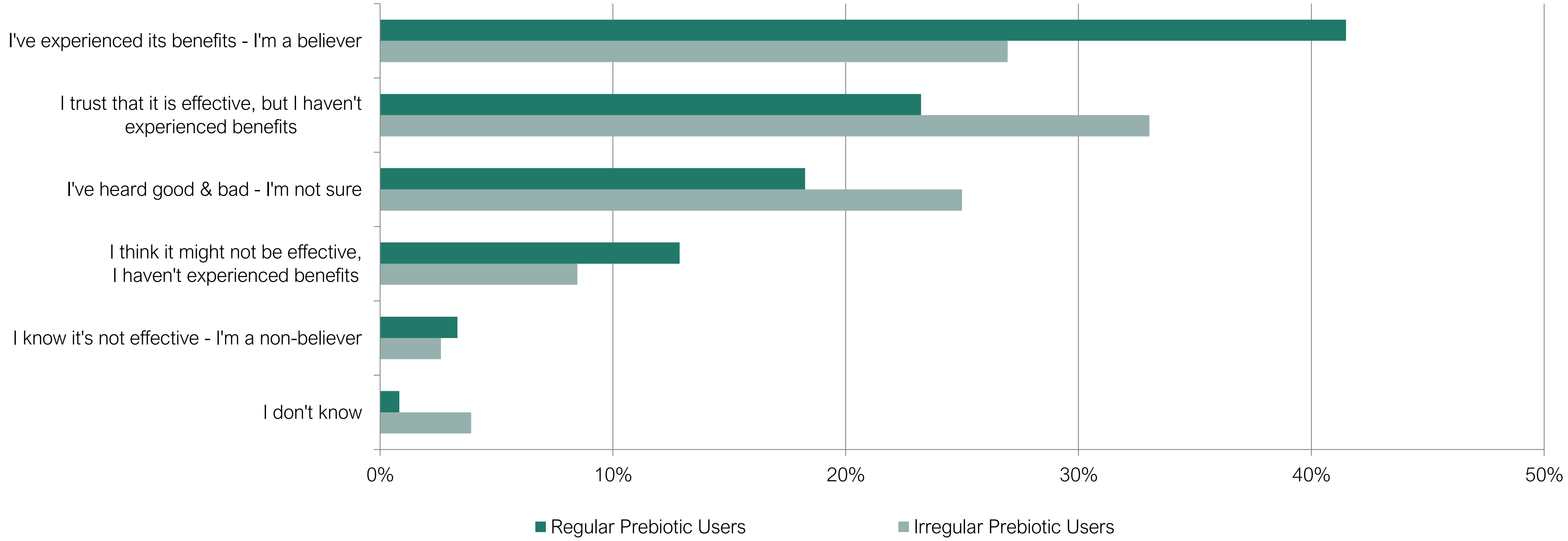


Note: Take prebiotics regularly, US N=115, UK N=61, Germany N=65. . Question: "Which of the following best describes how your use of each of these supplements compares to your usage 1 year ago?"

PERCEIVED EFFECTIVENESS OF PREBIOTICS

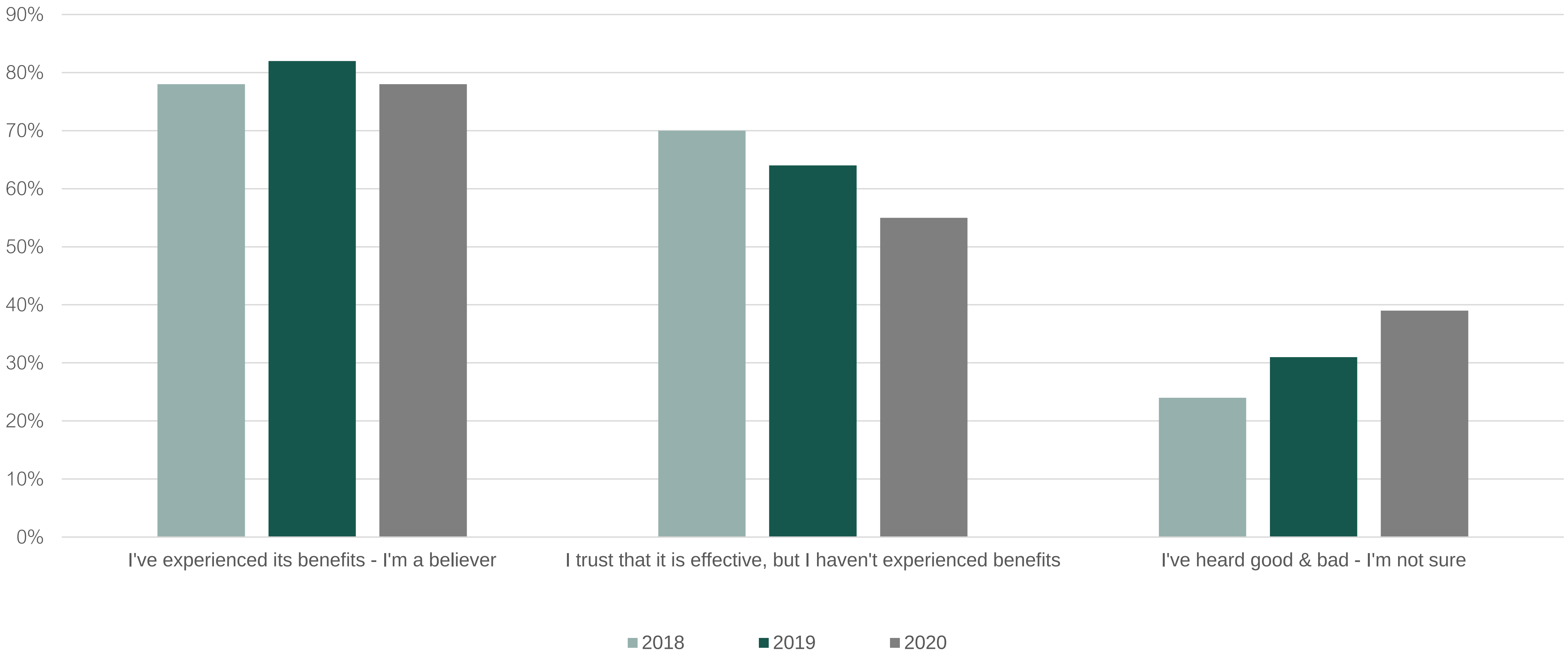
GLOBAL PREBIOTIC ASSOCIATION

- 41% of Regular Prebiotic Users have experienced the benefits of Prebiotics, which is typical of regular users of any supplement
- As is true of Irregular Users across supplement types, the biggest group of these users are trusting in the benefits but haven't experienced them



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: "What is your opinion of the effectiveness/benefit of this supplement?"

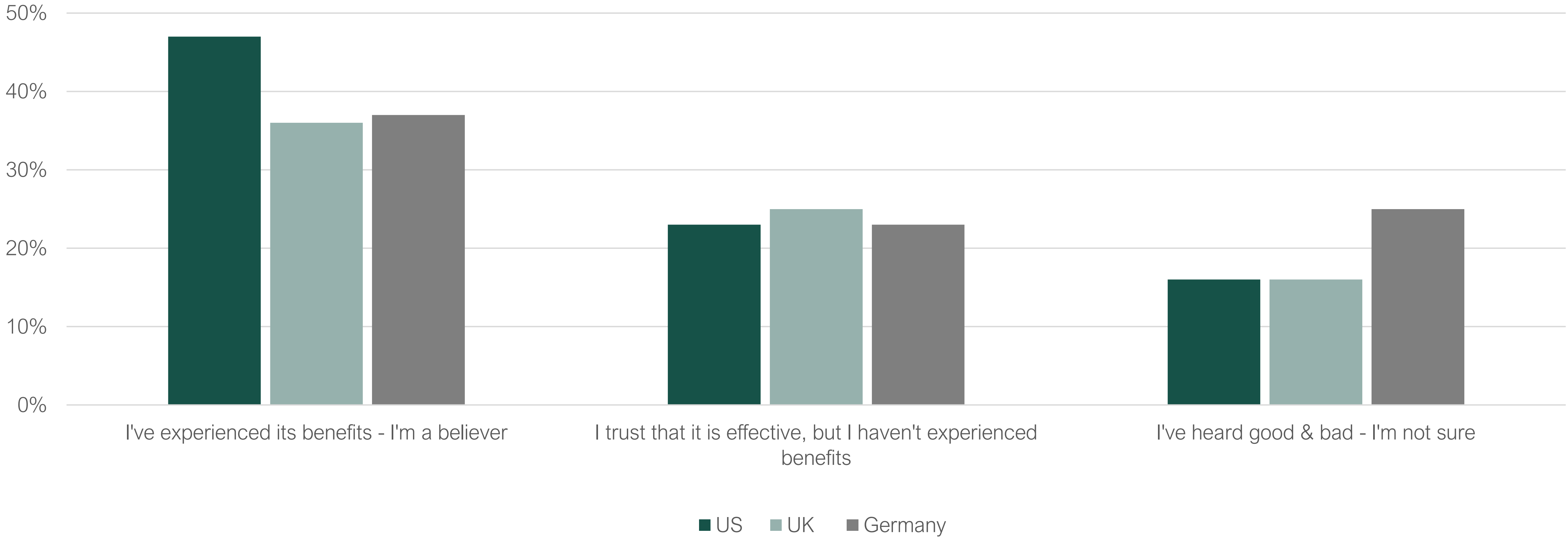
EFFECTIVENESS: 2018-2020 (US DATA)



Question: “What is your opinion of the effectiveness/benefit of each of these supplements?” US users, combined regular and irregular users.

EFFECTIVENESS: BY COUNTRY

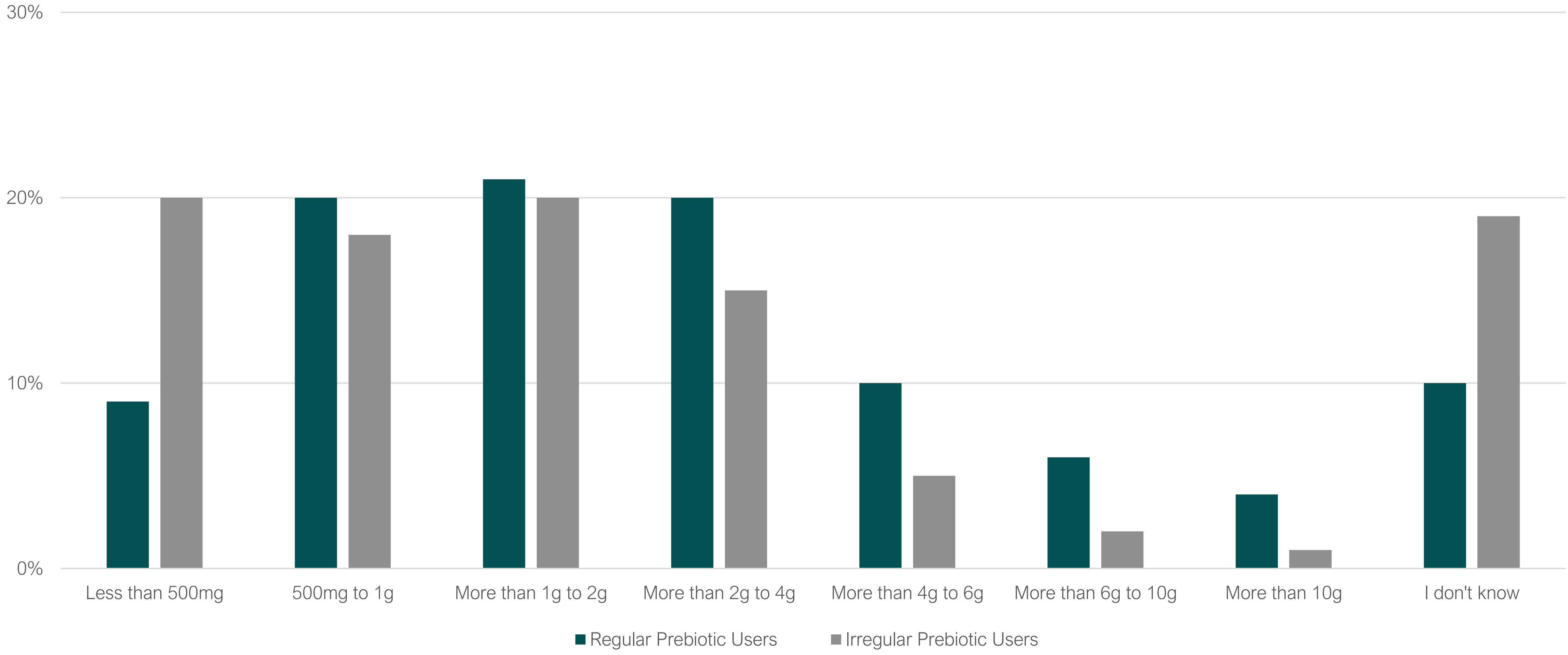
- Among Regular Users, those in the USA are most likely to have experienced benefits (47%) vs. UK (36%) & Germany (37%)
- UK Irregular Users are the most skeptical, with 32% reporting that they've heard good & bad



Note: Take prebiotics regularly, US N=115, UK N=61, Germany N=65. Question: "What is your opinion of the effectiveness/benefit of each of these supplements?"

PREBIOTIC DOSAGES

Strong indication that education is needed surrounding efficacious dosage

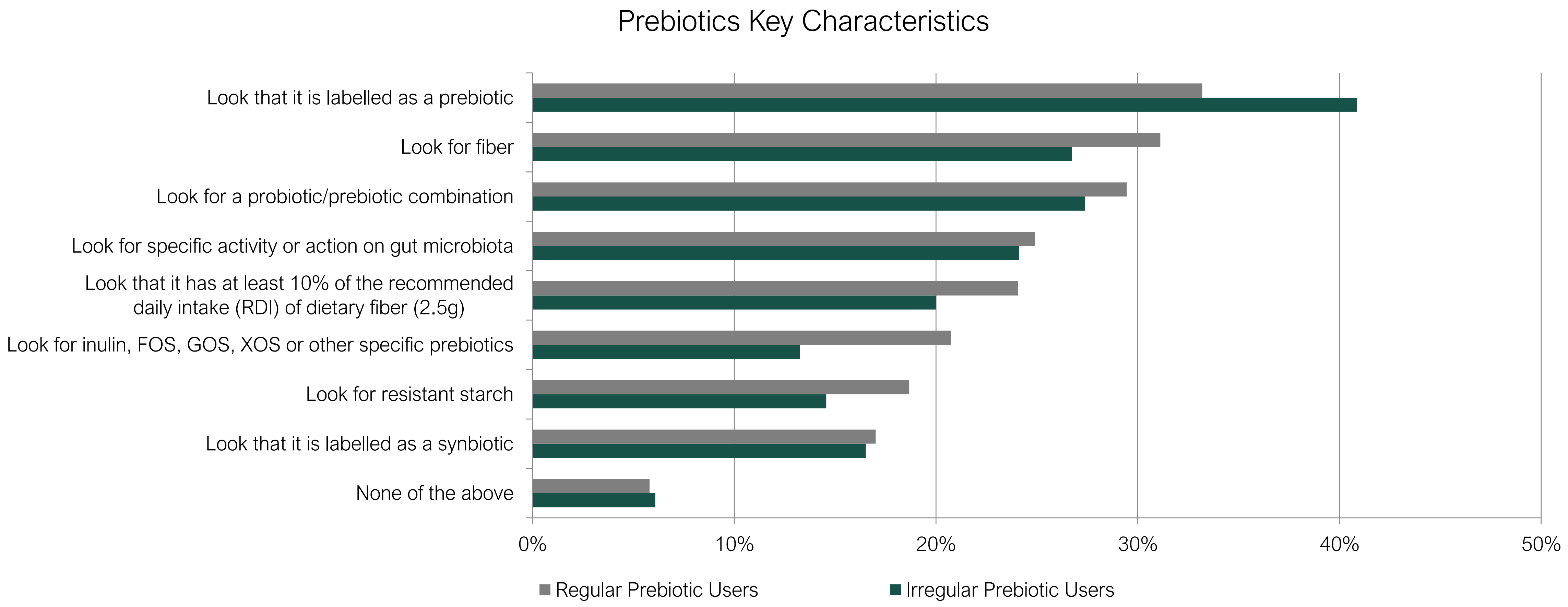


Note: Regular Users indicated using supplement at least 4 times per week. Question: “Approximately what dosage of Prebiotics do you take per serving?”

PREBIOTIC USER SHOPPING BEHAVIOR

PREBIOTICS PURCHASING DECISIONS

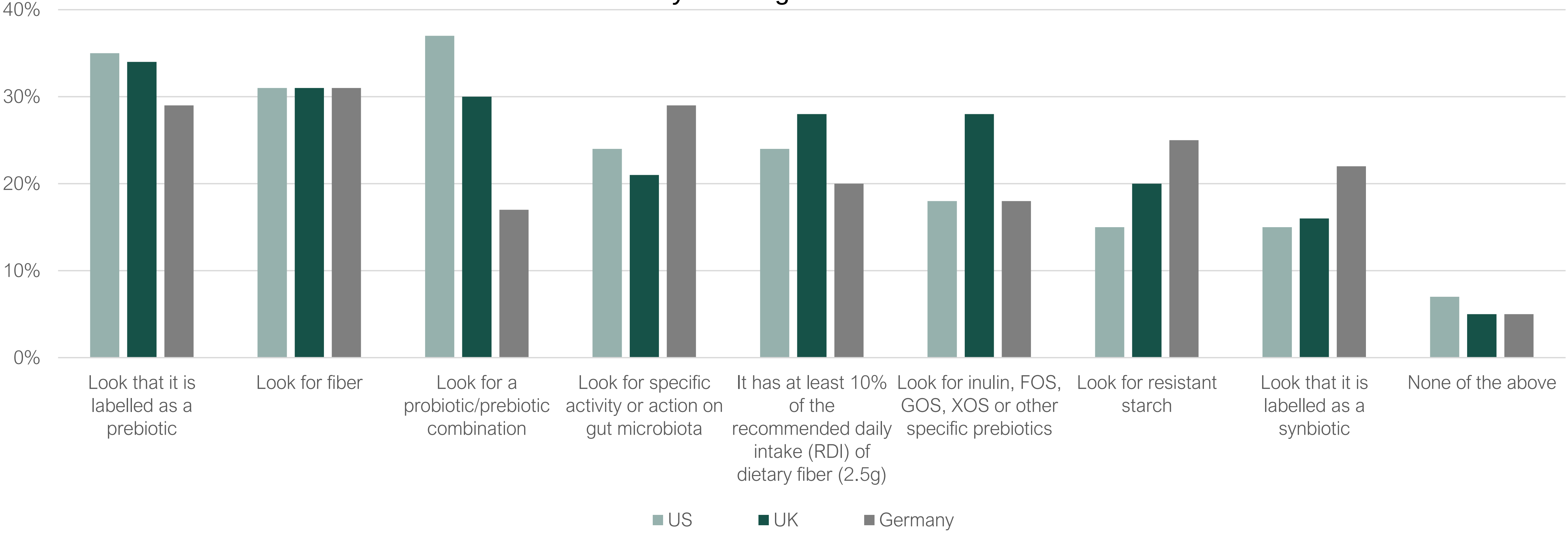
- Going beyond the basics, Regular Users are commonly looking for fiber along with a pro/pre combination (29%), but recognition of the term “synbiotic” remains low (17%).
- Most users aren’t looking for a high dosage of daily fiber, but they are commonly looking for the term “fiber”



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: “When you select what prebiotic to purchase, do you look for any of these specific characteristics?”

PREBIOTICS PURCHASING DECISION: BY COUNTRY

- 37% of Regular Users in the USA are looking for a pro/pre combination, vs 30% in UK & 17% in Germany
- 28% of UK Regular Users are looking for specific prebiotics such as inulin vs. only 18% in USA & Germany
- Gut health benefits are most recognized by USA Regular Users while those in UK have stronger connection to microbiome health benefits
- Regularity, along with gut health & immunity, is a leading benefit in Germany
- Bone health benefits are most noted by UK Regular Users

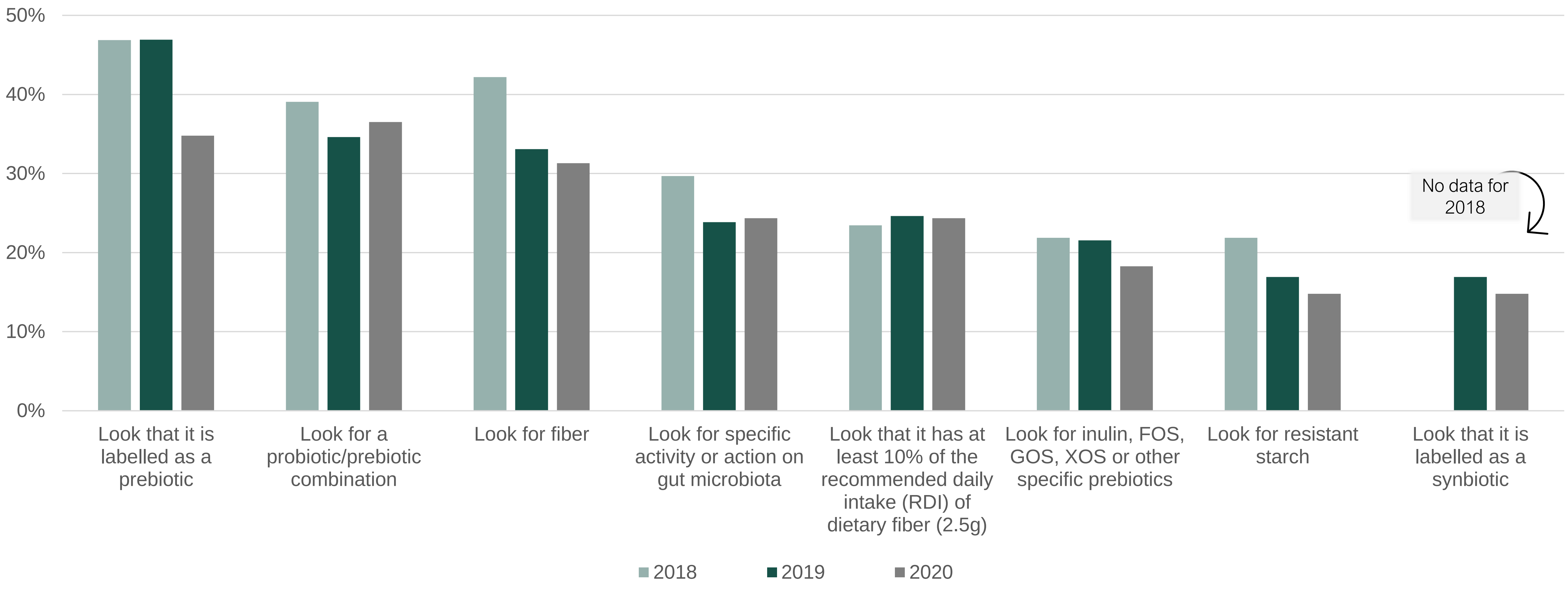


Note: Regular Users indicated using supplement at least 4 times per week, US N=115, UK N=61, Germany N=65. Question: “When you select what prebiotic to purchase, do you look for any of these specific characteristics?”

PREBIOTICS PURCHASING DECISION: 2018-2020 (US DATA)

GLOBAL PREBIOTIC ASSOCIATION

- 2020 dropped 12% from the previous two years in " look that it is labelled as a prebiotic."
- Looking for fiber in a prebiotic supplement has declined.



Note: Regular Users indicated using supplement at least 4 times per week. Question: "When you select what prebiotic to purchase, do you look for any of these specific characteristics?"

PREBIOTIC BRANDS

GLOBAL PREBIOTIC ASSOCIATION

Many consumers aren't aware of the prebiotic brands that they are taking or may be confused with probiotic brands – approximately 1 in 5 said they didn't know

US

- Nature Made
- align
- Kirkland Signature
- GNC
- OLLY

UK

- Holland & Barrett
- Vitabiotics
- Seven Seas
- Boots
- Benecol

Germany

- Abtei
- Vitality Nutritionals
- probaflor®
- Institut AllergoSan
- Probielle

Question: "What brand of prebiotics do you take?"

WHAT DO PREBIOTICS USERS SPEND?

GLOBAL PREBIOTIC ASSOCIATION

Monthly spend ranks 6 of 14 supplements surveyed

Individual Monthly Prebiotic Spend

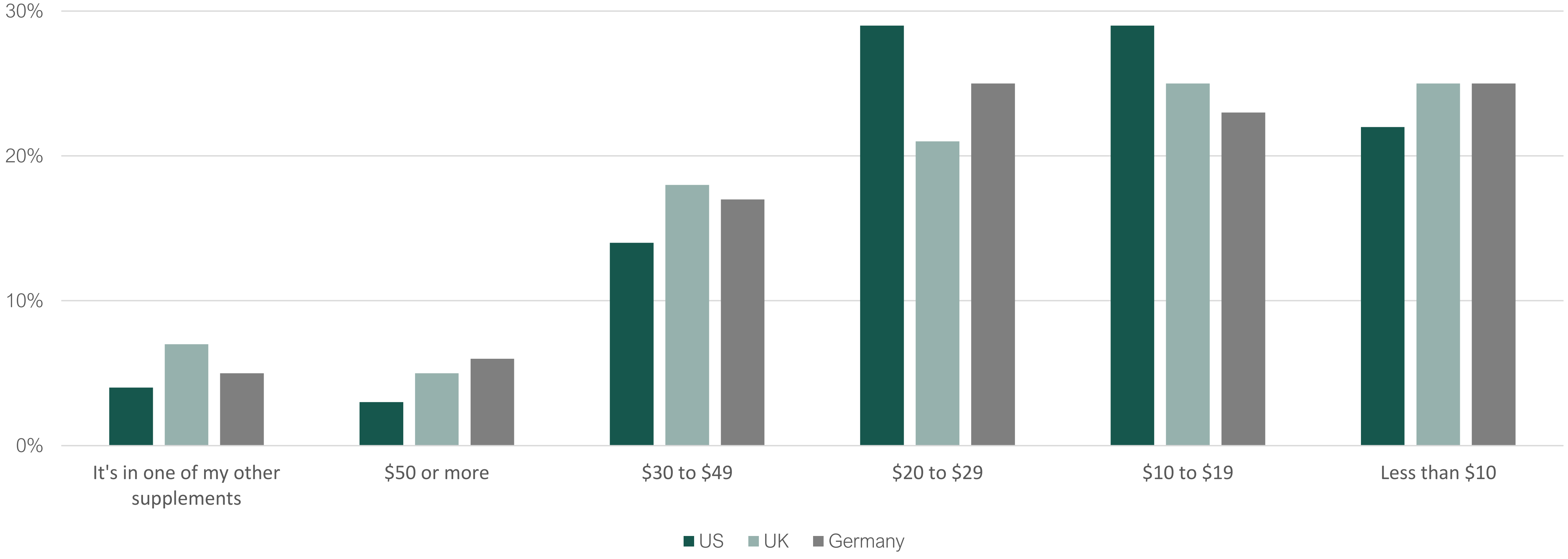
Based on All Prebiotic Users

Note: Take prebiotics at all is a combination of irregular and regular users, N=701. Question: “Approximately how much per month do you spend on this supplement?”

MONTHLY SPEND ON PREBIOTICS: BY COUNTRY

GLOBAL PREBIOTIC ASSOCIATION

- Average spend- US $19.61, UK $20.23, Germany $21.05
- UK and Germans are more likely to spend more on Prebiotics than US, but largely all countries will likely spend less than $30 monthly
- Regular Users' average spending is similar across countries, but USA Irregular Users are spending more than UK and German counterparts

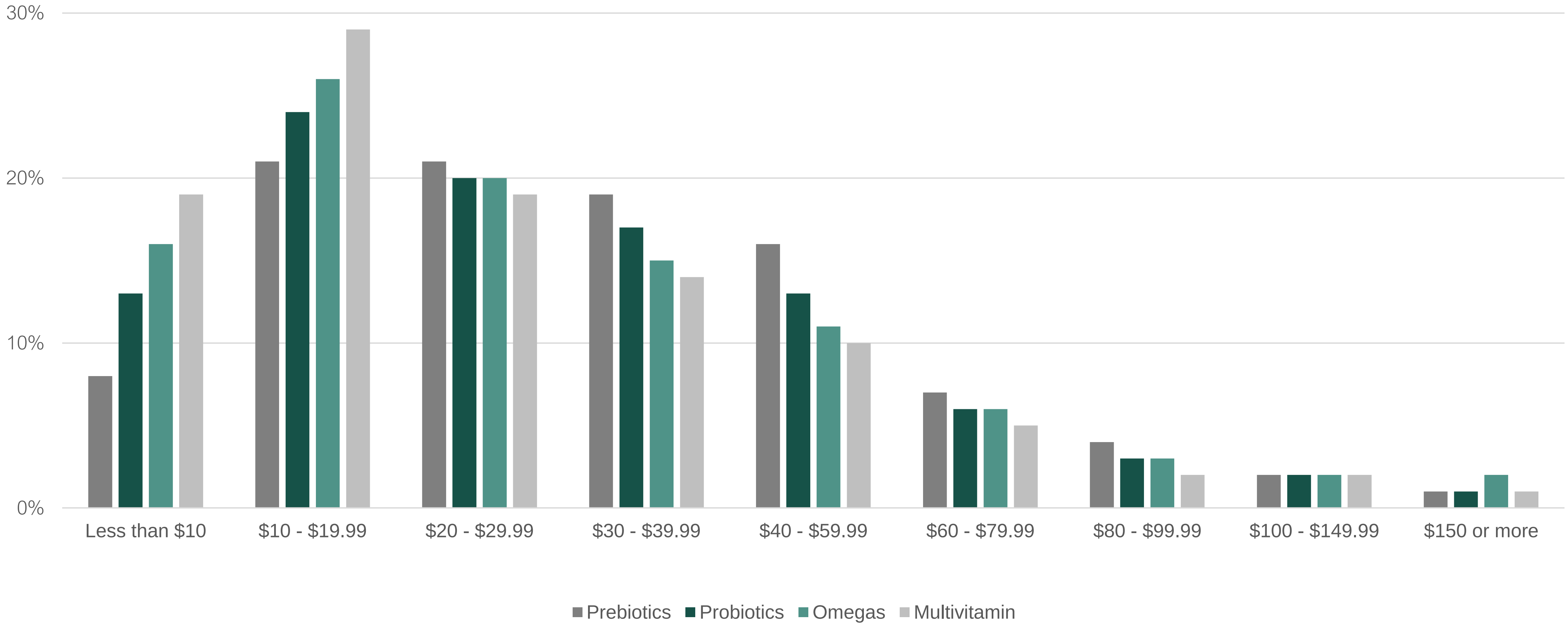


Note: Regular Users indicated using supplement at least 4 times per week. US N=115, UK N=61, Germany N=65. Question: "Approximately how much per month do you spend on this supplement?"

SPEND COMPARISON VS OTHER SUPPLEMENTS

GLOBAL PREBIOTIC ASSOCIATION

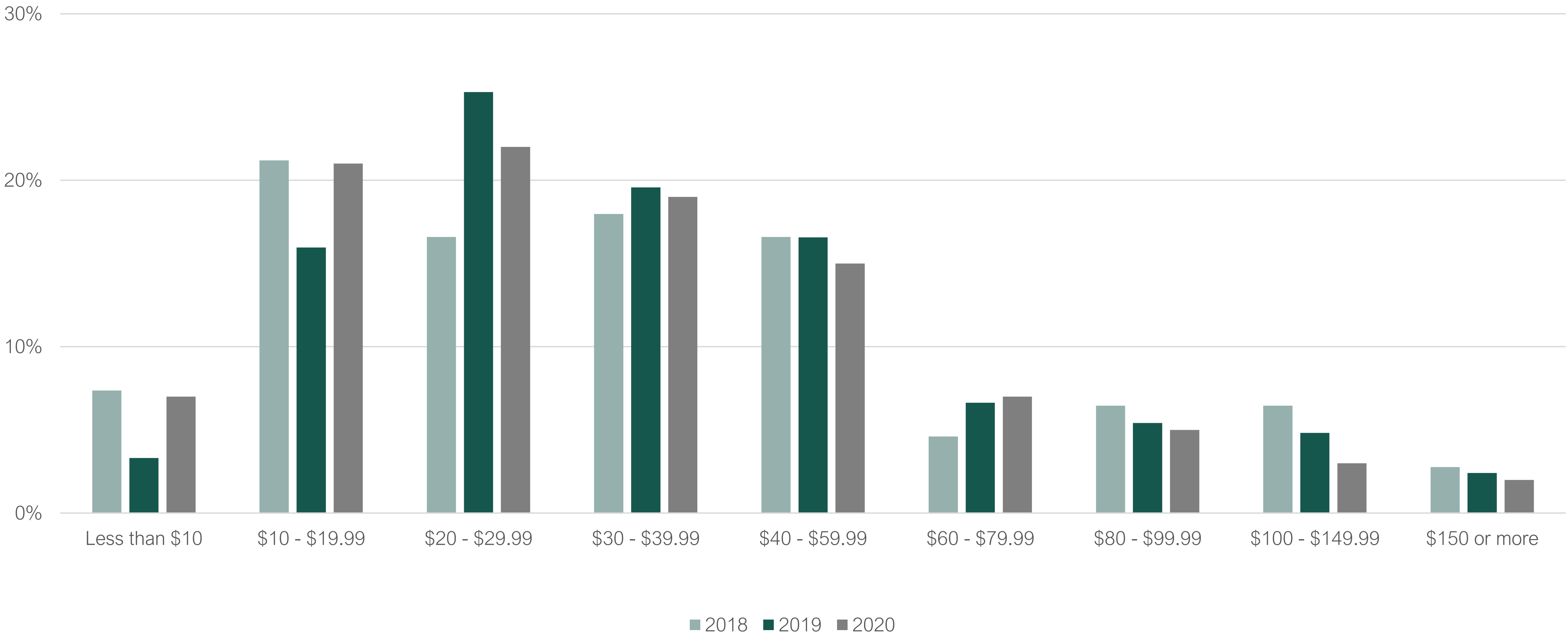
Users who take prebiotics are more likely to spend in the higher price categories.



Note: Take supplement at all. Prebiotic N=701, Probiotic N= 1065, Fish oil N=1018, Multivitamin= 1599. Question: "On average, how much do you spend monthly on vitamins, minerals, herbals, or other dietary supplements for just yourself?"

PREBIOTICS USER YEARLY SPEND: 2018-2020 (US DATA)

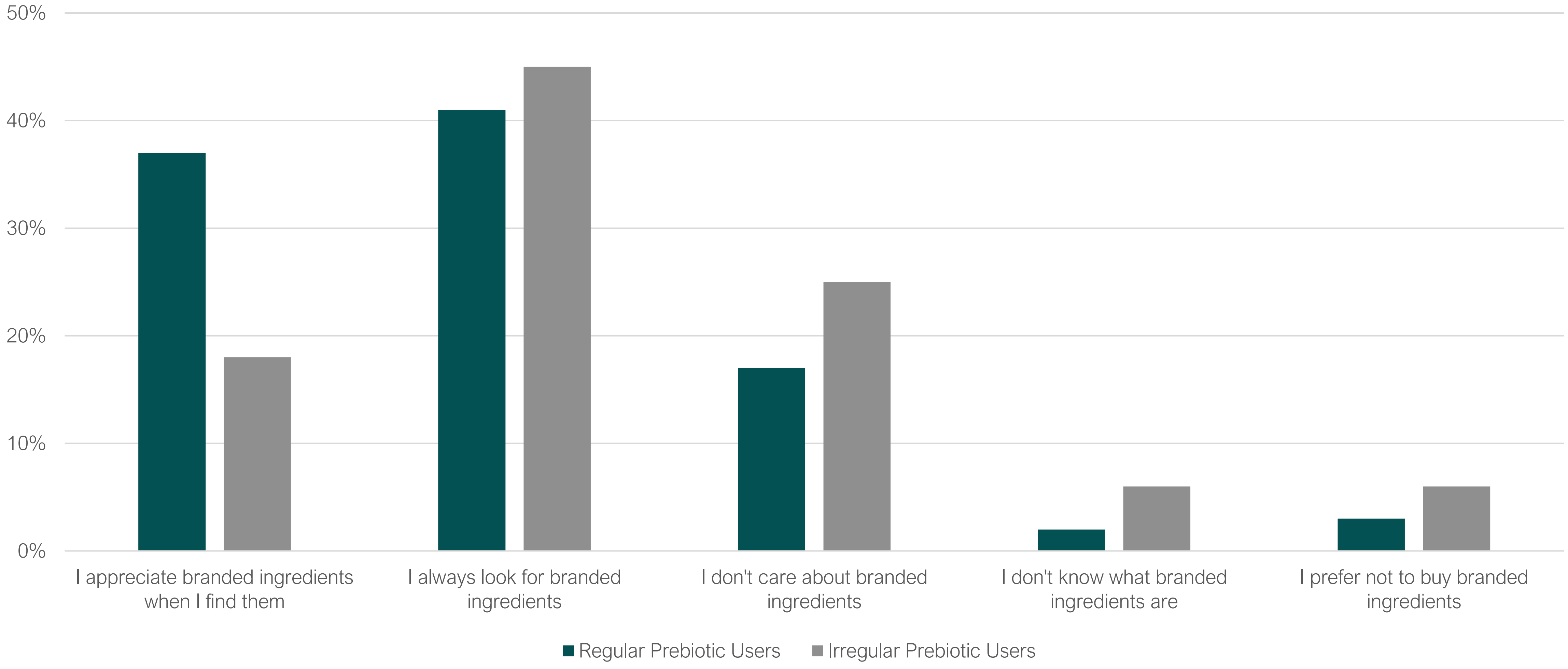
GLOBAL PREBIOTIC ASSOCIATION



US, take prebiotics at all. Question: On average, how much do you spend monthly on vitamins, minerals, herbals, or other dietary supplements for just yourself?

BRANDED INGREDIENTS

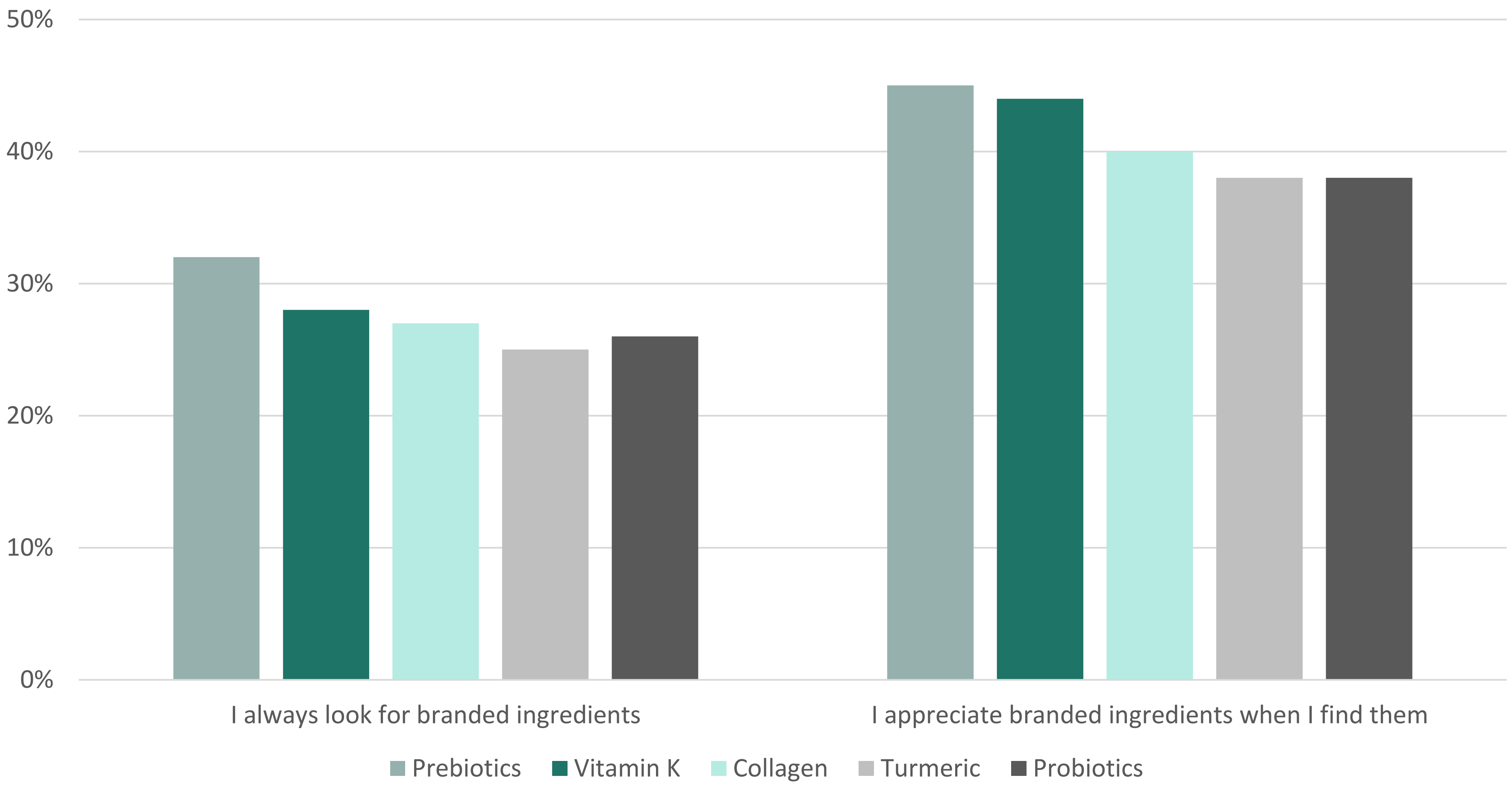
More prebiotic consumers choose branded ingredients than in other categories surveyed



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: “When deciding which supplements to purchase, how important is the inclusion of branded or proprietary ingredients?”

BRANDED INGREDIENTS: COMPARISON BETWEEN SUPPLEMENTS

GLOBAL PREBIOTIC ASSOCIATION

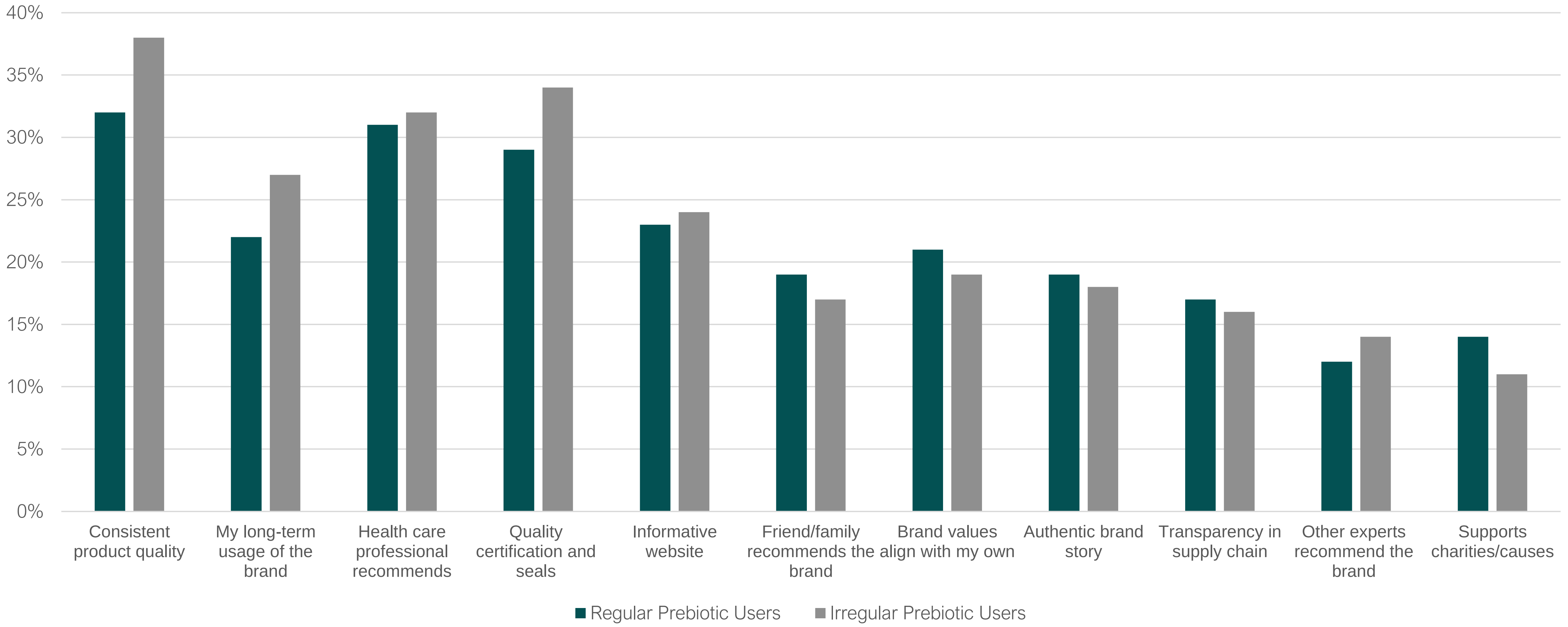


Take supplement regularly. Question: "When deciding which supplements to purchase, how important is the inclusion of branded or proprietary ingredients?"

TRUST, TRANSPARENCY AND SUSTAINABILITY INFLUENCE ON PREBIOTIC PURCHASING BEHAVIOR

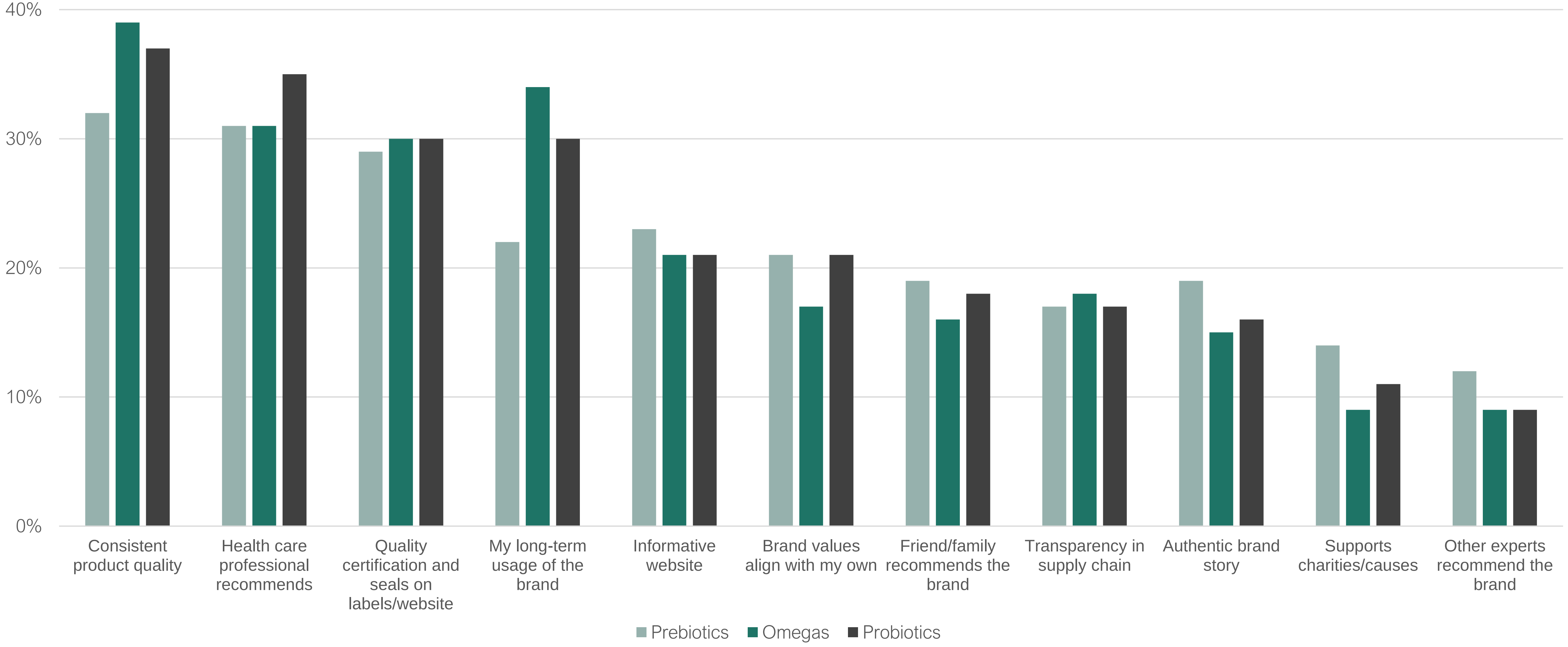
TRUST

Irregular prebiotic users care more about seals/ certs and an informative website than Regular users.



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: "What characteristics most encourage you to trust a supplement brand?"

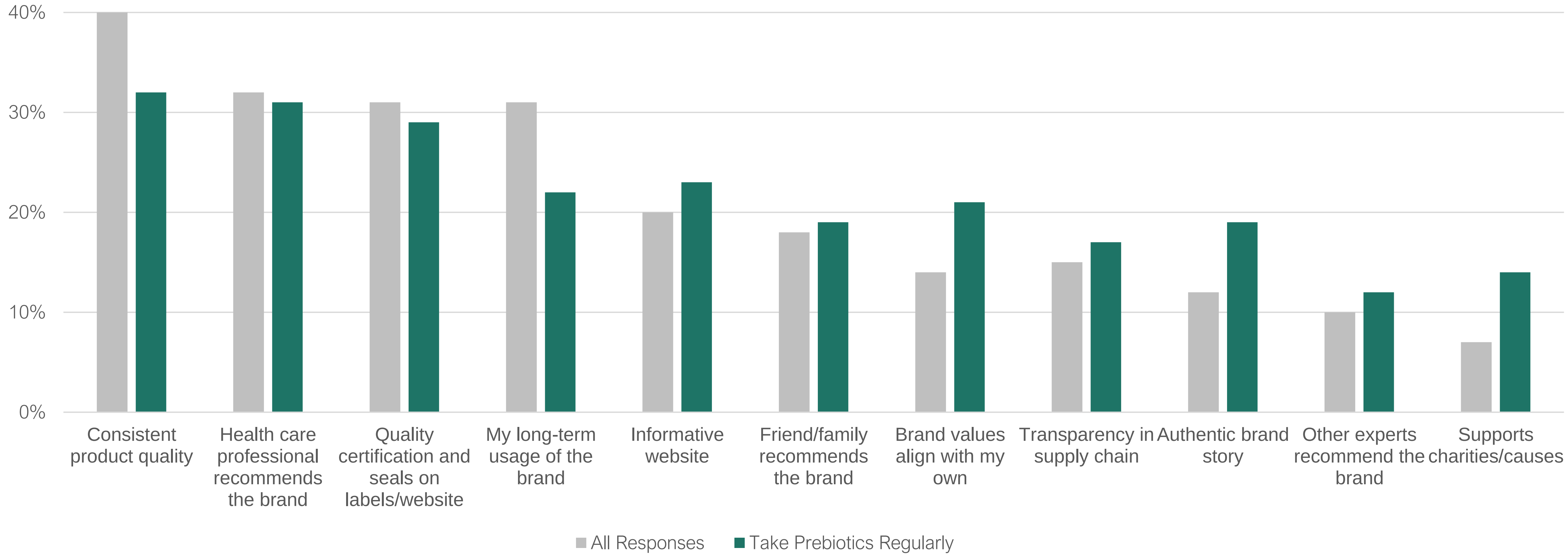
TRUSTING IN SUPPLEMENTS: PREBIOTICS VS OTHER CATEGORIES



Take supplement regularly. Question: “What characteristics most encourage you to trust a supplement brand?”

TRUST: ALL RESPONSES VS. PREBIOTIC USERS

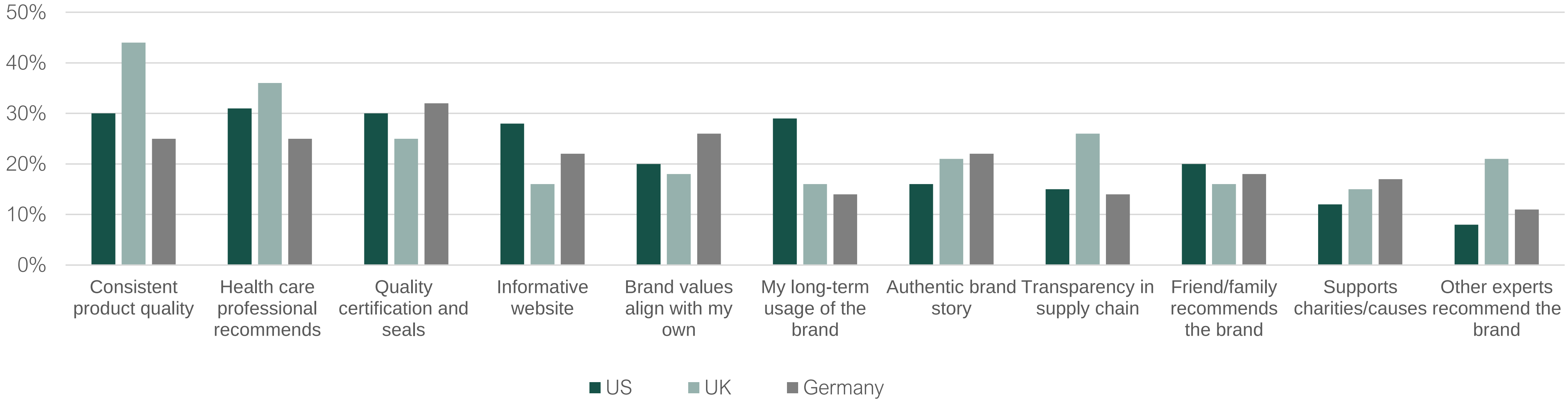
Prebiotic users tend to care more about values, causes and stories than other supplement users.

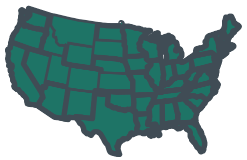


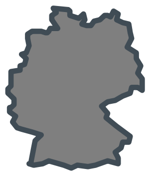
All responses to survey N=2004, take prebiotics regularly N=241. Question: “What characteristics most encourage you to trust a supplement brand?”

TRUST: BY COUNTRY FOR PREBIOTIC USERS

GLOBAL PREBIOTIC ASSOCIATION







US Top 3

- Health care professional
- Consistent product quality
- Certs & Seals

UK Top 3

- Consistent product quality
- Health care professional
- Transparency in supply chain

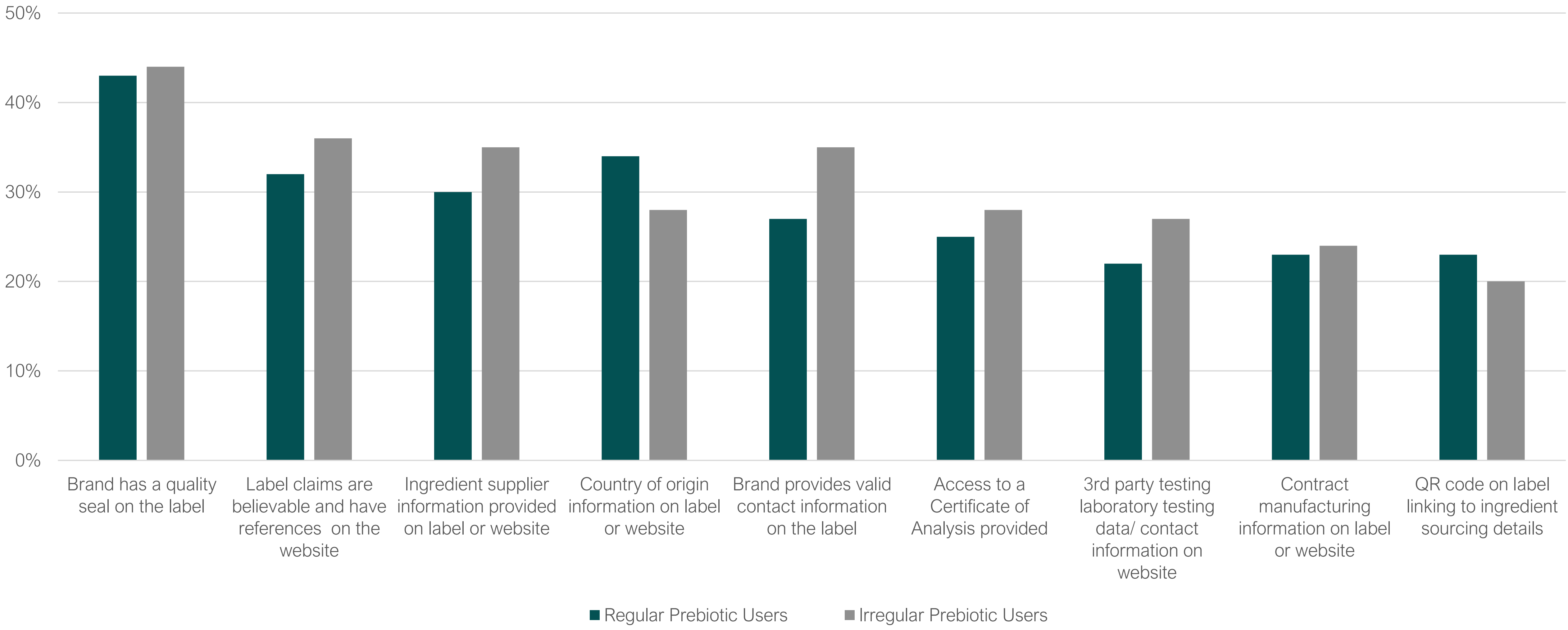
Germany Top 3

- Certs & Seals
- Brand values align
- Consistent product quality & Health care professional

Note: Regular Users indicated using supplement at least 4 times per week. US N=115, UK N= 61, Germany N=65. Question: “What characteristics most encourage you to trust a supplement brand?”

TRANSPARENCY SIGNALS

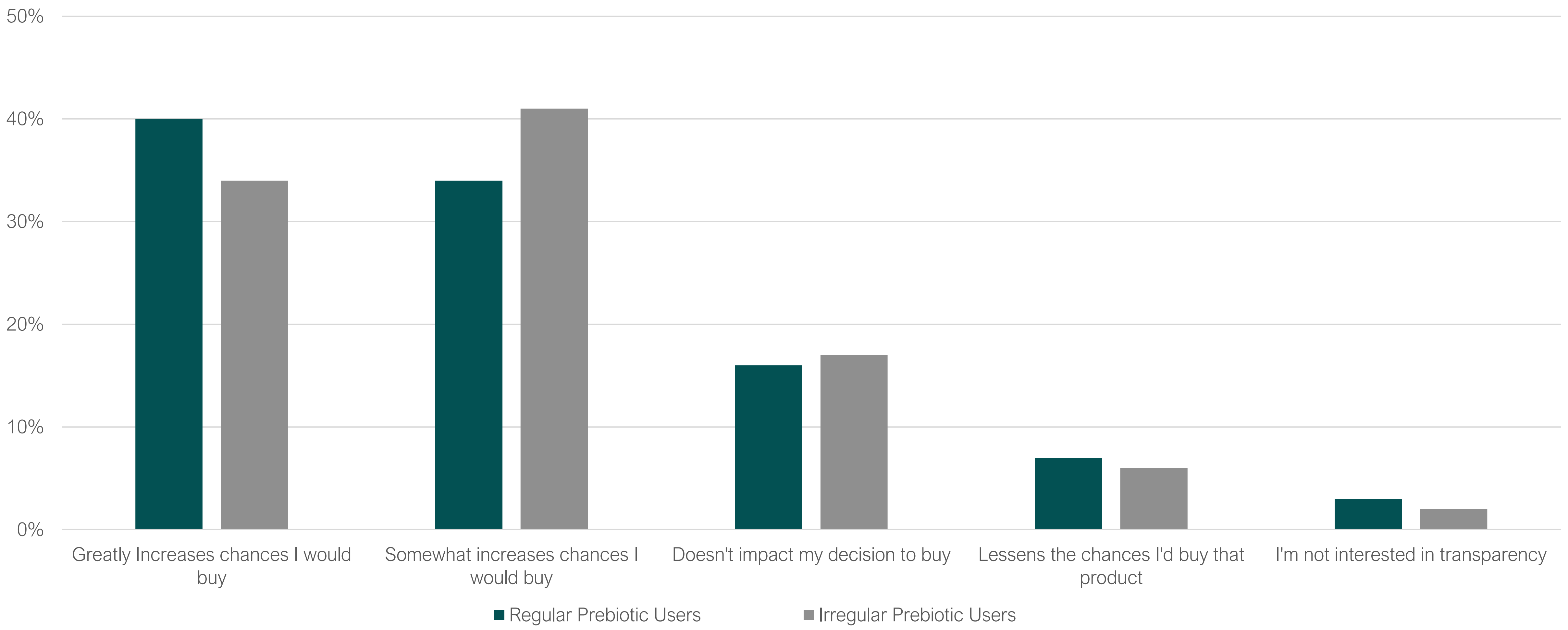
- Quality seals are important for all supplement consumers
- Country of origin is more important to prebiotic users than other supplement categories



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: “Which of the following items are the strongest signals that a supplement brand is operating transparently?”

TRANSPARENCY PURCHASE INFLUENCE

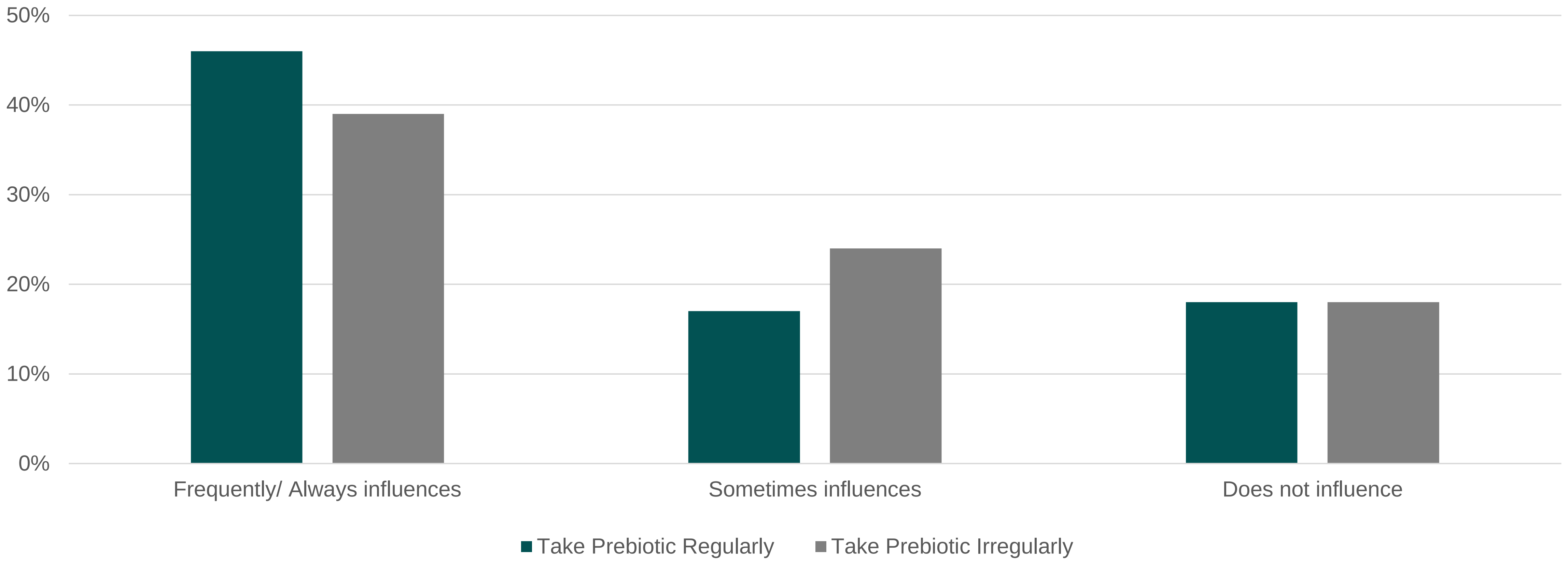
Transparency strongly influences purchase decision



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: “How likely are you to purchase supplements from a manufacturer that provides transparency information on its label or website?”

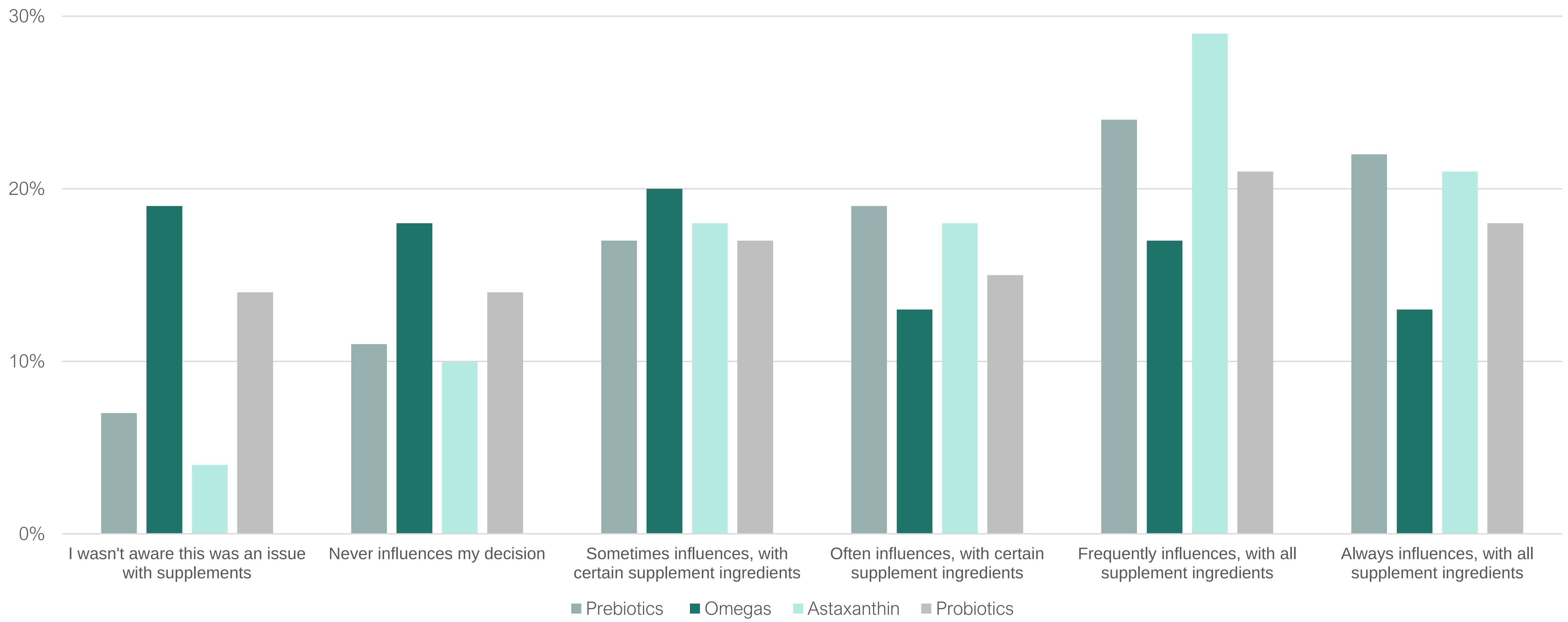
SUSTAINABILITY IMPACT

- An ingredient's sustainability/environmental impact has a significant impact on purchase decision among prebiotic users compared to other categories
- There was no significant variation by country



Note: Regular Users indicated using supplement at least 4 times per week. N=241 for Prebiotics Regular Users, N=460 for Prebiotics Irregular Users. Question: "When deciding which supplements to purchase, to what degree does the sustainability/environmental impact of a supplement ingredient influence your purchasing decision?"

SUSTAINABILITY: ACROSS SUPPLEMENTS



Question: “When deciding which supplements to purchase, to what degree does the sustainability/environmental impact of a supplement ingredient influence your purchasing decision?”

QUESTIONS?

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