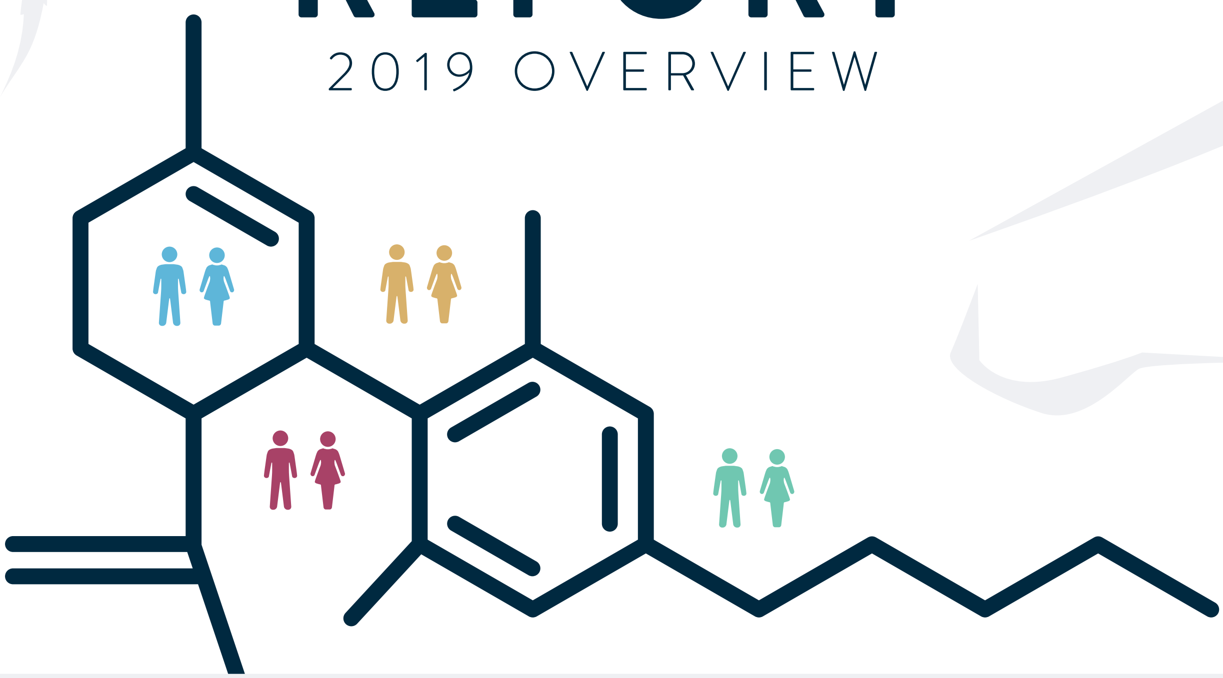
NewFrontier data

THE

EU CBD CONSUMER REPORT

2019 OVERVIEW



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LETTER FROM THE PUBLISHER

Whether in the United States or internationally, cannabidiol (CBD) is undergoing exponential growth in awareness, popularity, and use. Nowhere else is that more evident than in the European Union (EU).

The world's second-largest CBD market after the U.S. is home to 512 million potential consumers across 28 countries where trade in CBD products has been picking up speed after a few years of gradually gaining momentum. In ***The E.U. CBD Consumer Report: 2019 Overview,*** the first of a series of reports on the European CBD market, New Frontier Data examines the changing attitudes of consumers and the general public through comparison of eight subregions within the European market.

Covering 17 European nations, this continent-spanning study explores CBD perceptions, availability, adoption drivers, and consumption behaviors. Additionally, the report identifies differences across countries, including where the CBD market is rapidly maturing, and where there are gaps in the general awareness of (and openness to trying) CBD products. By providing data-driven insights into both high-performing nascent markets as well as those still developing, this report identifies opportunities both for growth and expansion while drawing attention to gaps in the market that CBD companies must address to maximize their potential. Indeed, this report creates a more holistic understanding of who is and is not a consumer of CBD, decision-making processes about both whether and how to consume CBD, and the overall utility that consumers derive from using CBD products. As such, it provides an exhaustive overview of the European CBD marketplace and consumer experience.

As is the case with all of our reports and country profiles available through New Frontier Data's online intelligence portal Equio™, we trust that readers will benefit from this fact-based assessment, our unbiased insights, and the actionable intelligence provided to continue to succeed in the global legal cannabis arena.

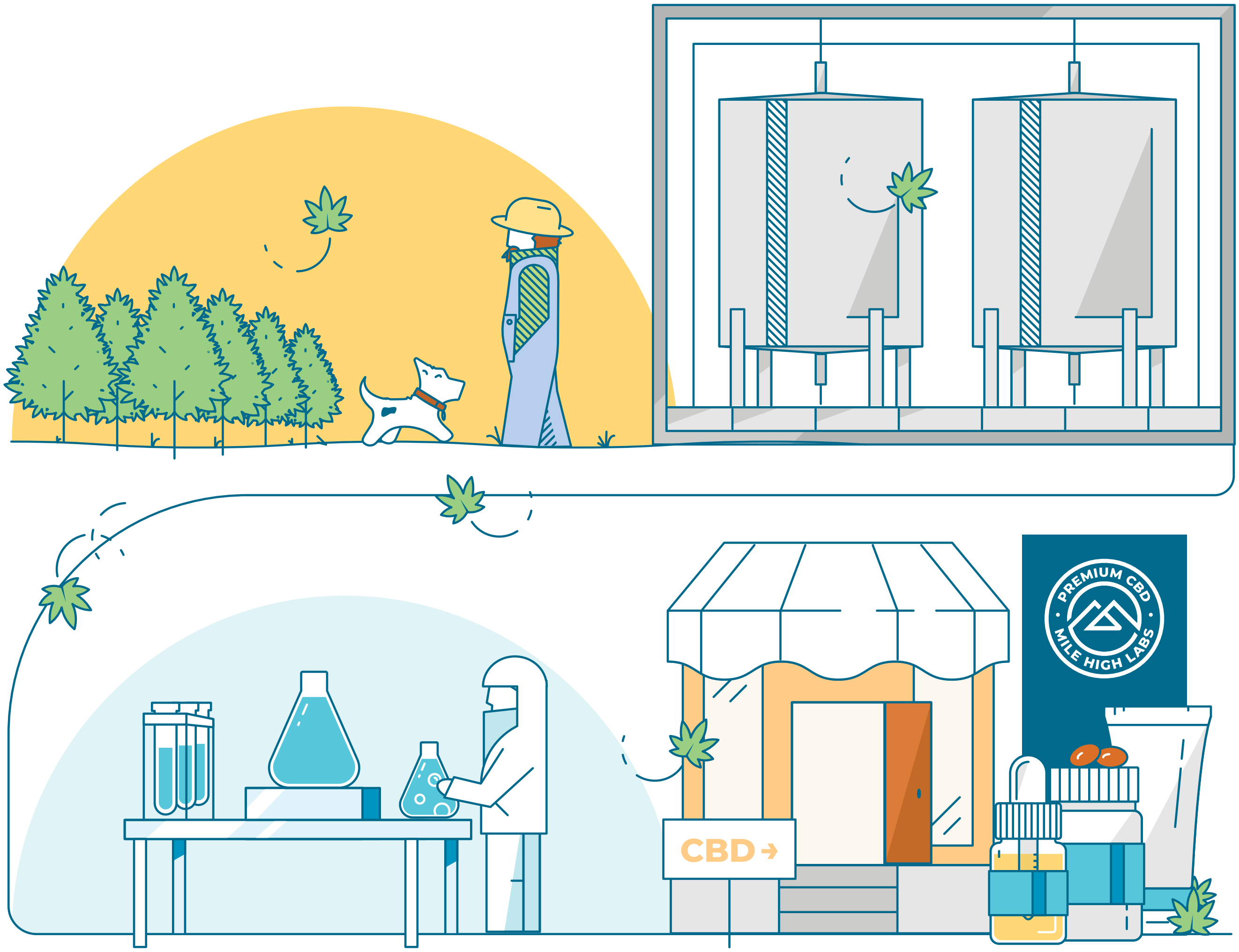
New Frontier Data's mission is to elevate the discussion around the legal cannabis industry globally by providing unbiased, vetted information intended for educating stakeholders to make informed decisions. We provide individuals and organizations operating, researching, or investing amid the cannabis industry with unparalleled access to actionable industry intelligence and insight, helping each to leverage the power of knowledge to succeed in a fast-paced and dynamic market.

As the global leader in Big Data analytics for legal cannabis markets, New Frontier Data is dedicated to publishing industry reports of the highest caliber.

Please do enjoy our newest report, produced in collaboration with **Deep Nature Project** and **Mile High Labs**, and harness the power of predictive analytics to shape your strategy and action plan within the cannabis industry!

Giadha Aguirre de Carcer
Founder and CEO, *New Frontier Data*

Strength in Knowledge®



DO YOU KNOW WHAT GOES INTO YOUR CBD?

You care about what goes into the products you use and you deserve to know that the label matches what's inside. The Mile High Labs Premium CBD seal is a symbol of trust and transparency signifying our commitment to producing only the highest-quality CBD products available.

1. Cultivation
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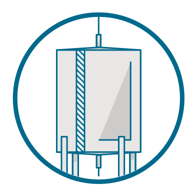
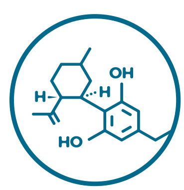


2. Extraction
Proprietary processes



3. Compliance
Quality control & testing

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Guaranteed purity and reliability

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EXECUTIVE SUMMARY

Cannabidiol (CBD) is experiencing exponential growth in awareness, popularity, and use on a global level. Across the European Union, CBD is slowly gaining traction, opening a market with millions of potential consumers. Composed of 28 member states, the European Union (EU) is home to 512 million potential consumers However, little has been known about the awareness, attitudes, adoption, and expectations of CBD across the region.

With the European opportunity for CBD growing quickly, New Frontier Data will focus on the evolving European market in a series of reports exploring changing consumer attitudes, the emerging industry's growth, and the European market in the broader global context. *The EU CBD Consumer Report: 2019 Overview* is the first report in the series.

Covering 17 European nations, the continent-spanning study explores CBD perceptions, availability, adoption drivers, and consumption behaviors. Additionally, differences are identified across countries, including where the CBD market is rapidly maturing and where there are gaps in the general awareness of, and openness to trying, CBD products.

By providing data-driven insights into both high-performing nascent markets as well as those still developing, this report identifies opportunities for growth and expansion while drawing attention to gaps in the market that CBD companies must address to maximize their potential. Indeed, this report creates a more holistic understanding of who is or is not a consumer of CBD, decision-making processes about both whether and how to consume CBD, and the overall utility that consumers derive from using CBD products. As such, New Frontier Data provides an exhaustive overview of the European CBD marketplace and consumer experience.

European CBD Consumer Survey

SURVEY OVERVIEW

SAMPLE SIZE **3,100**	MARGIN OF ERROR **±1.76%**
GEOGRAPHY **17 Countries**	POPULATION REPRESENTED **296,790,205**
FIELDING DATES **10/8/2019 – 10/17/2019**	METHODOLOGY **Online Survey**

SURVEY THEMES: Awareness about and use of CBD, openness to trying related products, purchasing decisions, spending behavior, public beliefs, and policy expectations for CBD's regulations, and how it may best be regulated.

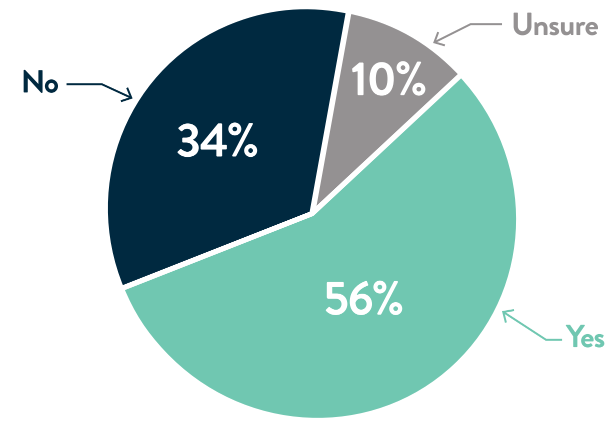
Key Findings

Notable findings include:

CBD USE IN EUROPE:

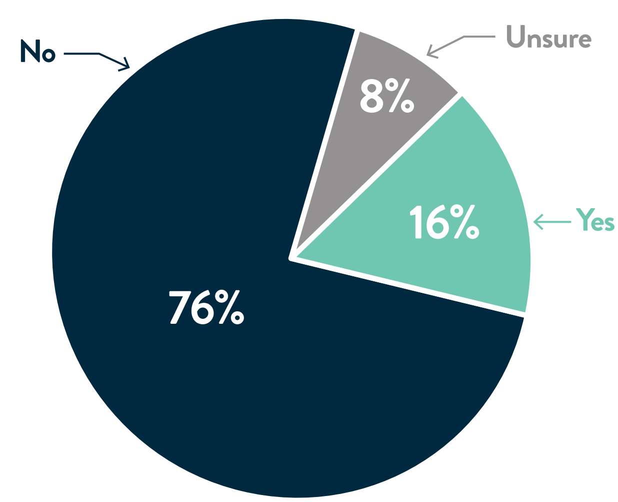
- The awareness of CBD among European consumers is relatively high. More than half of respondents (56%) had heard of CBD. However, CBD use is significantly lower, with 16% reporting having used CBD or CBD products.
- CBD use is nascent. A majority (58%) of those who reported having used CBD said they first tried it in the preceding six months.
- The most frequently indicated reason for using CBD was pain management (40%), followed closely by relaxation (34%) and stress relief (31%).
- Three-quarters of respondents (74%) who have used CBD reported that it has had a positive impact on their quality of life. The overwhelming majority (87%) indicated that CBD had not displaced any of their medications. However, 42% of consumers reported having replaced an over-the-counter medication with CBD.
- When nonconsumers were asked why they abstained from using CBD, the most common reason identified was that they were not interested in the product (26%), followed closely by not knowing enough about CBD (25%). Additionally, 44% of those who had not consumed reported that they had no curiosity about trying CBD.

HAVE YOU HEARD OF CBD?



Source: New Frontier Data 2019 European CBD Survey

HAVE YOU EVER USED CBD?



Source: New Frontier Data 2019 European CBD Survey

ATTITUDES AND AWARENESS OF CBD IN EUROPE:

- There remains a lack of clarity among consumers about the nature of CBD and the differences between it and high-THC cannabis. More than half of the respondents (53%) either believed that CBD consumption gets the user high (25%), or were unsure whether it does (28%). Nevertheless, CBD enjoys broadly positive public perception, with nearly half of survey respondents reporting that they had a positive impression of CBD (46%) and a minority (15%) expressing a negative impression.

COUNTRIES SURVEYED

Source: New Frontier Data

- A majority (56%) believed that CBD consumers should have legal access to it. Approximately one-third (35%) said that CBD should be available to anyone with a doctor's note or prescription, while an additional 21% supported its availability to any adult. Only 6% of survey respondents felt that CBD should be illegal.

- A majority supported standardization and regulation of CBD products, with 58% agreeing that its laboratory testing should be legally required.

Country-Level Markets

Beyond capturing consumer insights, sentiment, and behavior across the EU, this report provides regional-level comparisons of individual countries or groups of countries with similar markets and consumers that speak to the current state of the CBD market. The eight regional markets discussed are:

- **Ch/Aus:** Switzerland & Austria
- **Benelux:** Belgium, Netherlands & Luxembourg
- **Swe/Den:** Sweden & Denmark
- **UK/Ire:** The United Kingdom & Ireland
- **Germany**
- **Italy**
- **Sp/Port:** Spain & Portugal
- **France**

Such findings highlight the overall market penetration of CBD products within a given region, and provide data on use rates, attitudes, and openness to trying CBD in the future. Highlights include:

- Respondents from UK/Ire were the likeliest to have heard of CBD (78%). Awareness was also high among Ch/Aus respondents (69%), and those from Benelux (69%). French respondents were the least likely to have heard of CBD (36%), significantly below the European average (56%).

- Ch/Aus (33%), Benelux (25%), and Swe/Den (20%) had the highest CBD use rates across the surveyed blocs, each exceeding the European average (16%). Again, France demonstrated the lowest rates of CBD usage (7%).

- Satisfaction was high among those having tried CBD, with the majority of users indicating that it positively affected their quality of life (74%). Satisfaction was highest among consumers in Sp/Port (92%) and Italy (85%).

- European consumers were also broadly satisfied with the specific types of CBD products they purchased. Consumers in Italy (85%) and France (84%) were the most satisfied. Even where satisfaction was lowest, almost half of consumers indicated that they were satisfied with their purchase (Swe/Den, 49%).

- Europeans broadly supported the idea that CBD has valid medical uses. Respondents in Ch/Aus (62%) and UK/Ire (62%) reported being the most supportive of CBD's having valid medical uses. Even among the most skeptical of respondents (France at 46% and Italy at 45%), support for CBD as having valid medical applications approached the halfway mark.

- Close to half of respondents having not yet tried CBD in Ch/Aus (47%) or Benelux (42%) indicated that they would be likely to try CBD if it were offered to them by someone they trusted. Conversely, responses among the remaining regions surveyed dropped, with about a third of participants indicating willingness to try CBD, and those in France (27%) being the least likely to try even if offered by a trusted person.

COUNTRY LEVEL CBD CONSUMER OVERVIEW

	Ch/Aus	Benelux	Swe/Den	UK/Ire	Germany	Italy	Sp/Port	France
Have heard of CBD	69%	69%	55%	78%	49%	52%	44%	36%
Have consumed CBD	33%	25%	20%	14%	14%	11%	10%	7%
[Consumers] CBD positively affected quality of life	63%	76%	65%	74%	76%	85%	92%	67%
Agree with "CBD has valid medical uses"	62%	57%	50%	62%	59%	45%	53%	46%
[Purchasers] Generally satisfied with purchased CBD (agree)	65%	68%	49%	71%	67%	85%	69%	84%
[Non-users] Somewhat or very likely to try CBD if offered by trusted person	47%	42%	36%	38%	33%	35%	38%	27%

LOW INCIDENCE HIGH INCIDENCE

Source: New Frontier Data 2019 European CBD Survey

ABOUT NEW FRONTIER DATA

New Frontier Data is an independent, technology-driven analytics company specializing in the global cannabis industry. It offers vetted data, actionable business intelligence and risk management solutions for investors, operators, researchers, and policymakers. New Frontier Data's reports and data have been cited in over 80 countries around the world to inform industry leaders. Founded in 2014, New Frontier Data is headquartered in Washington, D.C., with additional offices in Denver, CO, and London, UK.

New Frontier Data does not take a position on the merits of cannabis legalization. Rather, its mission and mandate are to inform cannabis-related policy and business decisions through rigorous, issue-neutral, and comprehensive analysis of the legal cannabis industry worldwide.

For more information about New Frontier Data, please visit: NewFrontierData.com.

Mission

New Frontier Data's mission is to elevate the discussion around the legal cannabis industry globally by providing unbiased, vetted information for educating stakeholders to make informed decisions.

Core Values

- Honesty
- Respect
- Understanding

Vision

Be the Global Big Data & Intelligence Authority for the Cannabis Industry.

Commitment to Our Clients

The trusted one-stop shop for actionable cannabis intelligence, New Frontier Data provides individuals and organizations operating, researching, or investing in the cannabis industry with unparalleled access to actionable industry intelligence and insight, helping them leverage the power of big data to succeed in a fast-paced and dynamic market.

We are committed to the highest standards and most rigorous protocols in data collection, analysis, and reporting, protecting all IP and sources, as we continue to improve transparency into the global cannabis industry.

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METHODOLOGY

New Frontier Data designed and conducted an online survey in order to assess the attitudes, perceptions and use of cannabidiol (CBD) across the European Union.

Survey themes included: CBD use, purchasing behavior and decision influencers, product preferences and expenditures, beliefs about CBD, and policy attitudes.

The survey was conducted in October 2019. The estimated margin of error for the survey is 1.76%, given a confidence interval of 95%.

The survey recorded 3,101 responses collected from 17 countries: The United Kingdom, France, Germany, Italy, Spain, Sweden, Austria, Denmark, Switzerland, Belgium, the Netherlands, Hungary, Ireland, Portugal, Greece, Poland, and Luxembourg.

SURVEY STATS	
SAMPLE SIZE **3,101**	MARGIN OF ERROR **±1.76%**
FIELDING DATES **10/8/2019 – 10/17/2019**	METHODOLOGY **Online Survey**

The 20-minute online survey was available to respondents in their choice of six languages: English, German, French, Spanish, Italian, and Hungarian. Sampling was demographically representative of the adult population of each country surveyed (over n = 80) in the European Union.

Analyses were conducted on subsets of the sample: CBD consumers (respondents who indicated that they had ever consumed CBD, n = 507), CBD purchasers (respondents who indicated having purchased CBD, whether for themselves or someone else, n = 485), as well as potential consumers (those who had not or were unsure if they had consumed CBD, n = 2,594) and potential purchasers (those who had not purchased CBD, n = 2,616).

Regional Subgroupings

To perform more robust and valid analysis on regions within Europe, the countries surveyed were grouped into eight subregions.

Regional sub-groupings of countries were developed after preliminary analysis of individual countries. In addition to being geographically contiguous and sharing cultural and economic similarities, countries which have been grouped together had similar responses to key survey measures such as CBD attitudes, use prevalence, and spending.

Country	Country *n*	Regional Subgroup	Regional *n*
United Kingdom	409	UK/Ire	498
Ireland	89		
France	404	France	404
Germany	401	Germany	401
Spain	309	Sp/Port	367
Portugal	58		
Italy	309	Italy	309
Sweden	155	Swe/Den	302
Denmark	147		
Belgium	144	Benelux	301
Netherlands	140		
Luxembourg	17		
Austria	154	Ch/Aus	300
Switzerland	146		
Hungary	116	Not analyzed as regional groups	
Greece	53		
Poland	50		

Countries with small sample sizes that were not similar to neighboring countries (Hungary, Greece, Poland) were not analyzed as part of larger regions, but broad, preliminary findings from these markets are summarized at the end of the report.

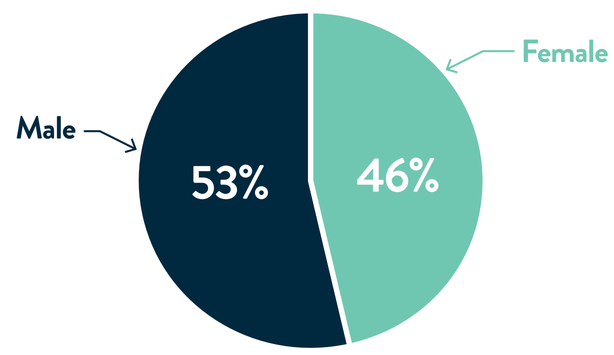
INTRODUCTION

2019 European CBD Survey: Sample and Demographics

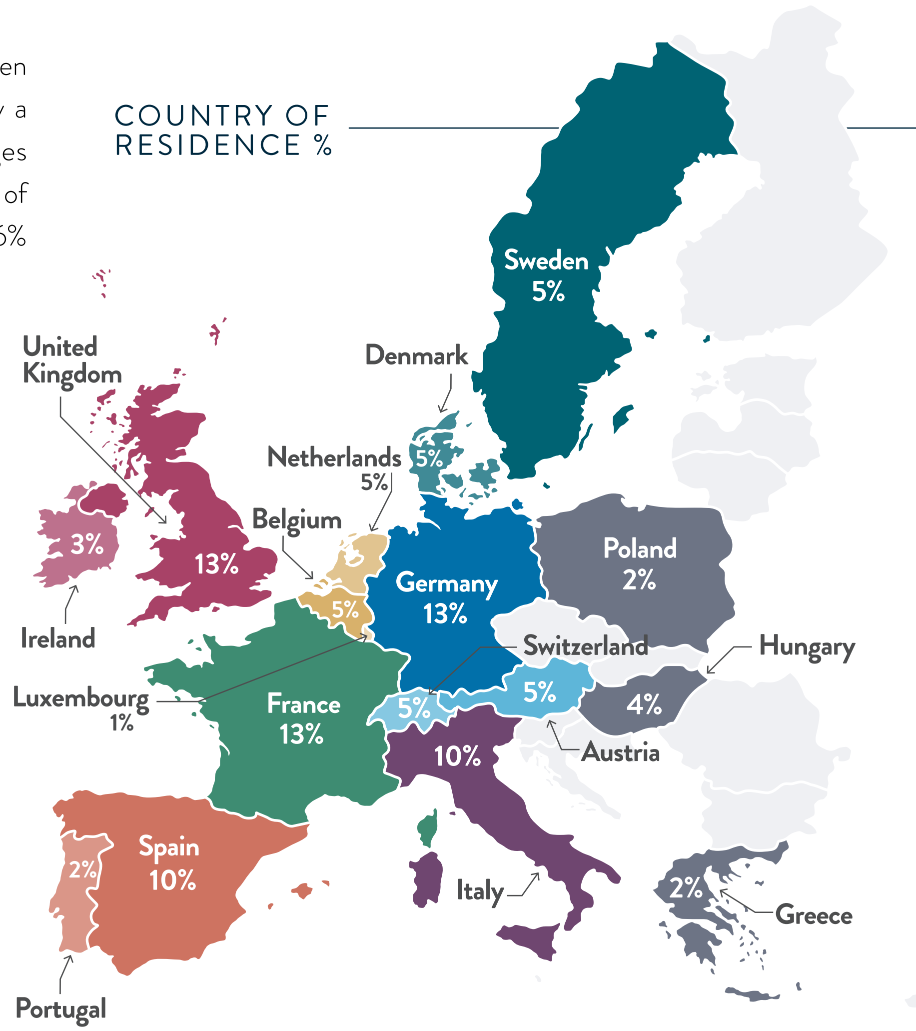
The survey was administered in 17 countries across Europe. The largest populations within the sample were drawn from the United Kingdom, France, and Germany (13%), followed by Italy and Spain (10%).

Just over half of the sample population is between 18 and 44 years-old (52%), while roughly a third (30%) is 55 or older. Respondents' ages ranged between 18 and 98 years. The gender of the respondents skewed male (53% male; 46% female; 1% other or not specified).

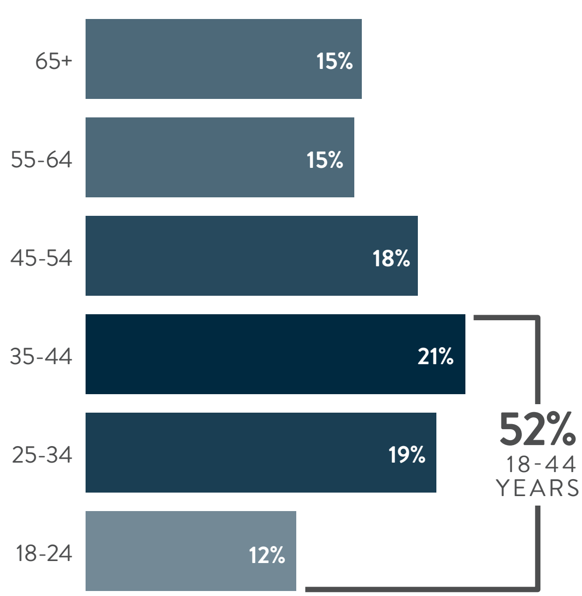
GENDER



COUNTRY OF RESIDENCE %



AGE DISTRIBUTION



Source: *New Frontier Data 2019 European CBD Survey*

PART I: CBD ATTITUDES AND TRENDS ACROSS EUROPE

The survey explored awareness of and exposure to CBD, as well as beliefs about CBD's properties, applications, and best policies.

Those who had consumed CBD and/or purchased CBD were asked about their consumption and purchasing behaviors and preferences, and those who had not consumed or purchased CBD were asked questions to gauge their interest and potential interaction with CBD in the future.

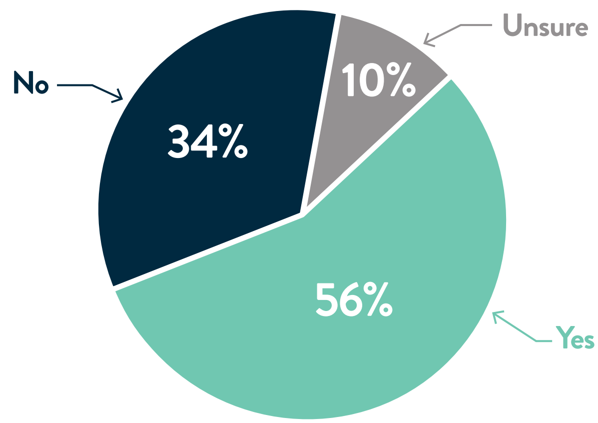
CBD AND THE GENERAL POPULATION

Awareness of CBD

More than half of respondents (56%) indicated having heard of CBD, while more than one-third (34%) reported having not done so. Among those reporting having known of it, 39% said they had become aware of it more than a year previously; nearly the same amount (38%) reported having learned of it within 1-12 months previously.

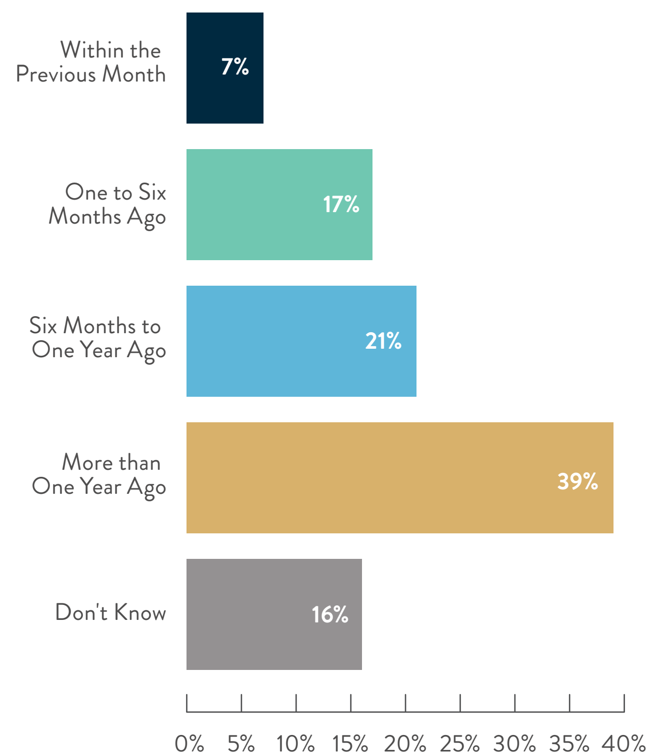
Despite a majority of respondents being aware of CBD, uncertainty about the cannabinoid remains. Just over half of the survey respondents (53%) reported believing either that CBD consumption got the user high (25%), or were uncertain whether it did (28%).

HAVE YOU HEARD OF CBD?



Source: New Frontier Data 2019 European CBD Survey

WHEN WERE YOU FIRST AWARE OF CBD?



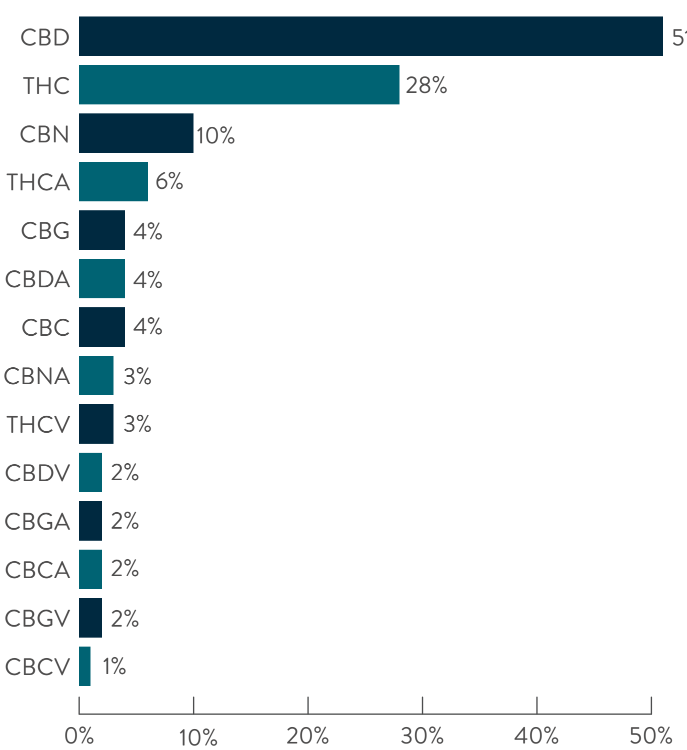
Source: New Frontier Data 2019 European CBD Survey

A significantly higher proportion of respondents (80%) reported that CBD can be used to treat some medical conditions.

While more than half (56%) reported not knowing the difference between CBD and hemp oil, another 22% were unsure. Similarly underscoring confusion about CBD's status, 30% of respondents expressed uncertainty whether it was legal for purchase or possession in their respective countries.

Of the listed cannabinoids, European adults were most aware of CBD (51%) and THC (28%). Only 10% had heard of CBN, and all other cannabinoids rated in the low single digits.

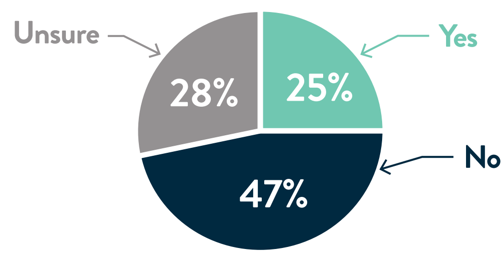
HAVE YOU HEARD OF THE FOLLOWING CANNABINOIDS?



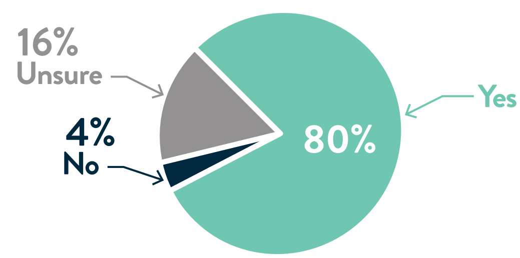
Source: *New Frontier Data 2019 European CBD Survey*

WHAT DOES THE PUBLIC KNOW ABOUT CBD?

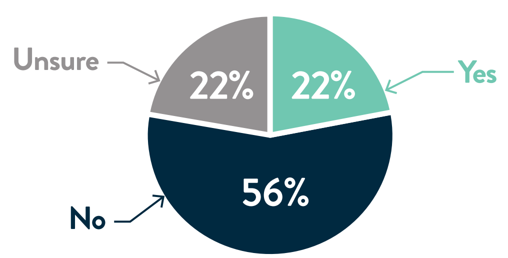
CONSUMING CBD CAUSES A HIGH



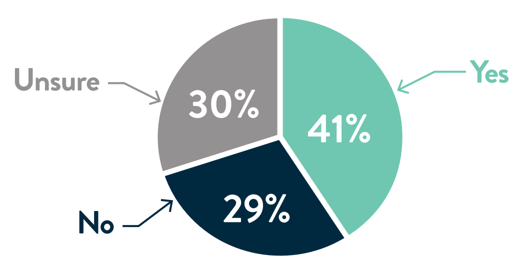
CBD CAN TREAT SOME MEDICAL CONDITIONS



DO YOU KNOW THE DIFFERENCE BETWEEN HEMP OIL AND CBD OIL?



IS CBD LEGAL TO POSSESS AND BUY?



Source: *New Frontier Data 2019 European CBD Survey*

Exposure to CBD

Nearly half of the survey respondents (45%) reported that they have not seen CBD products available for purchase. For those that have seen CBD products, the most common outlets were either online (30%) or in a pharmacy or drugstore (23%).

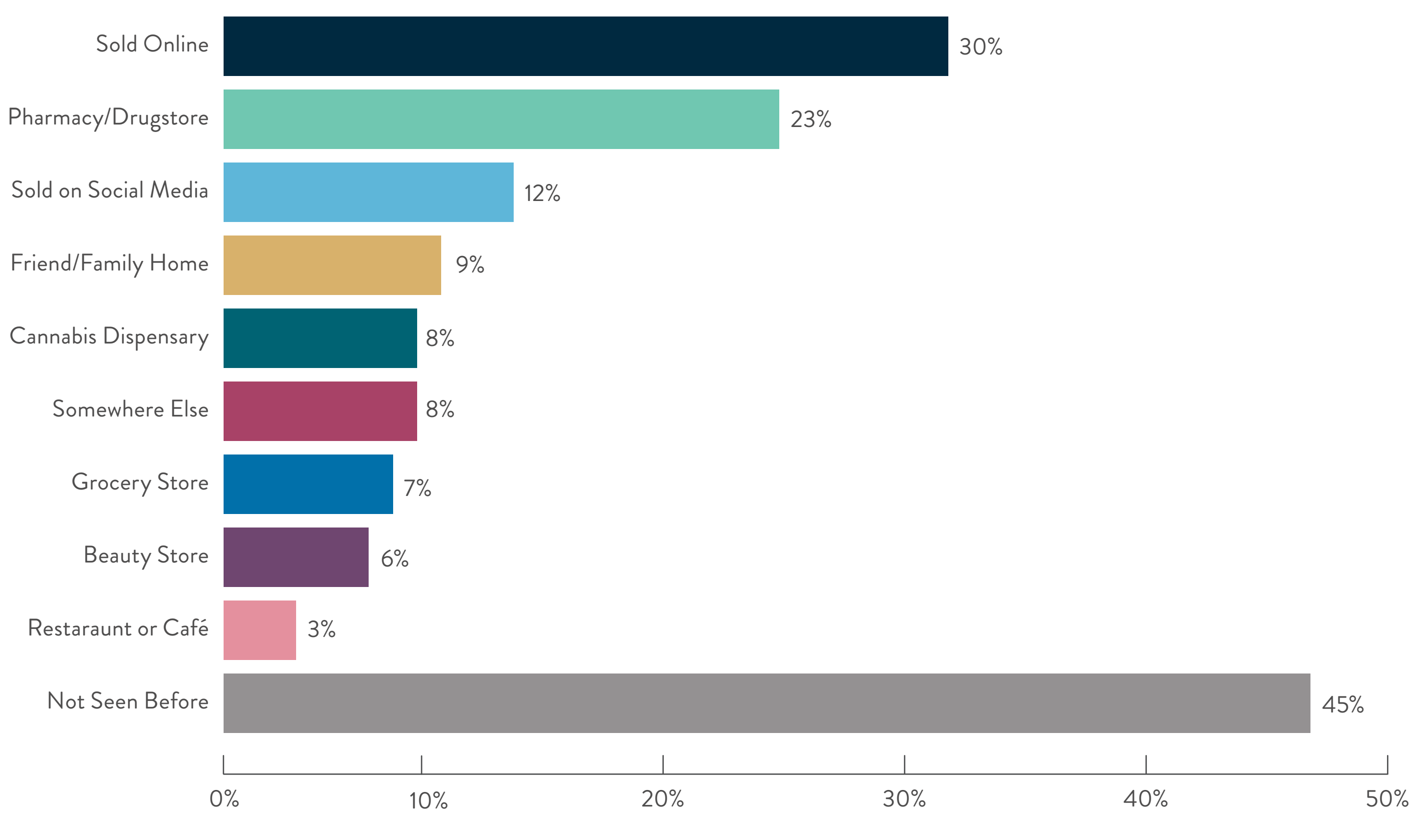
CBD information sources were widely varied. The most common sources include television news (25%), social media (21%), newspapers (19%), news websites (19%), or internet searches (19%).

Only 9% of respondents indicated that they source information from CBD brand websites.

Respondents generally felt the coverage of CBD was positive (56%); only 7% reported that the coverage they saw was negative.

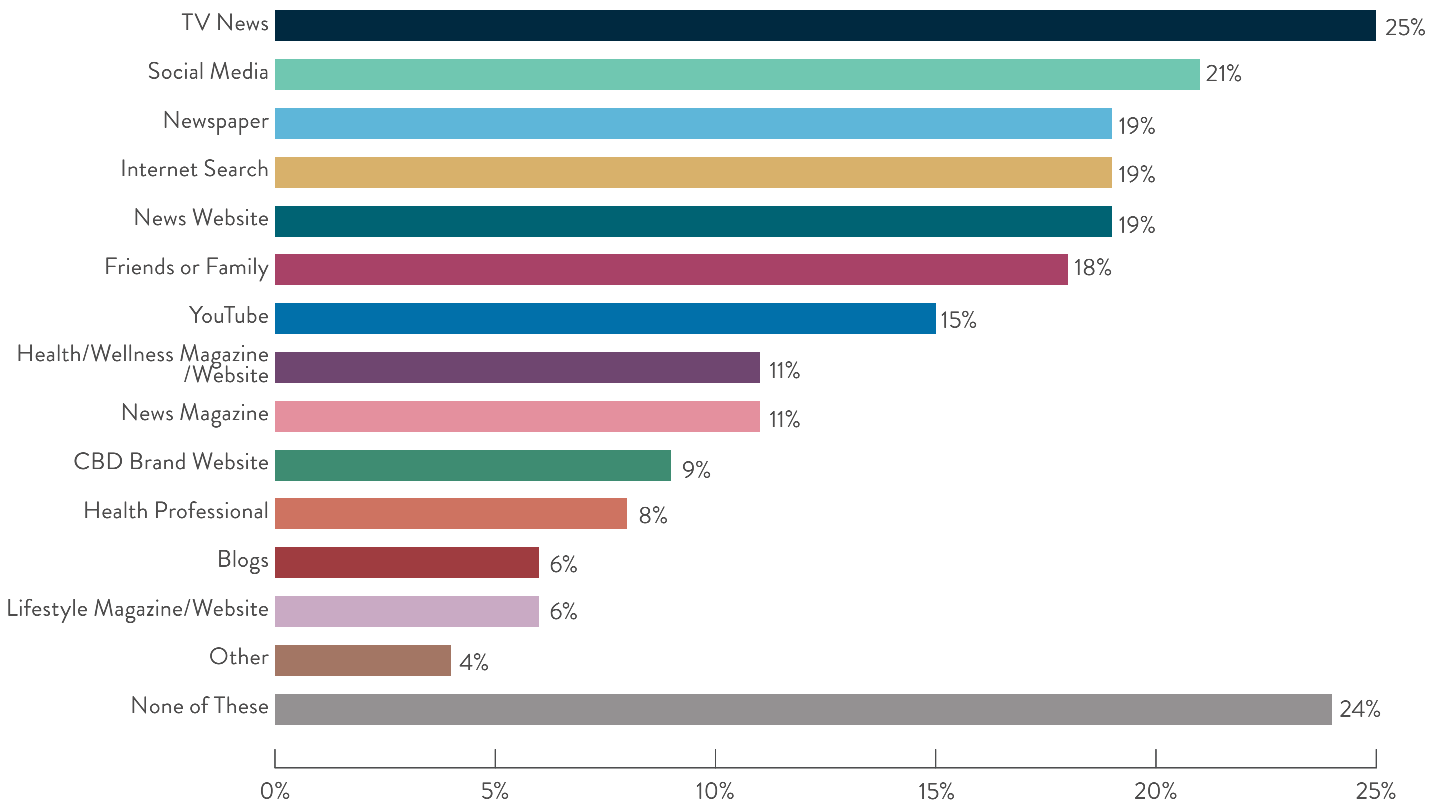
Over half of respondents (55%) are also interested in learning more about CBD, suggesting a potentially large base of persuadable consumers if products and messaging are effectively aligned to their interests and preferences.

WHERE HAVE YOU SEEN CBD PRODUCTS?



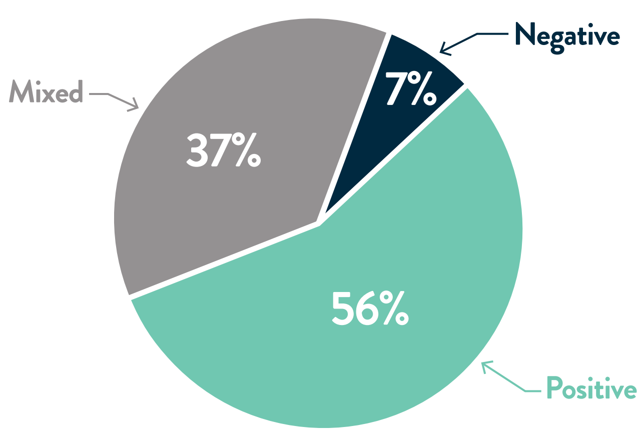
Source: New Frontier Data 2019 European CBD Survey

SOURCES FOR INFORMATION ABOUT CBD

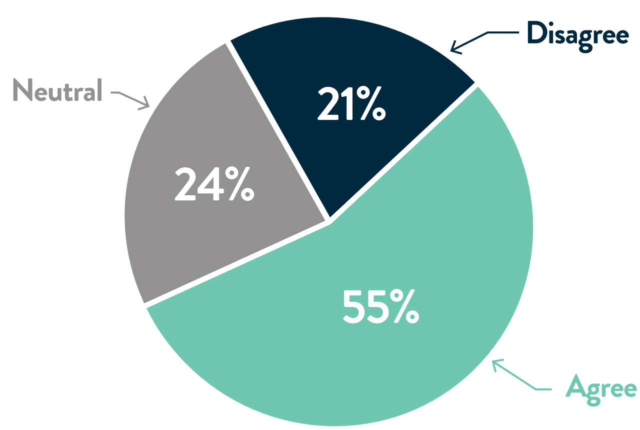


Source: New Frontier Data 2019 European CBD Survey

ATTITUDE OF PRIMARY SOURCE OF INFORMATION TOWARD CBD



I AM INTERESTED IN LEARNING MORE ABOUT CBD



Source: New Frontier Data 2019 European CBD Survey

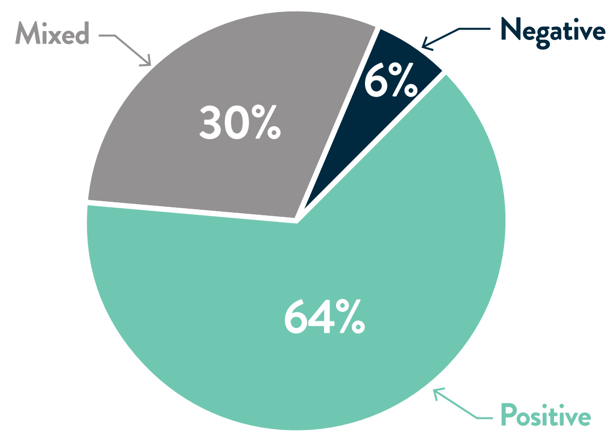
Interpersonal Information-Sharing About CBD

CBD has pierced Europe's social fabric, with 60% of respondents indicating they had discussed CBD with someone else. Those who had discussed CBD were most likely to have spoken with friends (32%), family (23%), or a spouse or partner (20%).

Notably, a majority (64%) indicated that these conversations were positive; only 6% said that the overall attitude of the conversation was negative.

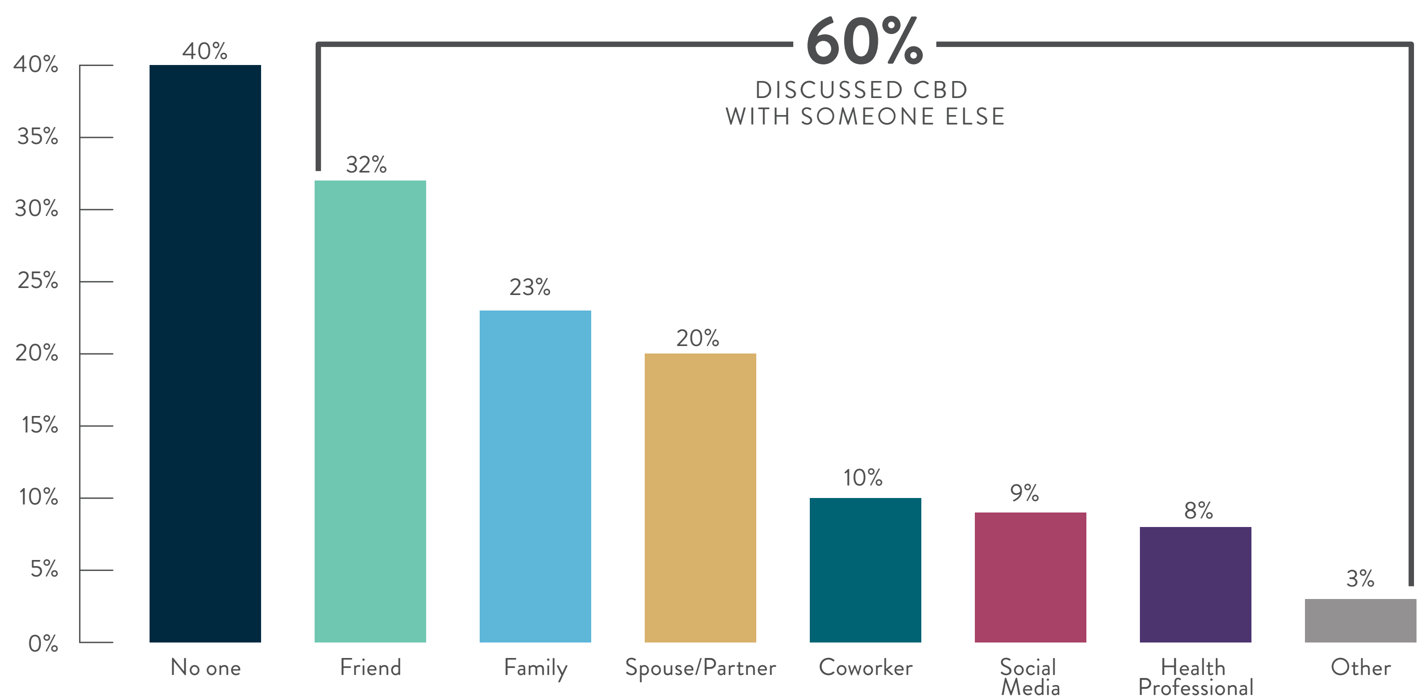
Taken together, these findings suggest that word-of-mouth among close social connections is playing an important role in advancing awareness and support for CBD across the continent.

WHAT WAS THE OVERALL ATTITUDE OF YOUR CONVERSATION ABOUT CBD?



Source: New Frontier Data 2019 European CBD Survey

WHO HAVE YOU TALKED TO ABOUT CBD?

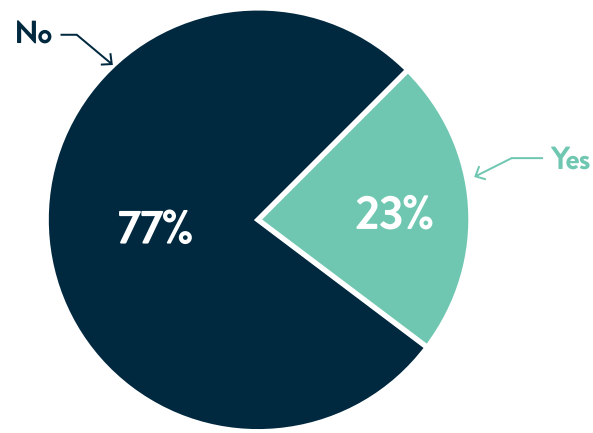


Source: New Frontier Data 2019 European CBD Survey

A significant proportion of survey respondents (77%) had not received a recommendation to try CBD from anyone they know. Friends were the most likely to recommend CBD (63%), followed by family members (28%). CBD was most commonly recommended for general health and wellbeing (52%) and the treatment of medical conditions or symptoms (51%).

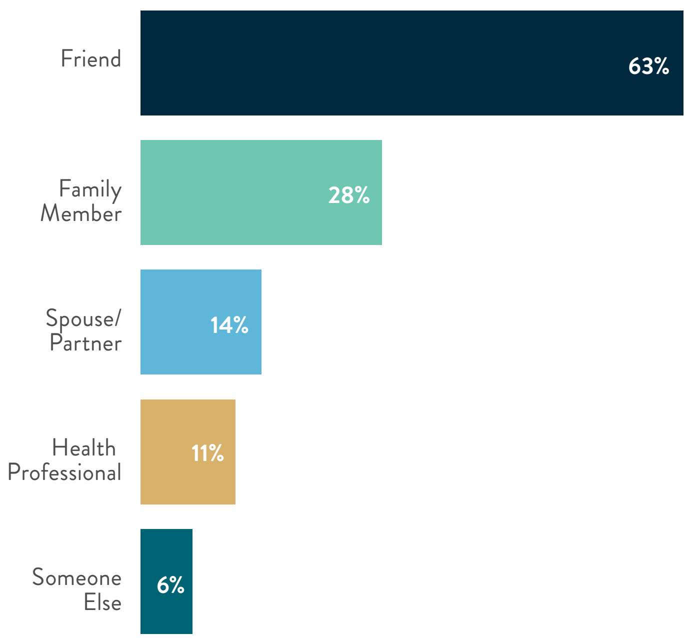
An even larger percentage had not themselves recommended CBD products to anyone they know (86%). Among the minority that recommended CBD to someone else, the most common reasons for a recommendation include pain management (58%), stress relief (33%), and relaxation (32%). Forty-four percent (44%) indicated knowing friends or family using CBD.

HAS ANYONE YOU KNOW RECOMMENDED THAT YOU TRY CBD?

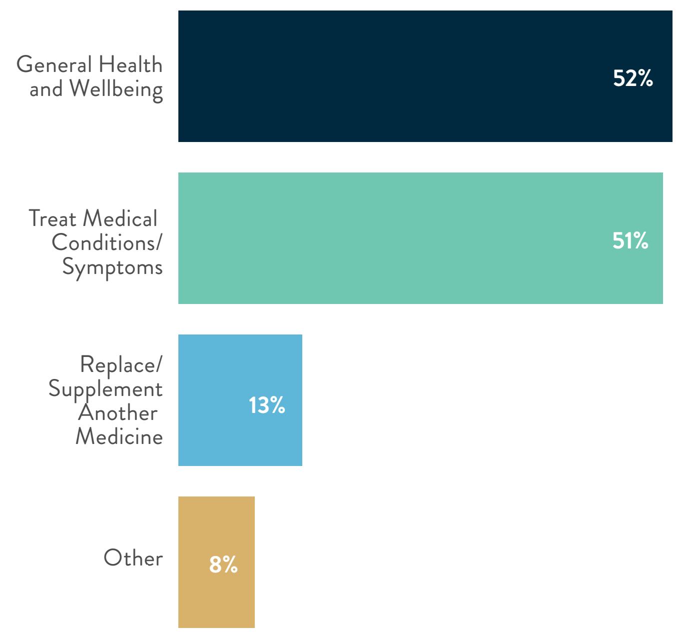


Source: New Frontier Data 2019 European CBD Survey

WHO RECOMMENDED THAT YOU TRY CBD?



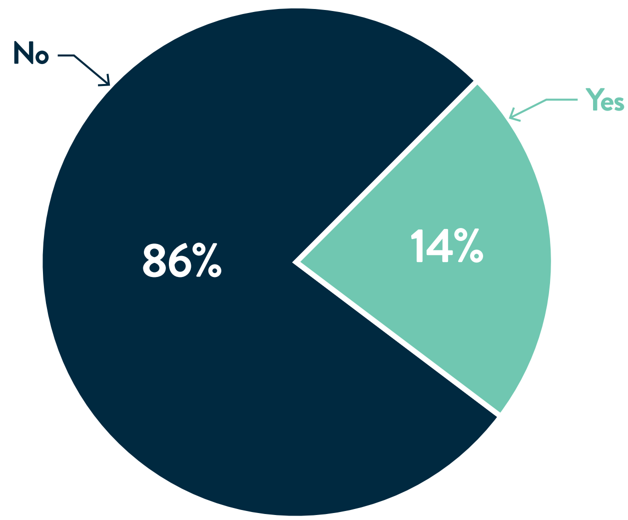
REASONS CBD WAS RECOMMENDED TO YOU



Source: New Frontier Data 2019 European CBD Survey

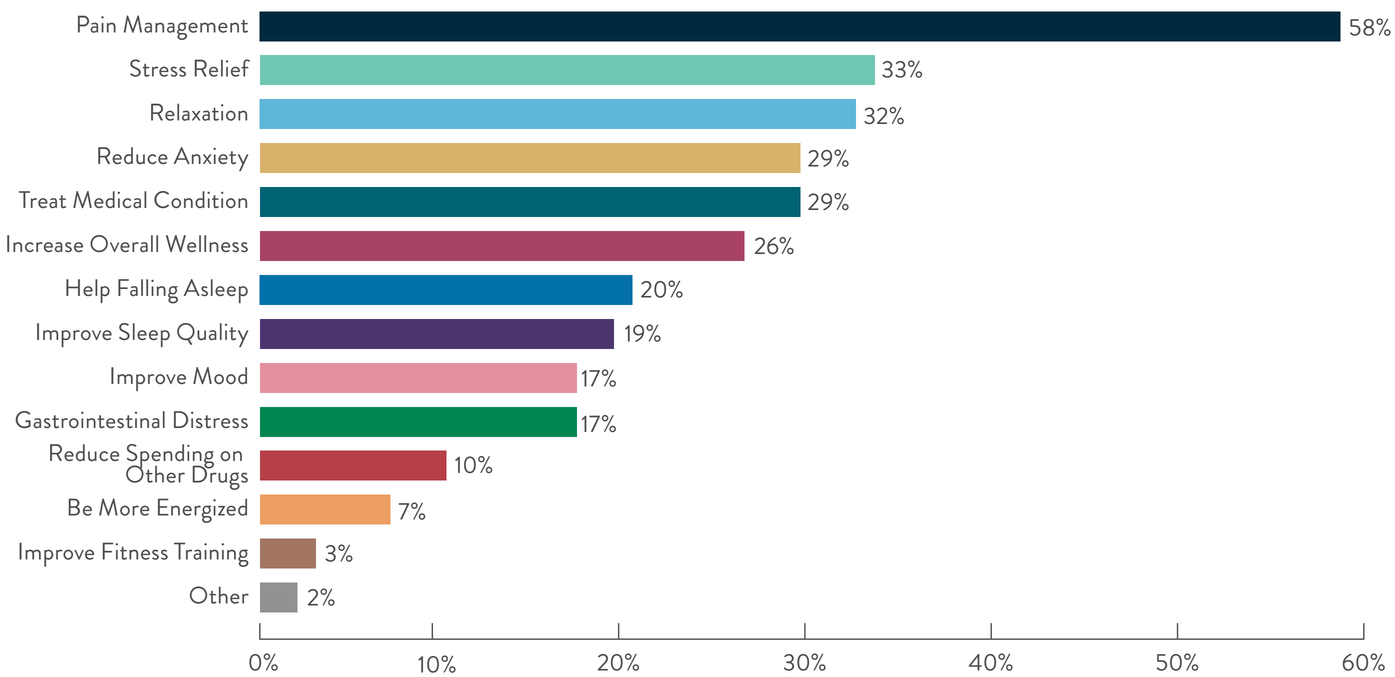
"Forty-four percent (44%) of Europeans surveyed indicated knowing friends or family using CBD."

HAVE YOU EVER RECOMMENDED CBD TO SOMEONE YOU KNOW?



Source: New Frontier Data 2019 European CBD Survey

REASONS YOU HAVE RECOMMENDED CBD TO OTHERS



Source: New Frontier Data 2019 European CBD Survey

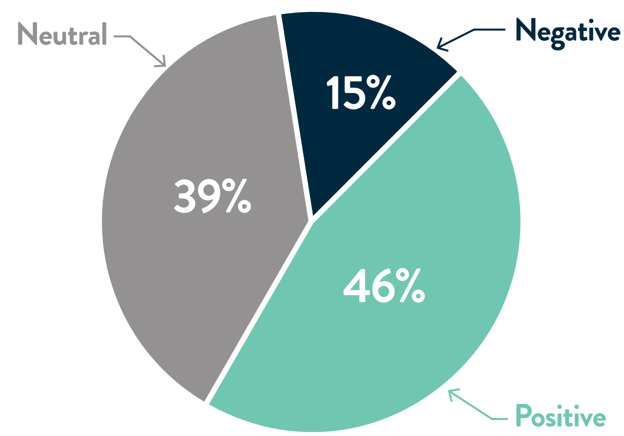
Overall Impressions of CBD

Nearly half of Europeans (46%) reported a positive impression of CBD; a small minority (15%) expressed an overall negative impression of CBD. The large base of positive and neutral perceptions offers brands in the sector a strong foundation on which to inform and shape attitudes and adoption across the region.

Policy Positions and Beliefs About CBD's Applications

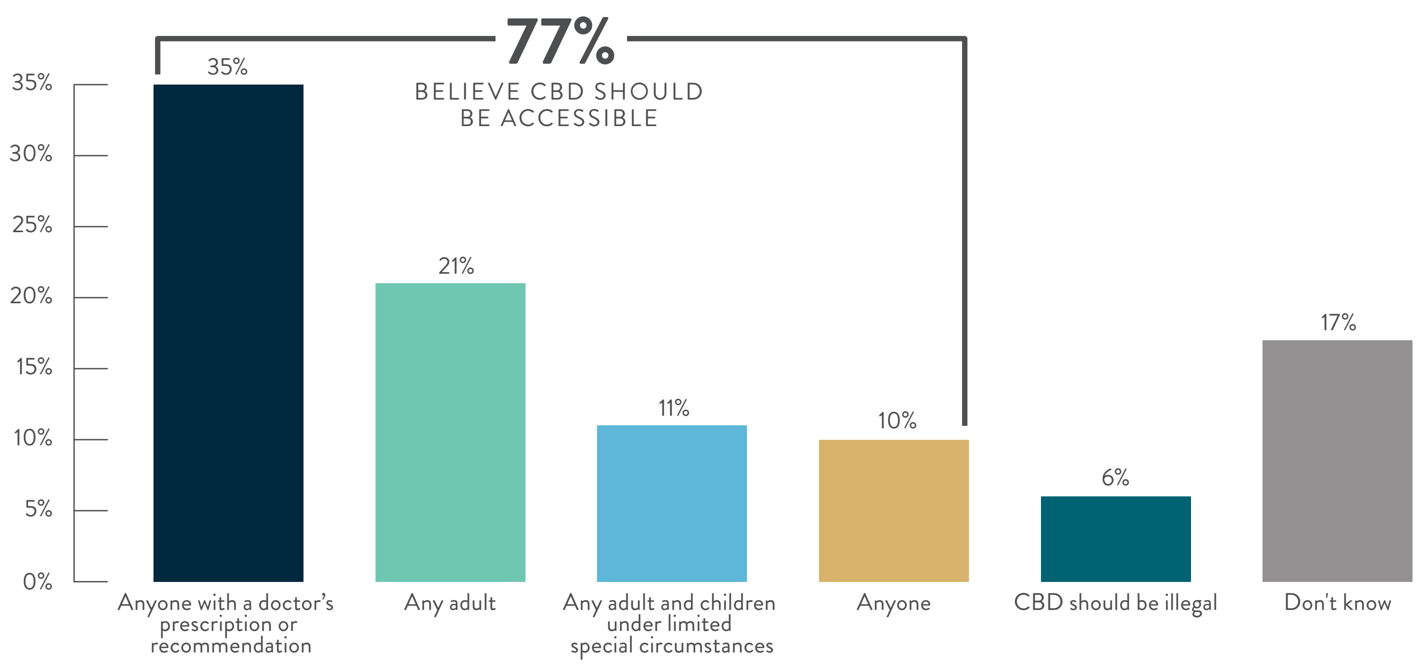
Europeans appear to support the general availability of CBD; 35% said that it should be available to anyone with a doctor's note or prescription while an additional 21% supported CBD's availability to any adult.

WHAT IS YOUR GENERAL IMPRESSION OF CBD?



Source: New Frontier Data 2019 European CBD Survey

CBD SHOULD BE AVAILABLE FOR

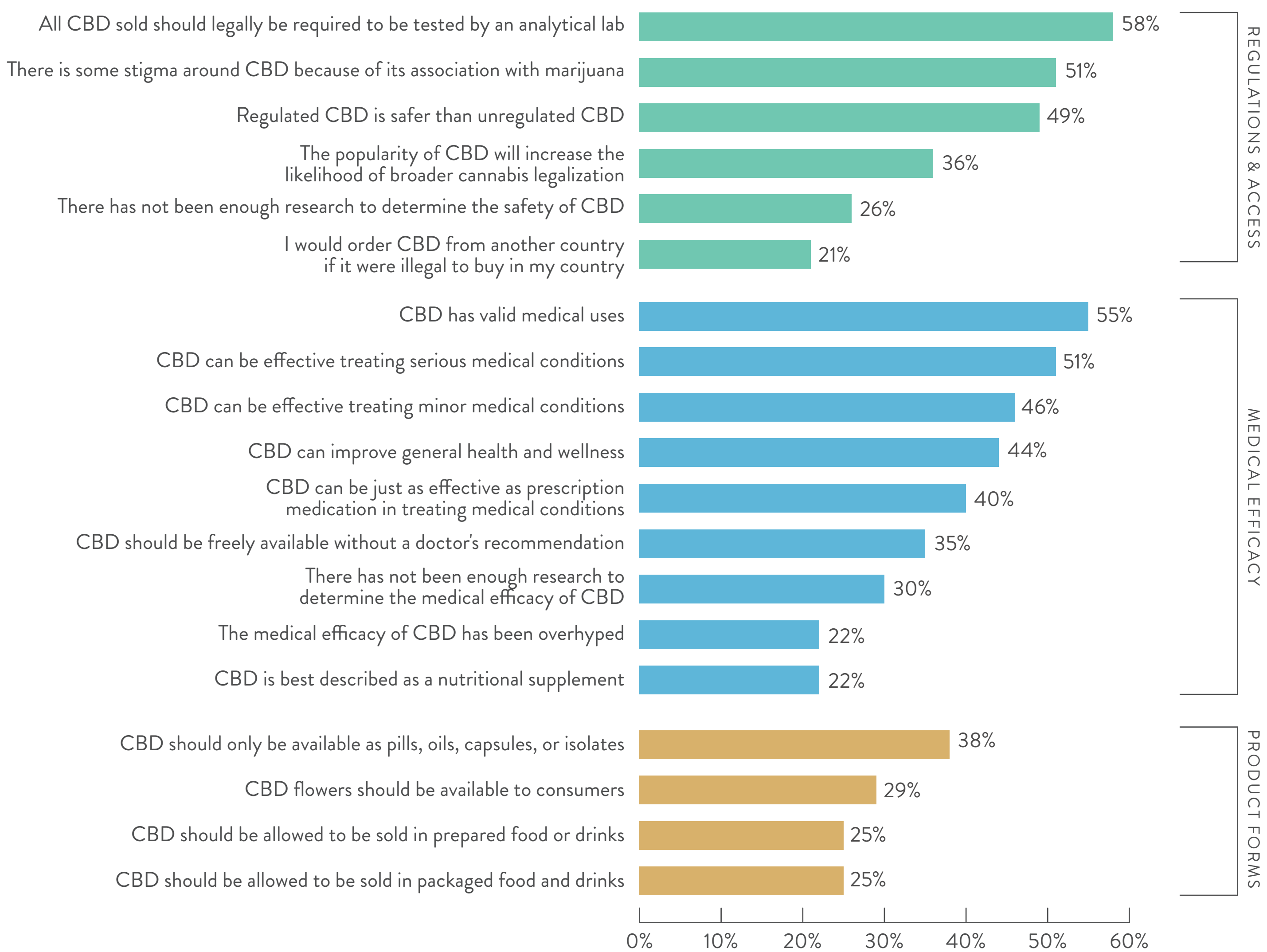


Source: New Frontier Data 2019 European CBD Survey

Support for standardization and regulation of CBD products is widespread but not entrenched. A solid majority of survey respondents (58%) agreed that laboratory testing of CBD should be legally required. Almost half (49%) deemed regulated CBD safer than unregulated CBD products.

Consumers also supported the idea that CBD has some value as a medical intervention. More than half (55%) agreed that CBD has valid medical uses, while 51% agreed that it is effective for treating serious medical conditions. However, 51% of survey participants also acknowledged some stigma around CBD because of its association with marijuana.

RESPONDENTS AGREEING WITH THE FOLLOWING STATEMENTS ABOUT CBD



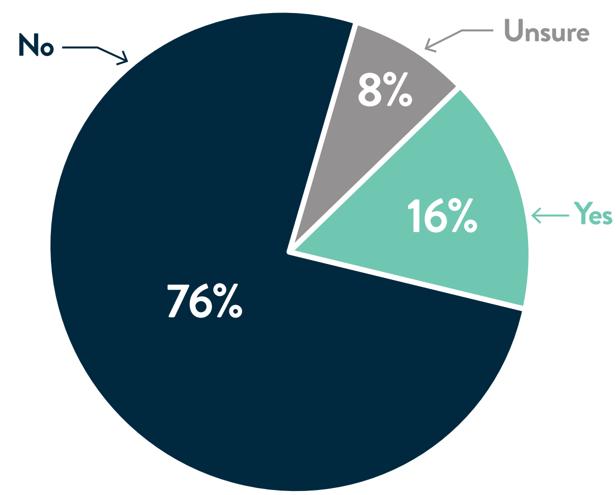
Source: New Frontier Data 2019 European CBD Survey

CBD CONSUMERS

The majority of respondents have not tried CBD; only 16% have ever used CBD or CBD products. Interestingly, 8% reported being uncertain whether they ever used CBD. Similarly, almost three-fifths of consumers (58%) who reported having used CBD indicated first trying it in the previous six months; roughly a quarter (23%) first tried CBD more than a year earlier.

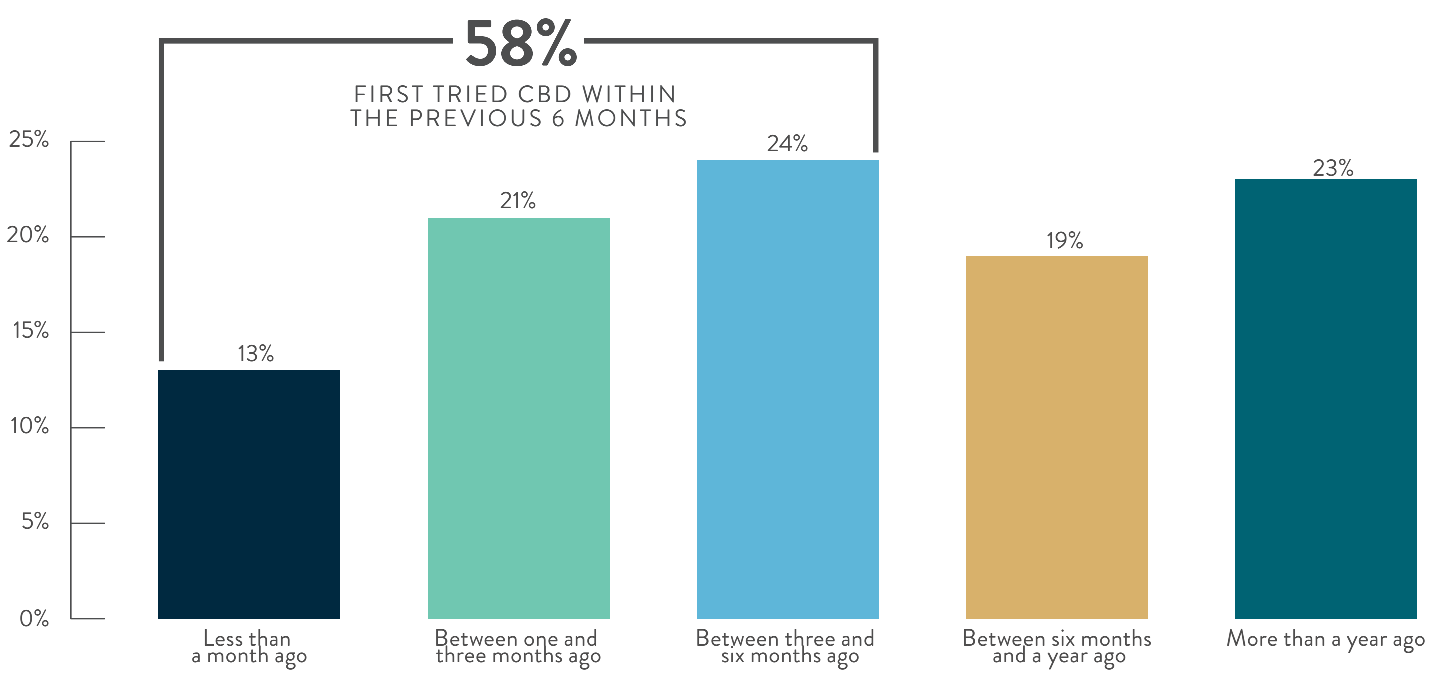
Similarly, 54% of those who had used a CBD product had done so in the previous month, while an additional 30% last consumed CBD between one and six months earlier.

HAVE YOU EVER USED CBD?



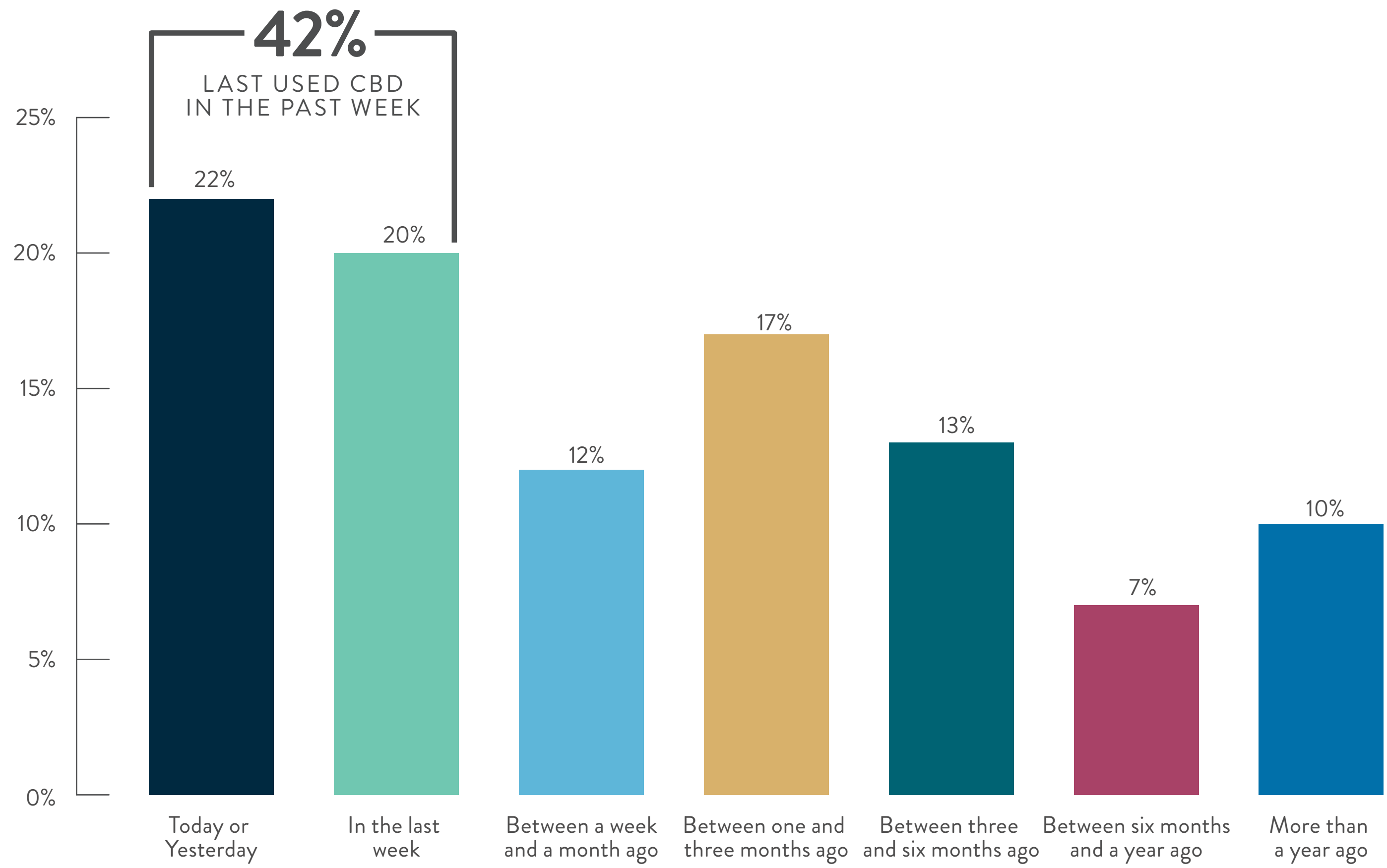
Source: New Frontier Data 2019 European CBD Survey

WHEN WAS THE FIRST TIME YOU USED A CBD PRODUCT?



Source: New Frontier Data 2019 European CBD Survey

HOW RECENTLY DID YOU LAST USE A CBD PRODUCT?



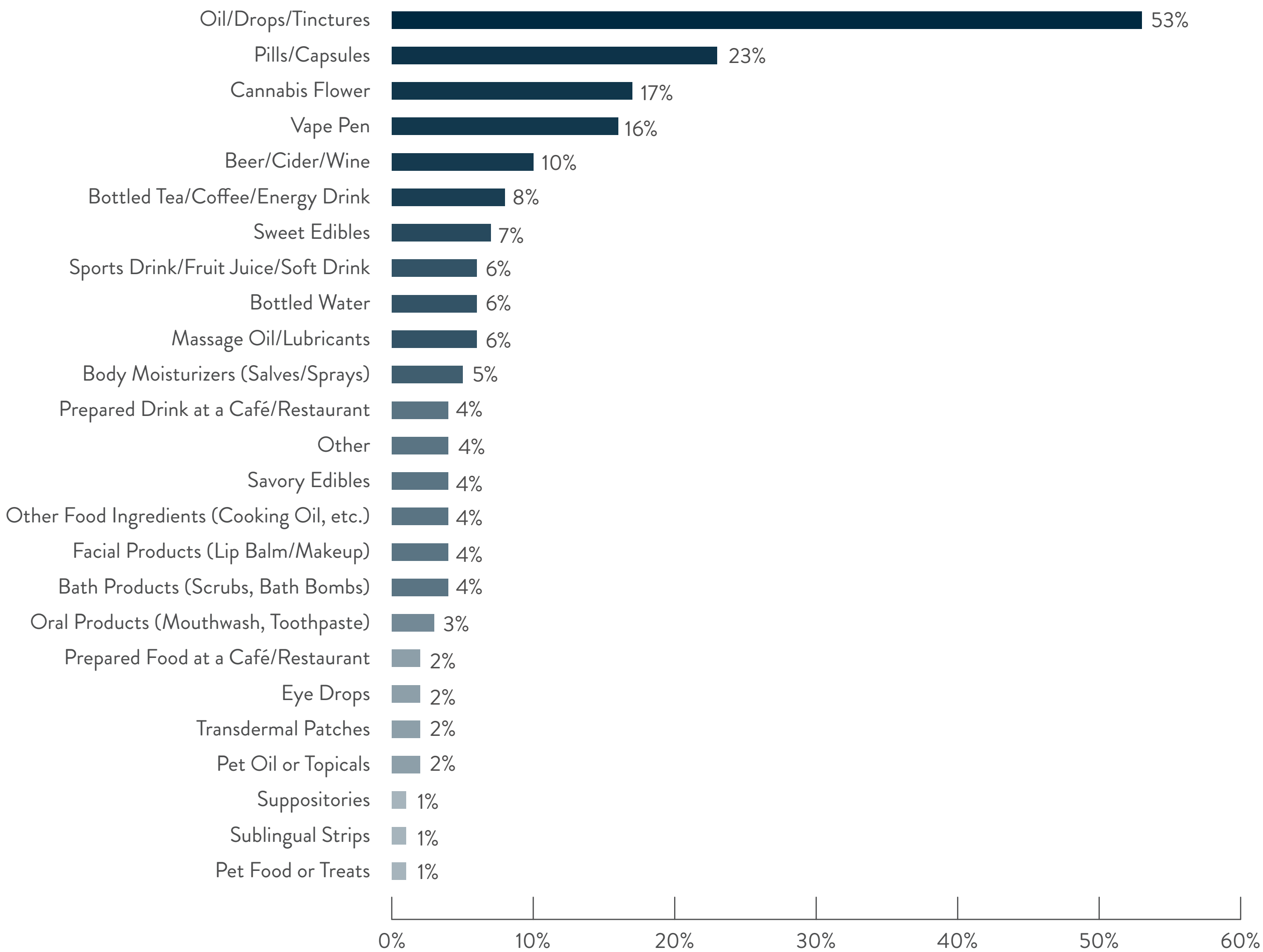
Source: New Frontier Data 2019 European CBD Survey

CBD Products and Product Preferences

Oils and tinctures (53%) ranked as the preferred means for Europeans' consumption of CBD; pills and capsules (23%) are also common. Cannabis flower (17%) and vape pens (16%) round out the top four most common modes of consuming CBD.

The small percentages reporting use of products ranging from massage oils and eye drops to transdermal patches and pet products highlights the breadth of interest in trying products in different forms. As the market matures, it remains to be seen which of the nascent categories will become market leaders. However, data suggests there will also be substantial opportunity within specialized product categories aimed at specific consumers or targeting particular use cases.

CBD FORMS USED



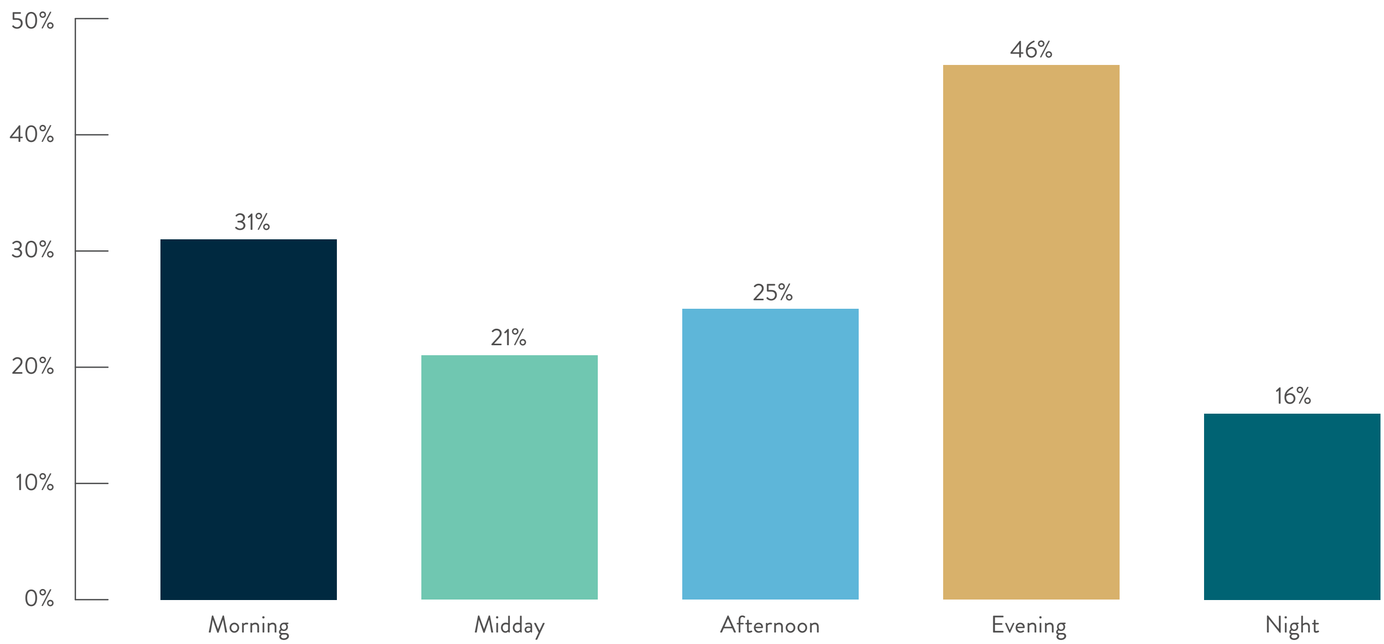
Source: New Frontier Data 2019 European CBD Survey

CBD Consumption Behaviors

CBD is reportedly most often consumed in the evening (46%), followed by the morning (31%). The most common serving size is less than 5 milligrams (29%). Interestingly, nearly one-fifth (18%) of respondents were unaware of how much CBD they consume per serving.

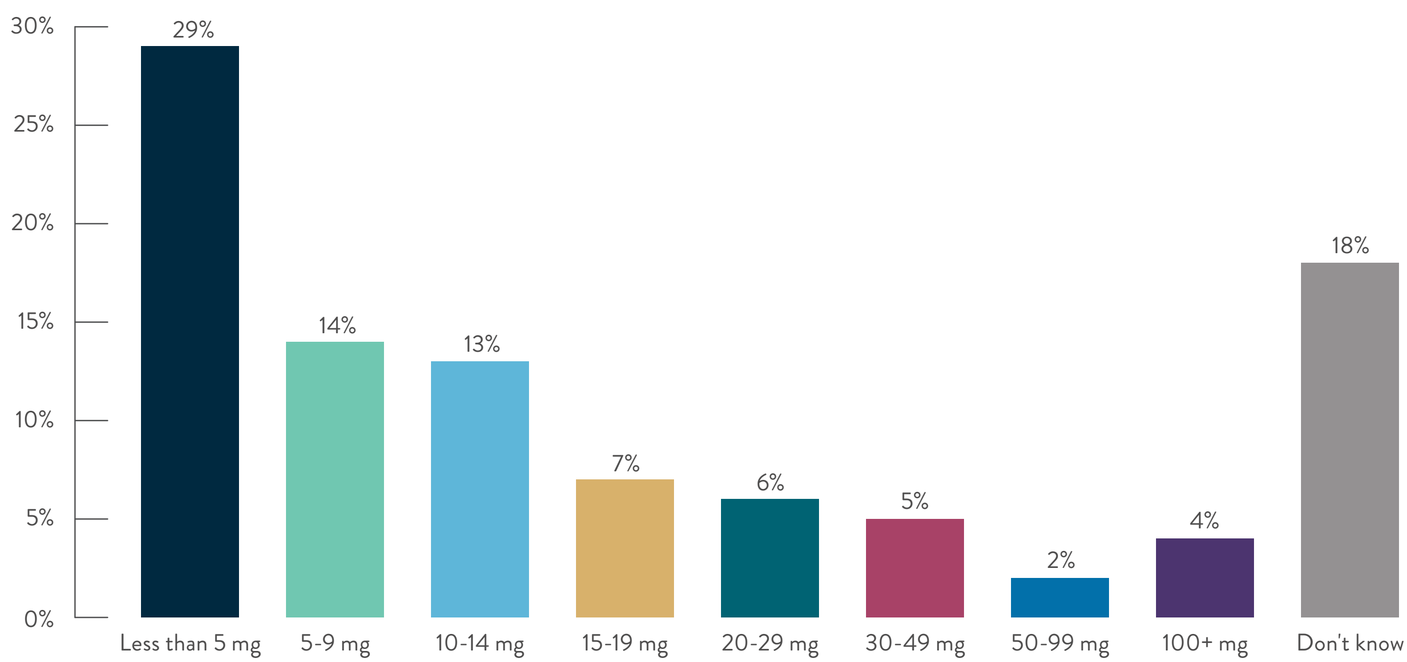
Among consumers having used CBD, the most frequently cited reason was for pain management (40%), followed closely by relaxation (34%) or stress relief (31%). The most common health goal chosen by respondents was the management of symptoms for a chronic condition (38%).

TIME RESPONDENTS CONSUME CBD PRODUCTS



Source: New Frontier Data 2019 European CBD Survey

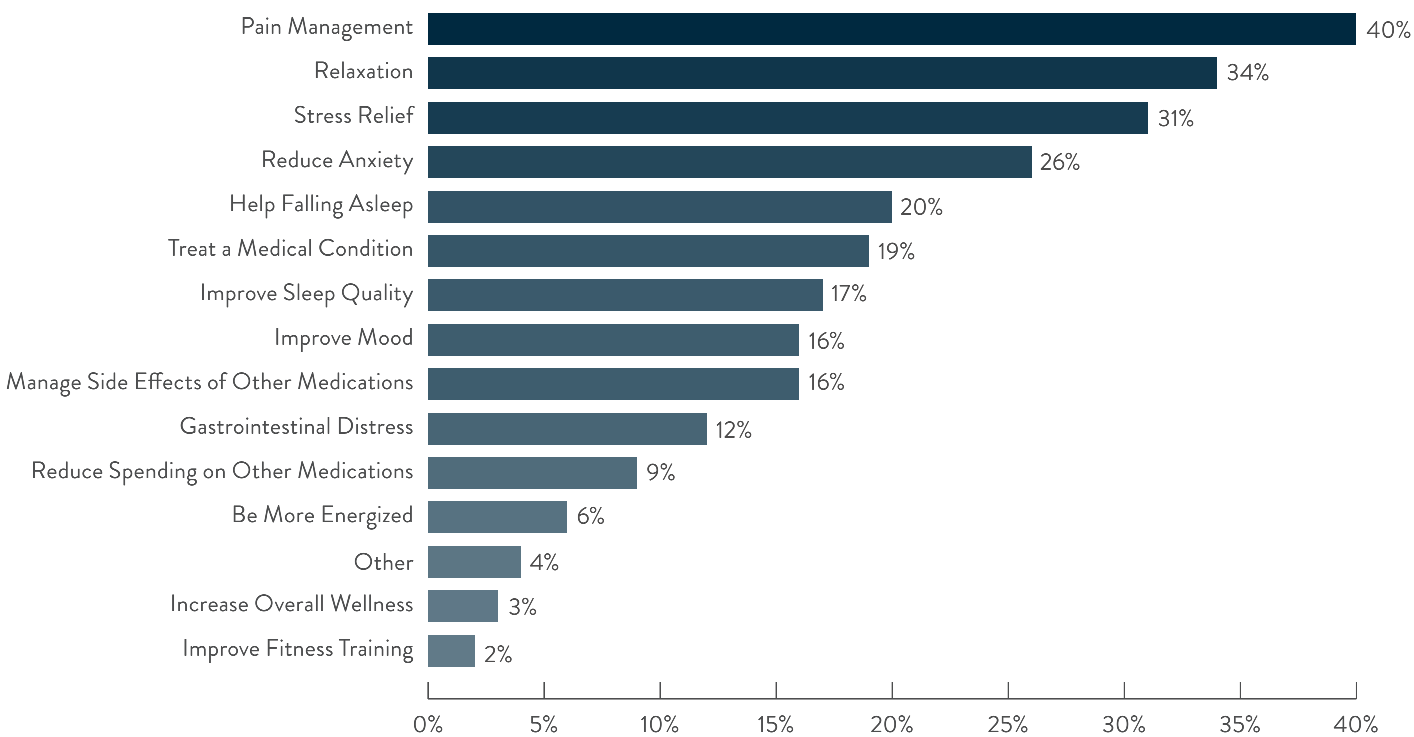
TOTAL MG OF CBD CONSUMED IN A TYPICAL SERVING



Source: New Frontier Data 2019 European CBD Survey

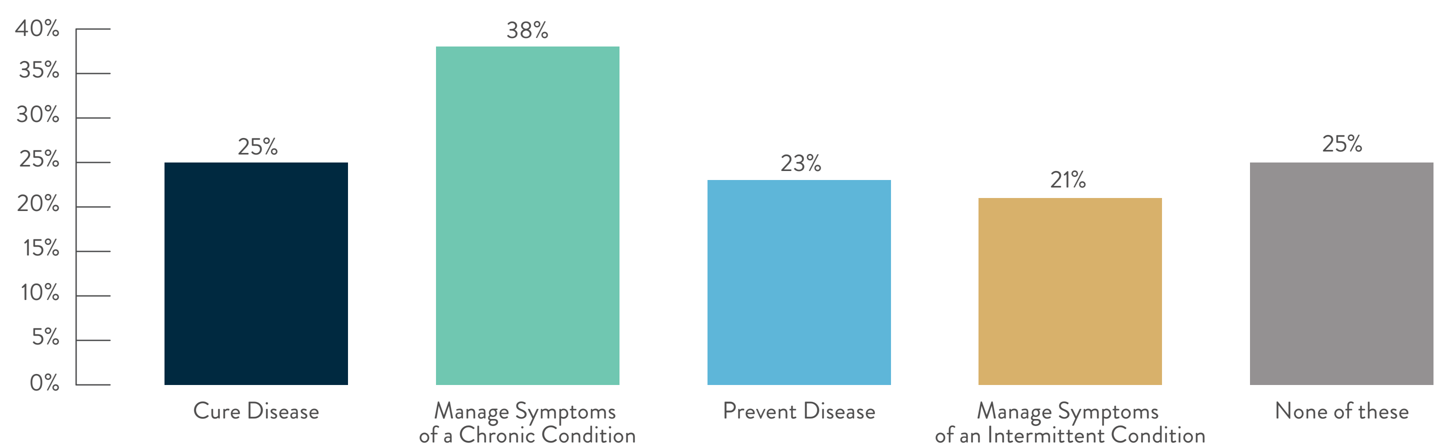
Reasons for Use and Health Goals

REASONS FOR USING CBD



Source: New Frontier Data 2019 European CBD Survey

CBD HEALTH GOALS

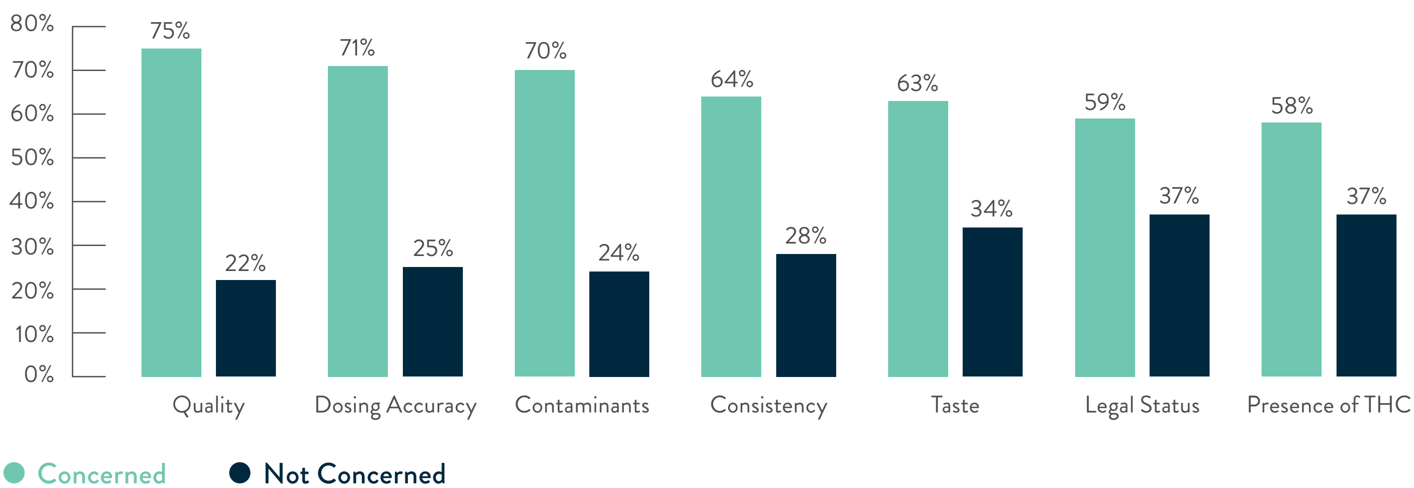


Source: New Frontier Data 2019 European CBD Survey

Consumers’ Concerns About CBD

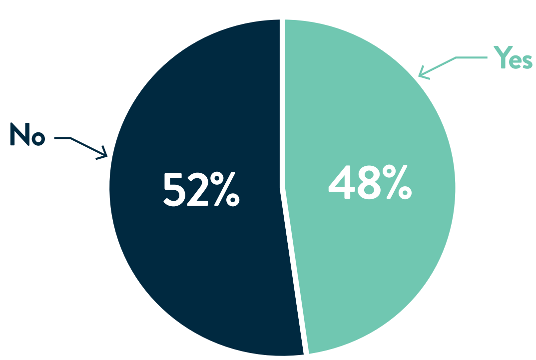
Quality (75%) is the primary concern consumers reported about CBD products, followed closely by dosing accuracy (71%) and the presence of contaminants (70%). The legal status of CBD products (59%) and the presence of THC in those products (58%), while less important, remain significant concerns. Approximately half (48%) of the respondents indicated that such concerns impacted the frequency or doses at which they use CBD and the brands they purchase (51%).

CONCERNS ABOUT CBD PRODUCTS

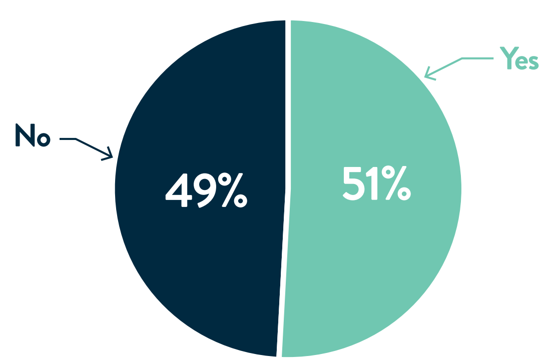


Source: New Frontier Data 2019 European CBD Survey

DO THESE CONCERNS AFFECT HOW YOU USE CBD?



DO THESE CONCERNS AFFECT WHICH BRANDS YOU CHOOSE?



Source: New Frontier Data 2019 European CBD Survey

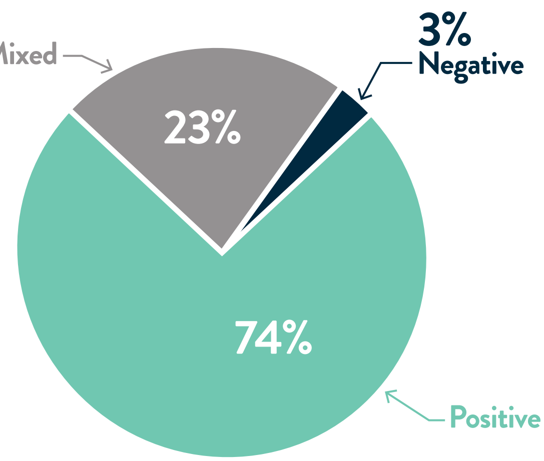
Sources of CBD

One of the most commonly identified sources for CBD products is friends (35%), suggesting the persistence of an informal environment for procuring CBD, at least for newer consumers. Online specialty stores (29%) as well as major online retailers (22%) are popular sources for CBD, as are drug stores (23%).

Impact of CBD on Quality of Life

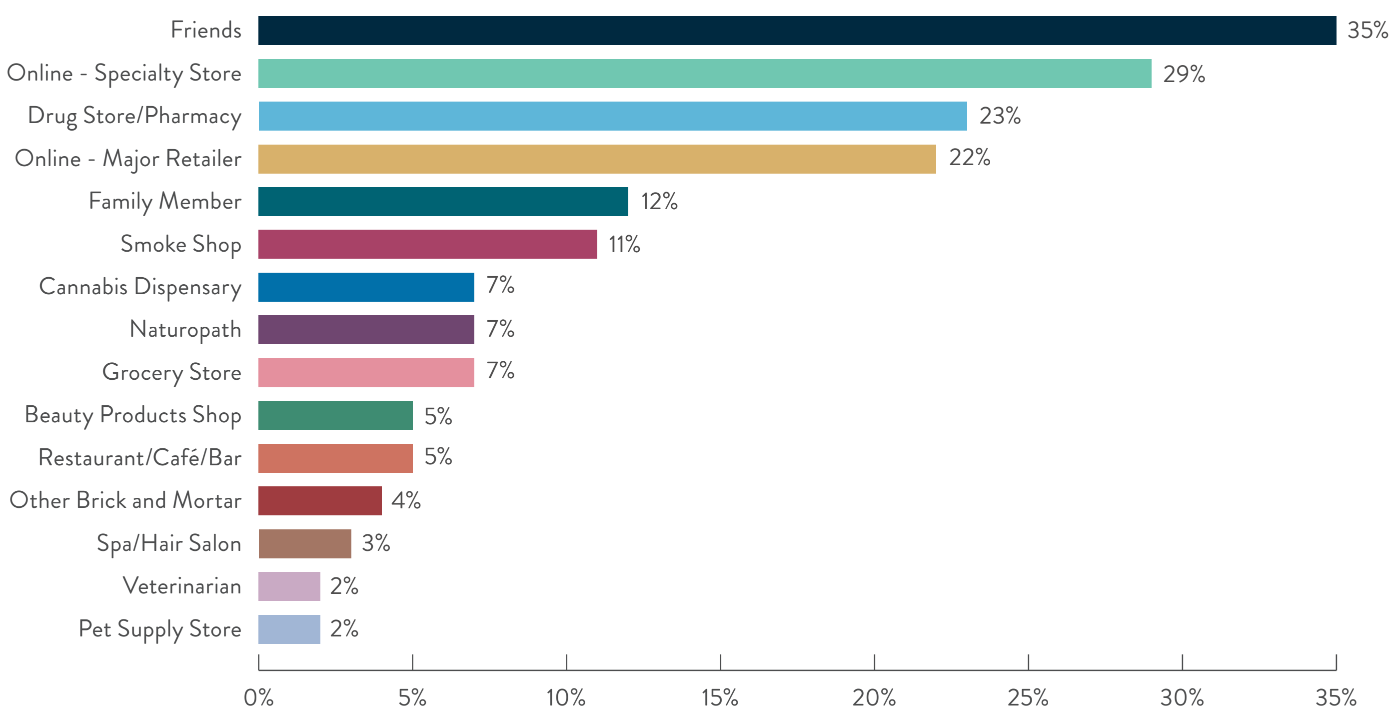
Almost three-quarters of respondents (74%) who have used CBD reported that it has had a positive impact on their quality of life.

HOW HAS CBD IMPACTED YOUR QUALITY OF LIFE?



Source: New Frontier Data 2019 European CBD Survey

PRIMARY SOURCE OF CBD PRODUCTS



Source: New Frontier Data 2019 European CBD Survey

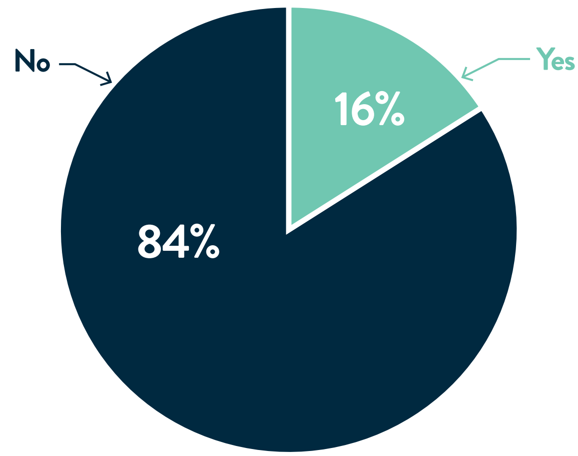
CBD PURCHASERS

Across the European Union, a minority of respondents (16%) indicated that they have ever purchased a CBD product.

CBD Brands

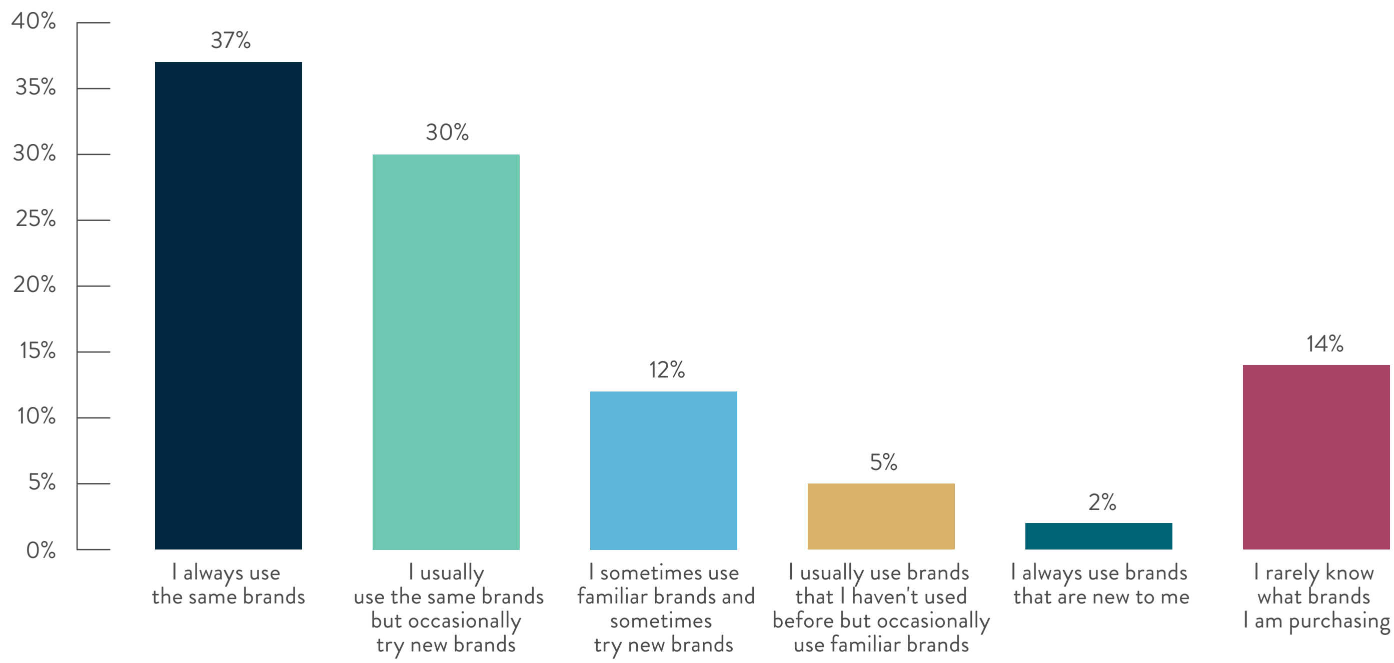
While no single CBD brand is dominating the European marketplace, some do appear to have at least a foothold among purchasers. The most cited CBD brands that European purchasers report buying include CBD Vital, Cannabigold, Nordic Oil, and Cannapower, though none was claimed by more than 10% of purchasers.

HAVE YOU EVER PURCHASED A CBD PRODUCT?



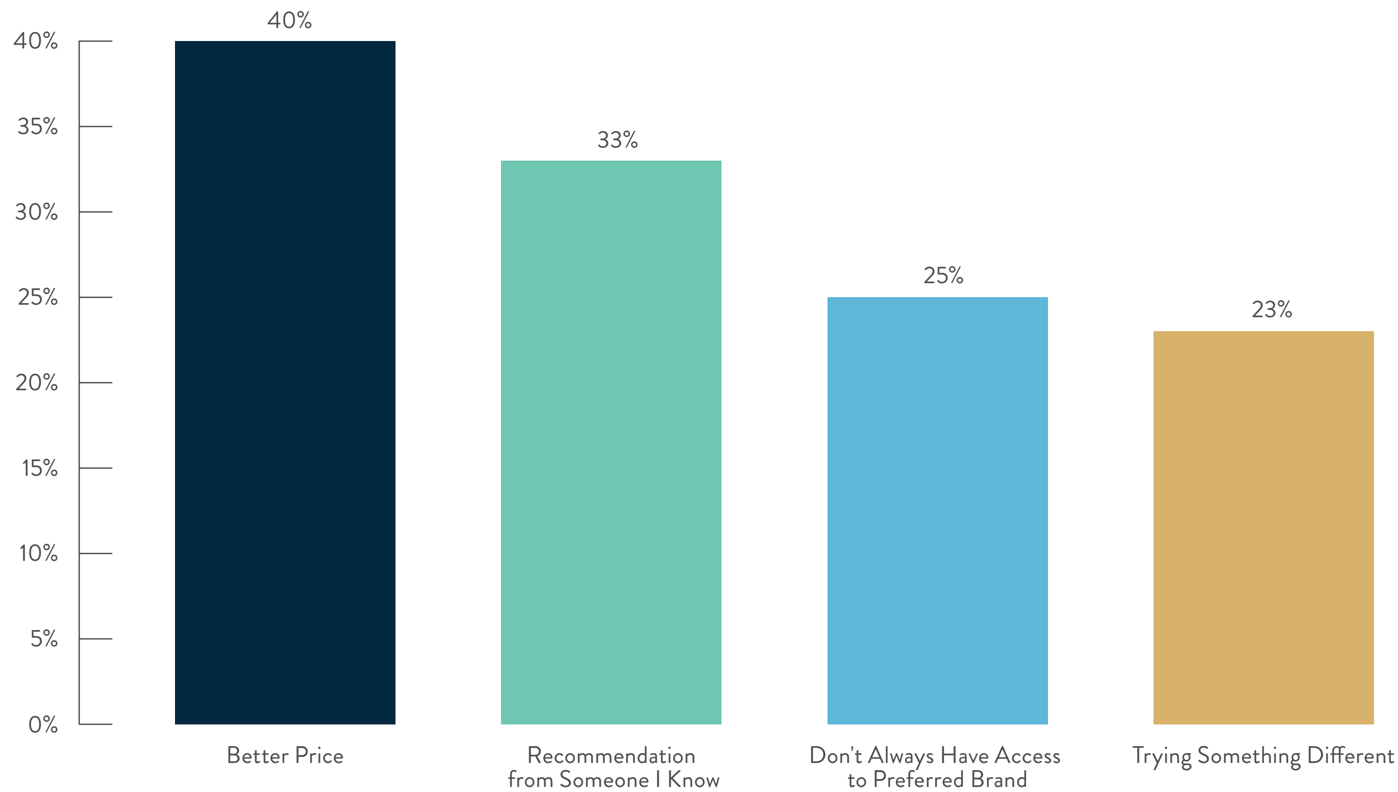
Source: New Frontier Data 2019 European CBD Survey

CBD BRAND LOYALTY



Source: New Frontier Data 2019 European CBD Survey

REASONS CONSUMERS SWITCH BRANDS



Note: Among purchasers who indicate sometimes switching brands

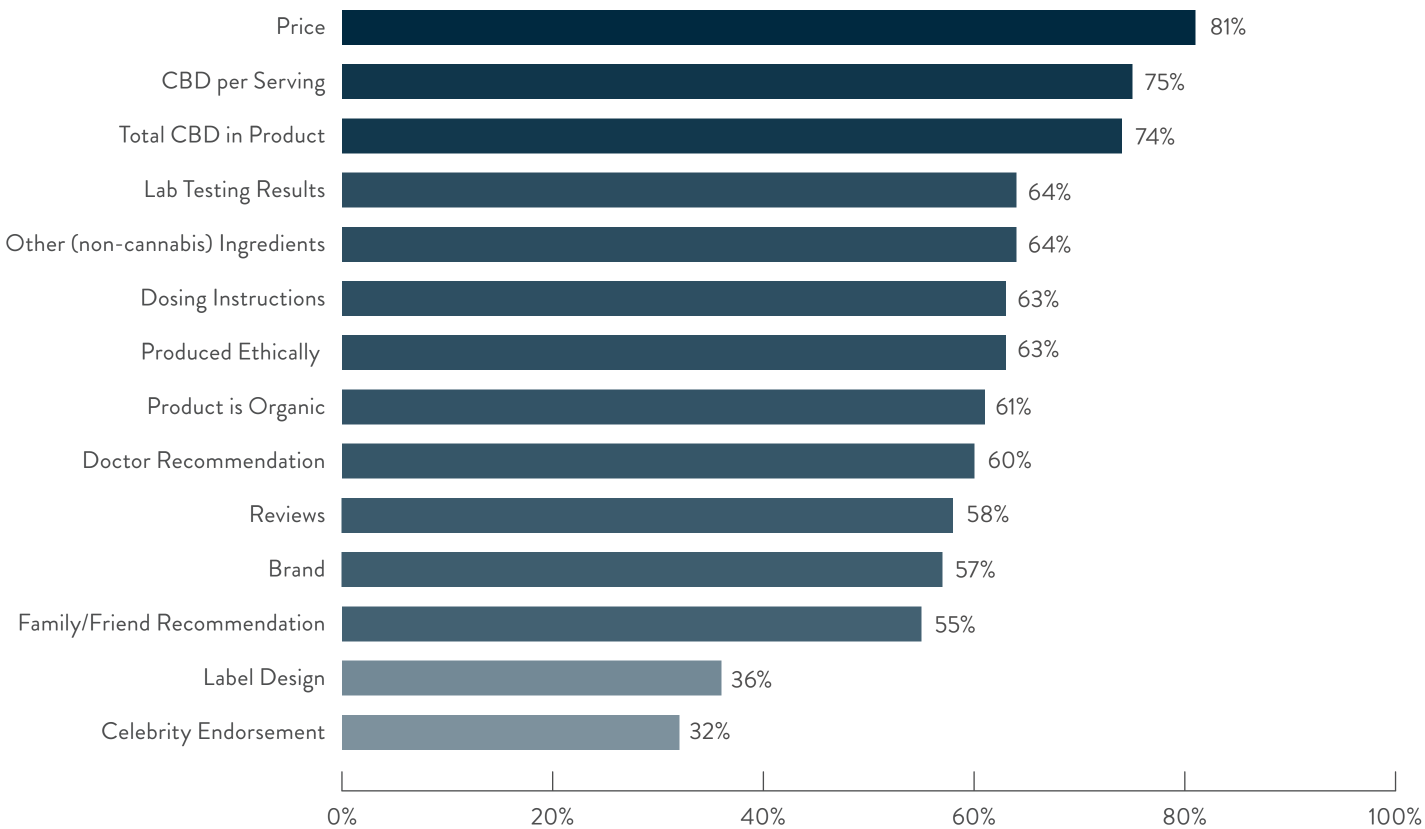
Source: New Frontier Data 2019 European CBD Survey

Despite the fragmented brand environment, purchasers express a fairly high degree of brand loyalty, with 67% reporting that they always or usually purchase the same brands. Experimenting with brands is a less frequent occurrence, though 20% reported that they are open to trying new brands. A smaller percentage (14%) noted that they rarely know what brands they are purchasing. CBD purchasers are price conscious; that was the top reason for switching among those that did not always purchase the same brand (40%).

Purchase Decision Influencers: Products

European purchasers were asked about a range of factors influencing their decisions about which CBD product to buy. The top three factors cited by respondents as being very important or important include price (81%), the amount of CBD per serving (75%), and the total amount of CBD in the product (74%). Factors identified as unimportant include label design (36%) and celebrity endorsement (32%).

IMPORTANT FACTORS INFLUENCING PRODUCT PURCHASE



Source: New Frontier Data 2019 European CBD Survey

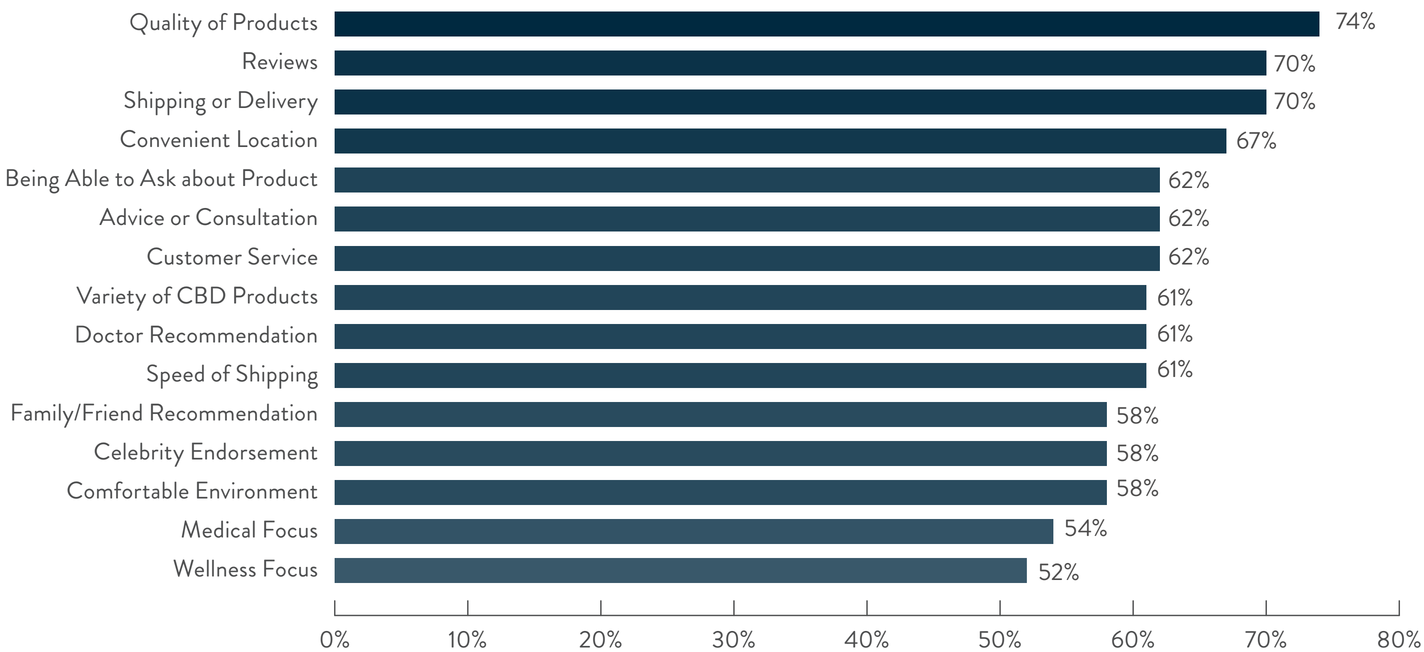
Purchase Decision Influencers: Sources

Europeans who had purchased CBD were also asked about factors influencing their decision-making regarding the sourcing of their CBD products. The top three factors identified as being very important or important include quality of products (75%), reviews (70%), and options for shipping or delivery (70%). Factors identified as least important include whether the source has a wellness (52%) or medically (54%) focused environment or sensibility.

The relative importance of so many purchase influencers suggests that CBD brands will have broad latitude to determine their differentiating factors as they work to attract new consumers. However, attracting new consumers from other brands may be more challenging given the brand loyalty shown by the majority of consumers.

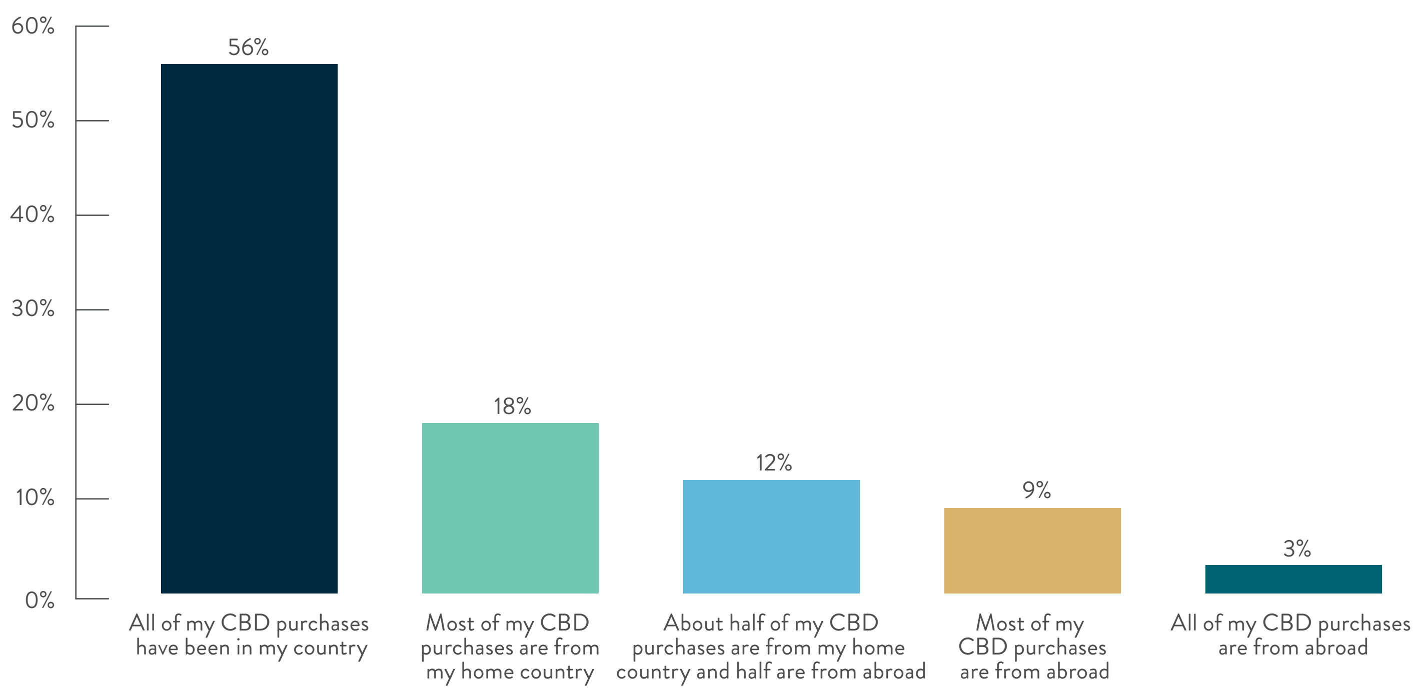
Most CBD purchasers report making either all (56%) or most (18%) of their CBD purchases in their own country; only 12% of respondents reported making most of their CBD purchases outside of their own country.

IMPORTANT FACTORS INFLUENCING SOURCE OF PRODUCT PURCHASE



Source: New Frontier Data 2019 European CBD Survey

CBD PURCHASES:
ABROAD VERSUS DOMESTIC



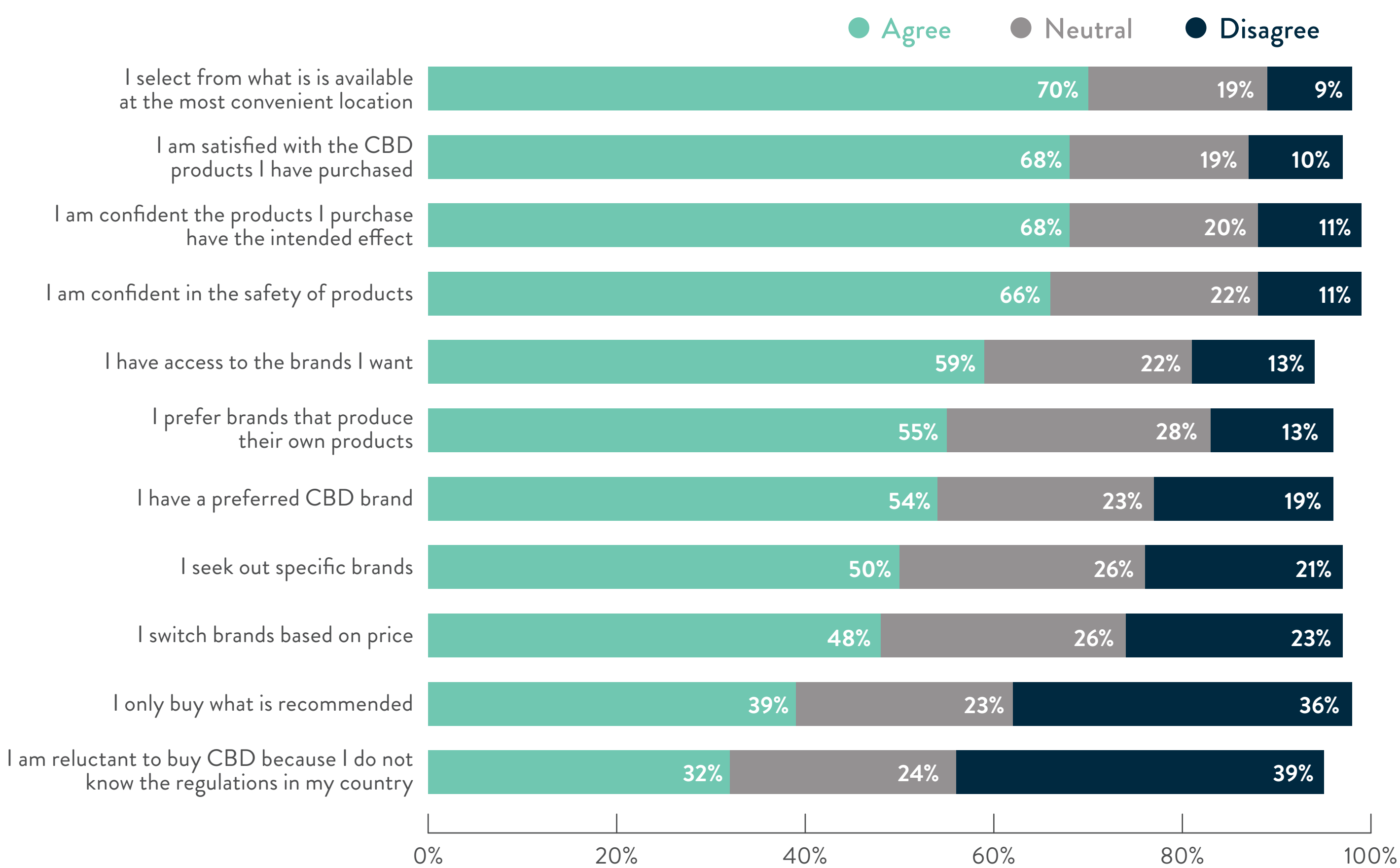
Source: New Frontier Data 2019 European CBD Survey

Purchasing Behaviors

Those who had purchased CBD were asked their level of agreement with a series of statements about the purchase and use of CBD products. Purchasers most strongly agreed that their selection of CBD is based on convenience of a source's location (70%), that CBD products will have the intended effect (68%), and that they are satisfied with the products they have purchased (68%). Respondents disagreed most with the idea that they were reluctant to purchase CBD because they were unfamiliar with the regulations in their country (32%) or that they only buy what is recommended to them (39%).

The majority of purchasers (63%) reported spending a monthly average of €99 ($109 USD) or less on CBD products. Over the previous six months, 41% saw an increase in their spending. Conversely, 44% expected to see some increase in spending on CBD products while 46% expected their spending to remain the same.

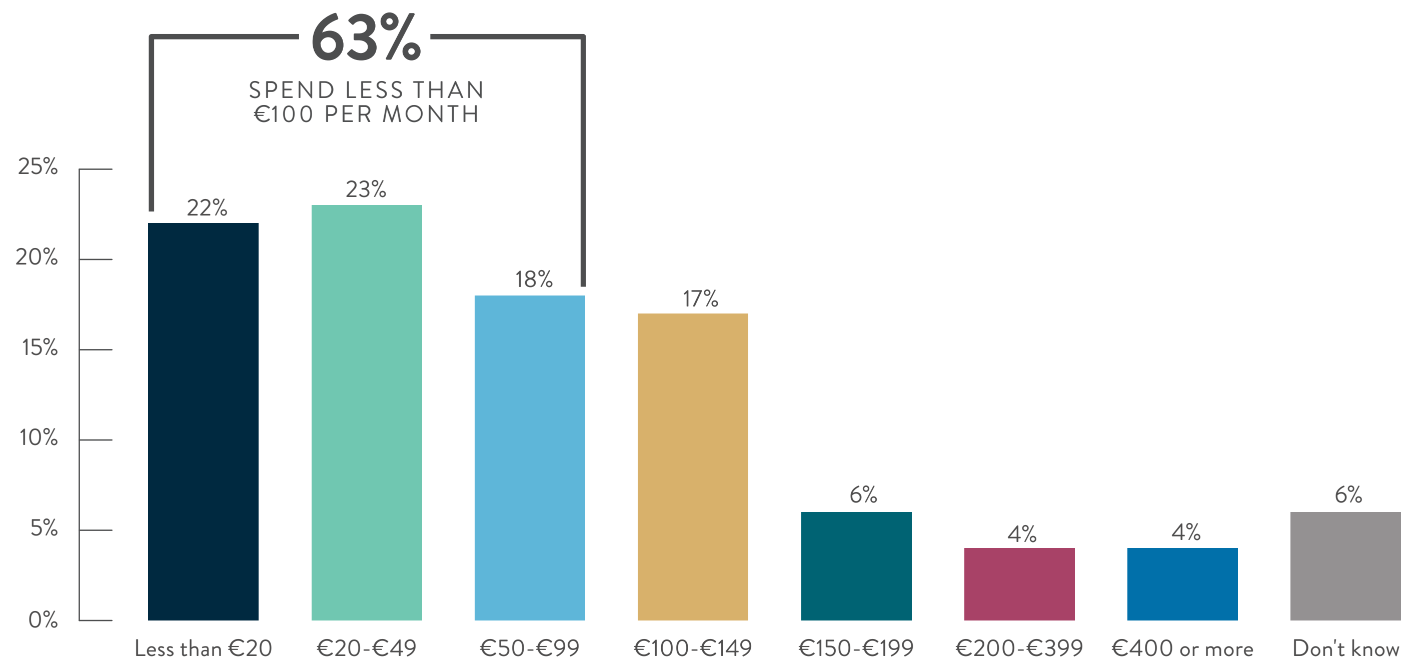
AGREEMENT WITH FOLLOWING STATEMENTS:



Note: Totals do not equal 100% as "don't know" responses are not included.

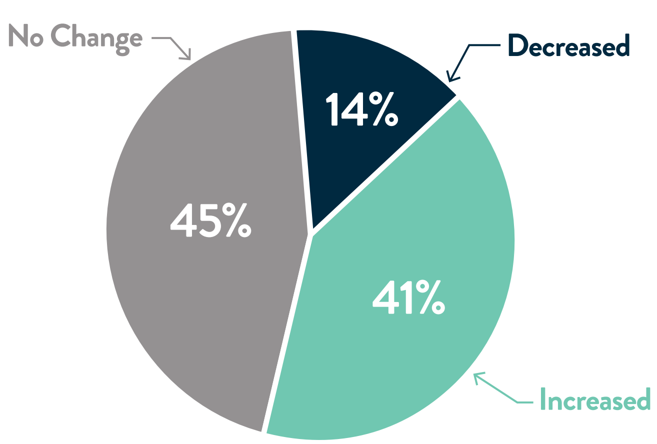
Source: New Frontier Data 2019 European CBD Survey

AVERAGE MONTHLY SPENDING ON CBD PRODUCTS

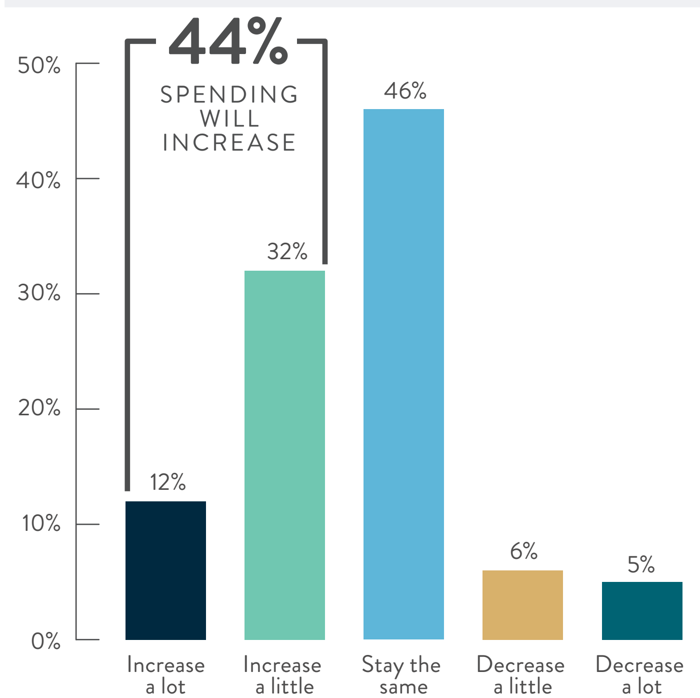


Source: New Frontier Data 2019 European CBD Survey

CHANGE IN CBD SPENDING OVER THE PAST SIX MONTHS



EXPECTED CHANGES IN SPENDING OVER THE NEXT SIX MONTHS



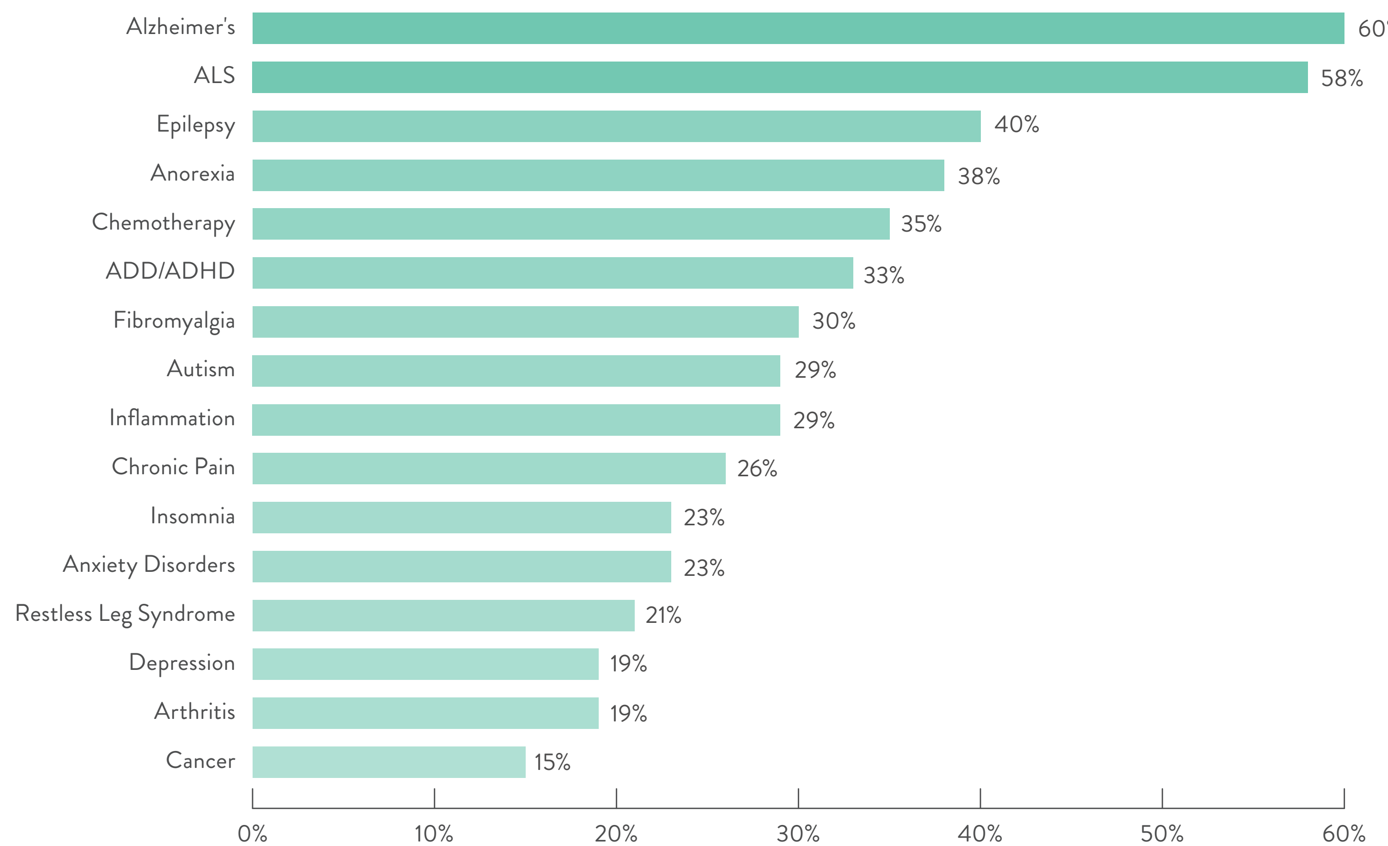
Source: New Frontier Data 2019 European CBD Survey

MEDICAL CONDITIONS AND CBD AS TREATMENT

Survey participants were asked if they have a range of medical conditions and, if so, whether they use CBD as a treatment. Of those participants that indicated they have Alzheimer's, 60% reported using CBD to manage their illness; for respondents with ALS, 58% use CBD.

> **For respondents using CBD as a medical intervention, 76% reported that CBD has improved their medical condition."**

RESPONDENTS INDICATING THAT THEY USE CBD TO MANAGE ILLNESS



Source: New Frontier Data 2019 European CBD Survey

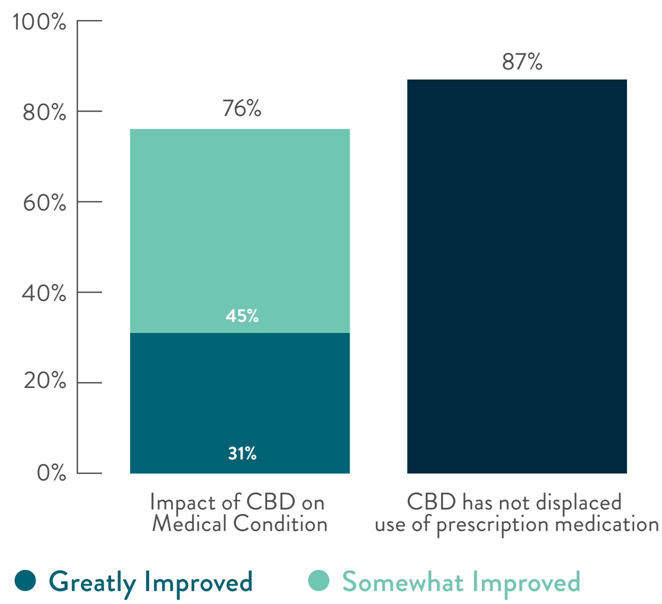
For respondents using CBD as a medical intervention, 76% reported that CBD has improved their medical condition. However, the overwhelming majority (87%) indicated that CBD has not displaced any of their medications. That suggests that CBD is being deployed as a supplement to treatment but not as a substitute for traditional medical interventions.

European consumers also use CBD to treat a range of common health ailments including body aches (31%), insomnia (30%), headaches (24%), and joint pain (23%). Again, an overwhelming majority (83%) indicated that they saw some improvement in their ailments through the use of CBD, and 42% of consumers reported that they have replaced at least some of their use of over-the-counter (OTC) medications with CBD.

The higher rate at which consumers are replacing over-the-counter treatments with CBD products suggests that further expansion of the CBD market will have far greater impact for cannibalization in the general wellness market than in the pharmaceutical market where it is much more likely to be used in addition to, not instead of, prescribed medications.

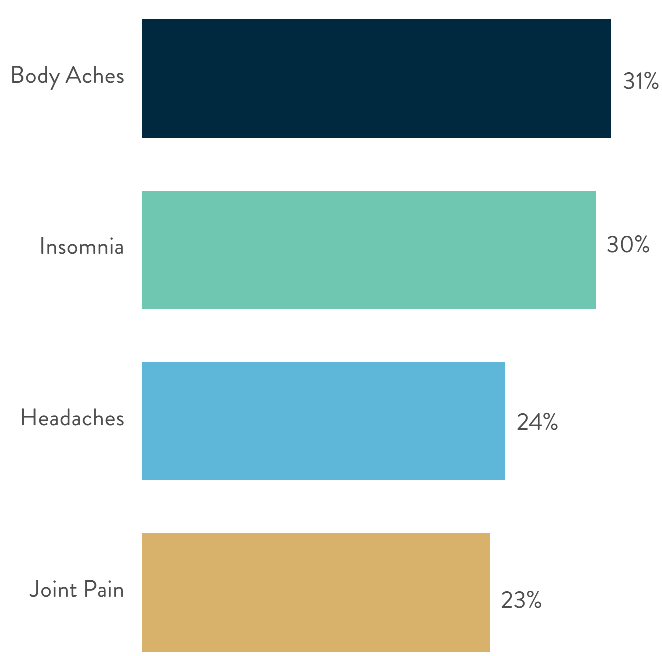
Notably, only 2% of consumers reported negative effects from their CBD use, and less than one percent reported severely adverse effects. The low risk profile implied by the limited number of negative health impact stories from CBD significantly lowers the barrier to trial and adoption of diverse CBD products as they become available.

CBD AS MEDICAL TREATMENT



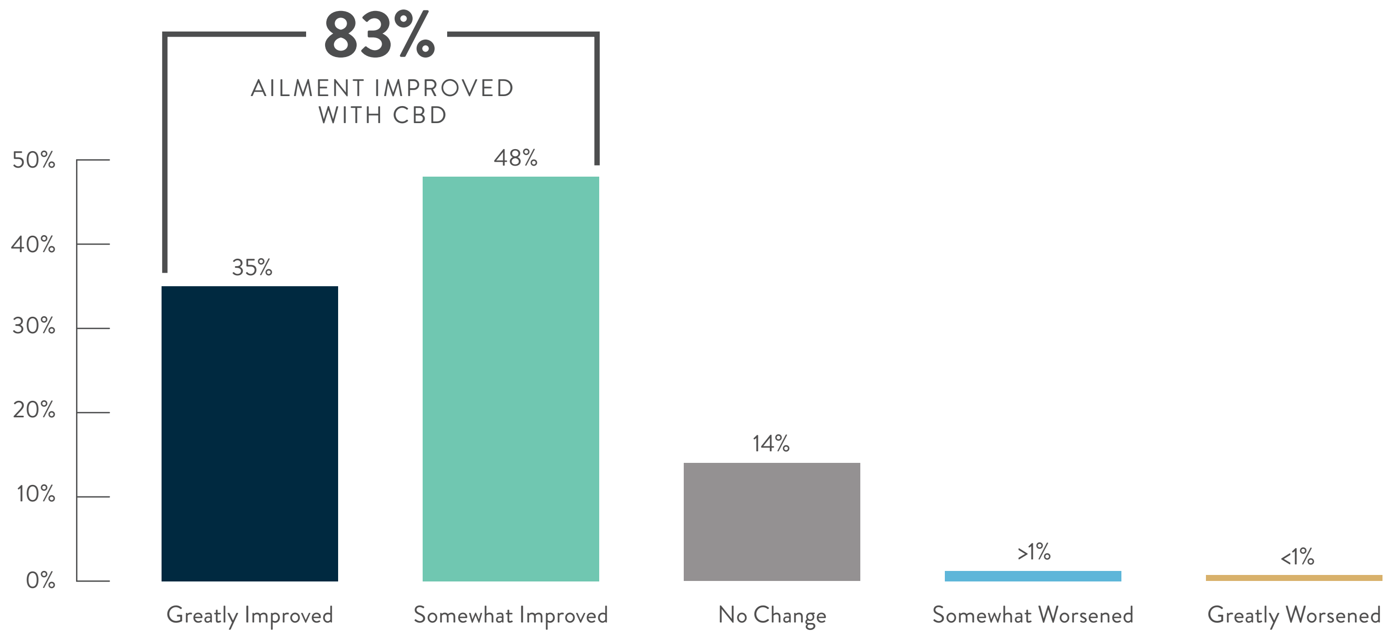
Source: New Frontier Data 2019 European CBD Survey

TOP AILMENTS TREATED WITH CBD



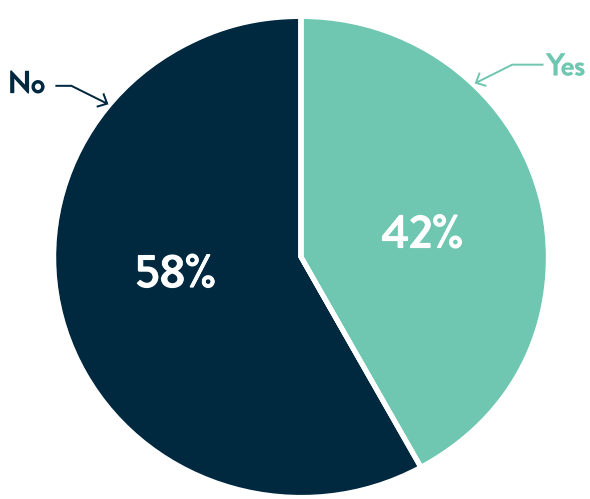
Source: New Frontier Data 2019 European CBD Survey

IMPACT OF CBD ON COMMON HEALTH AILMENTS



Source: New Frontier Data 2019 European CBD Survey

CONSUMERS INDICATING THEY HAVE REPLACED ANY OTC MEDICATION WITH CBD



Source: New Frontier Data 2019 European CBD Survey

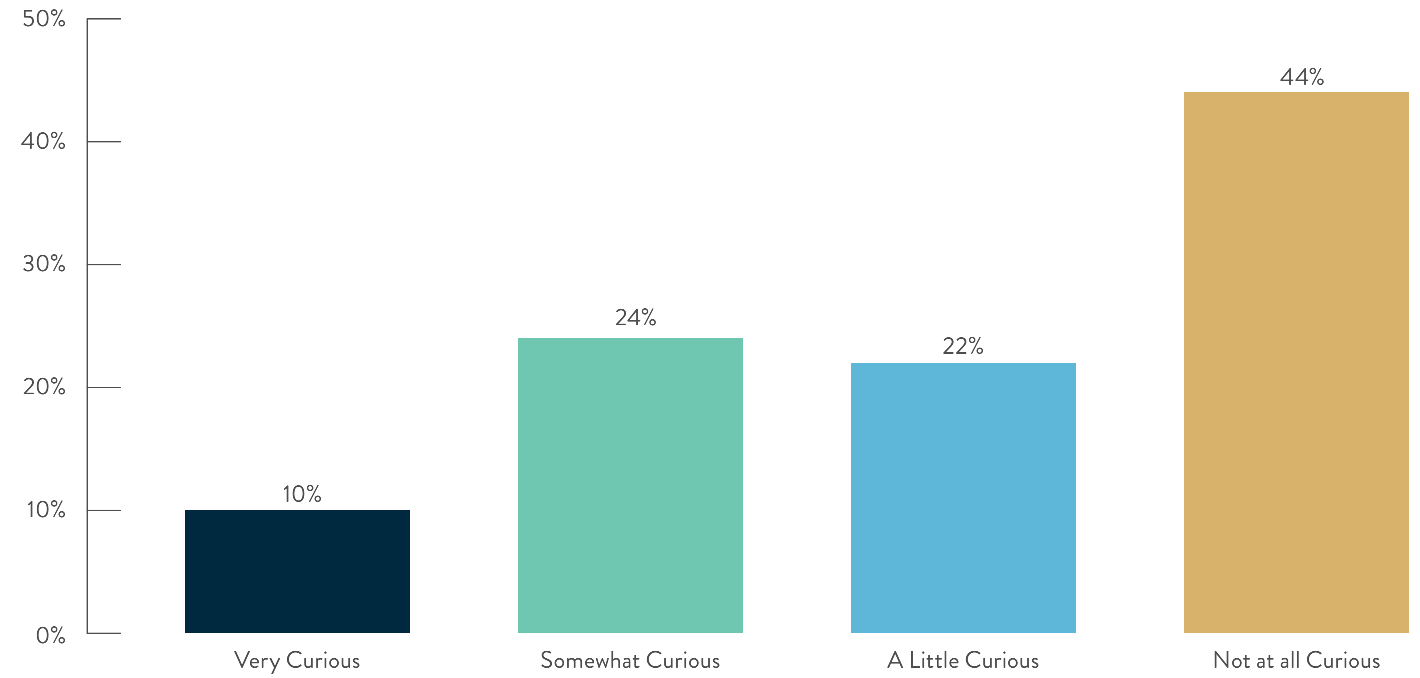
POTENTIAL CBD CONSUMERS

Respondents who had not consumed or purchased CBD were asked about their potential interest in and use of CBD products. A majority (56%) indicated some degree of curiosity in trying CBD, while 44% were indifferent.

Reasons for Consuming and Abstaining from CBD

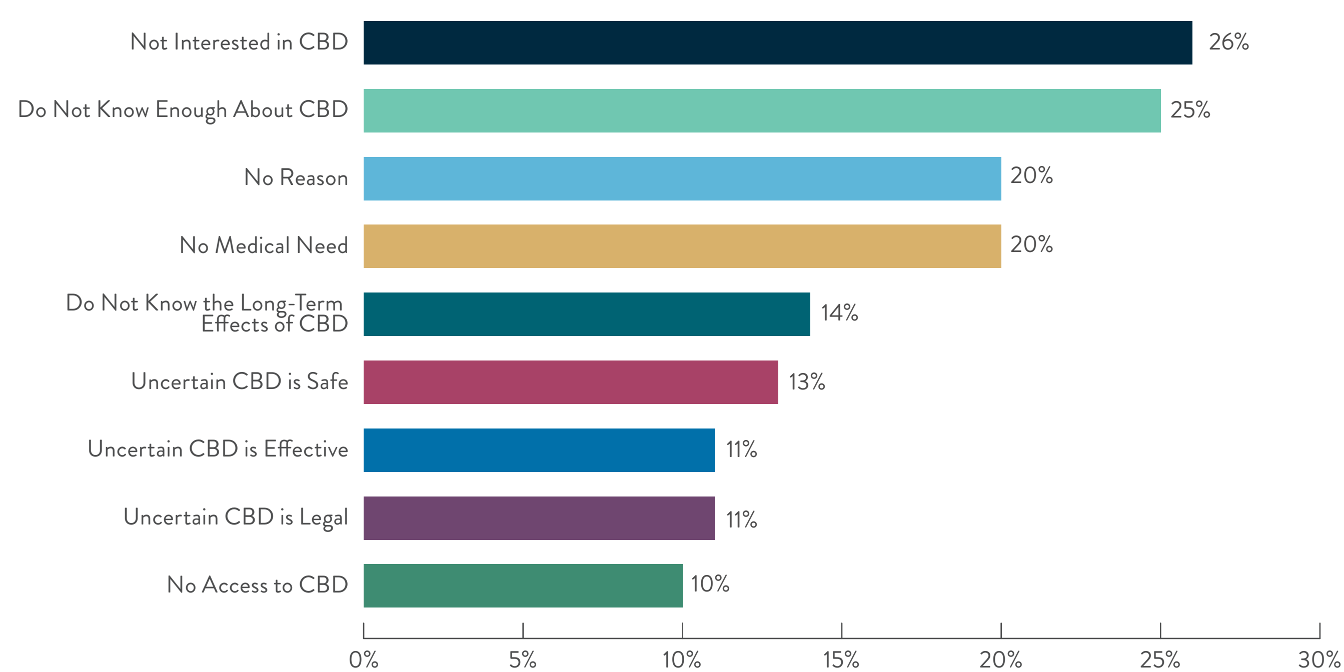
When asked why they had abstained from using CBD, those not having tried it indicated they were not interested in the product (26%). That reason

NONCONSUMERS' CURIOSITY ABOUT CBD PRODUCTS



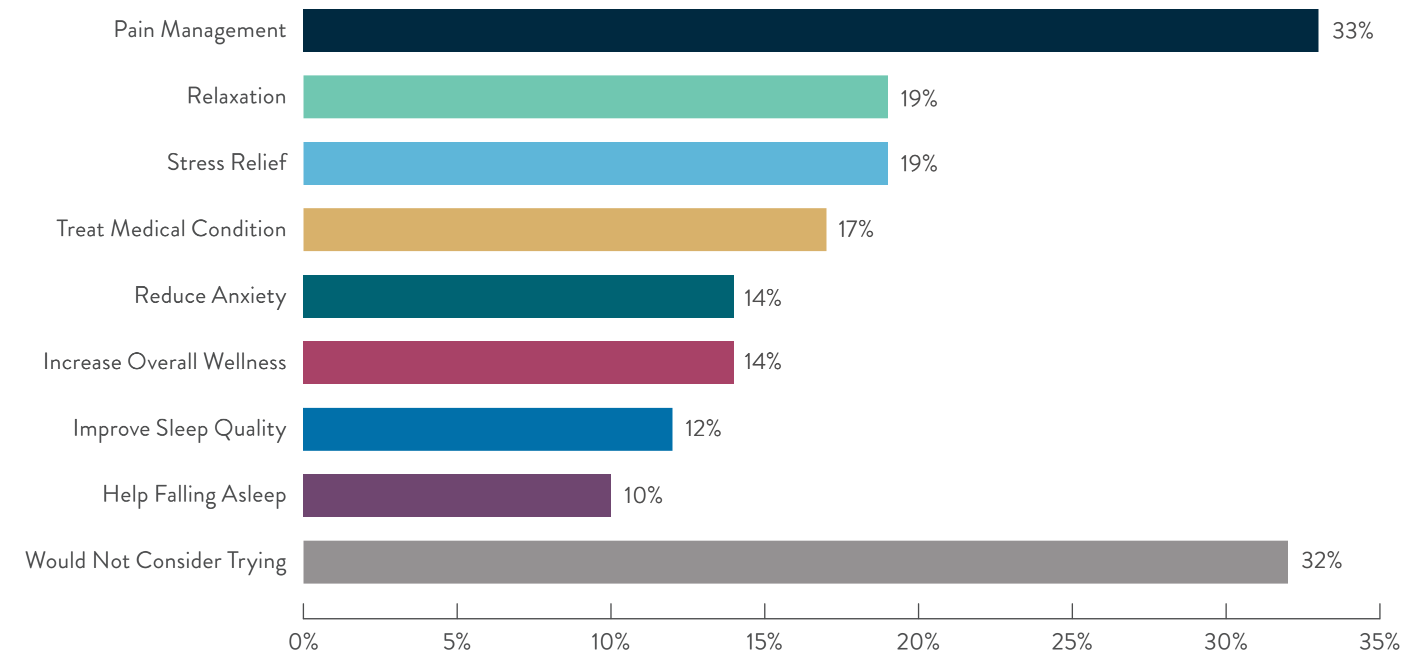
Source: New Frontier Data 2019 European CBD Survey

REASONS FOR ABSTAINING FROM CBD



Source: New Frontier Data 2019 European CBD Survey

POTENTIAL REASONS TO CONSIDER CBD



Source: New Frontier Data 2019 European CBD Survey

was closely followed by not knowing enough about CBD (25%), having no medical need (20%), or simply having no reason at all (20%).

Among potential consumers asked whether they might consider trying CBD, the most commonly cited motivation was pain management (33%), echoing that most popularly cited (40%) among current consumers.

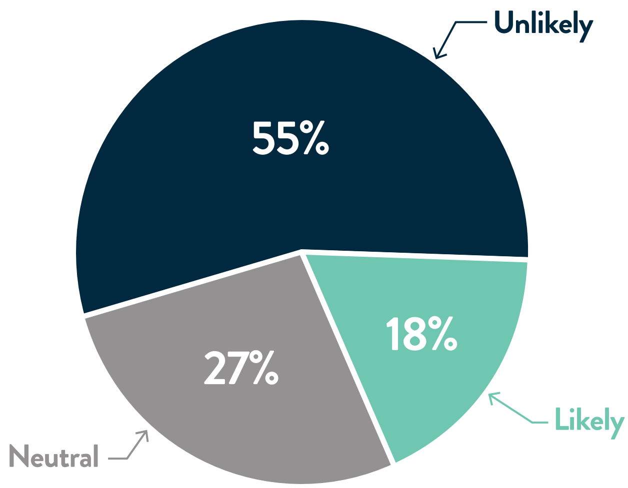
Nonconsumers' Likelihood of Trying CBD

Among potential CBD consumers, a solid majority (55%) indicated being unlikely to try a CBD product in the following six months; but nearly one in five (18%) reported being likely to do so.

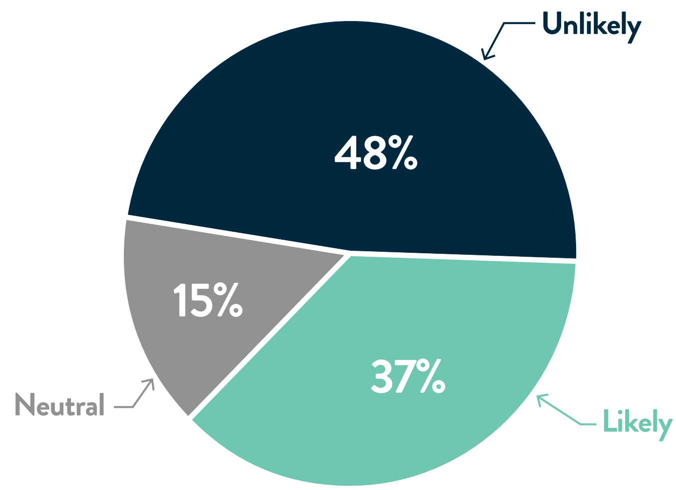
When asked whether they would try CBD if a product was offered by someone they trust, their reported likelihood doubled to 37%. Still, nearly half of nonconsumers (48%) indicated being unlikely to do so.

The higher probability of trying it if offered by a trusted source further underscores the important role that friends and family play in influencing consumers' decision to try CBD.

NONCONSUMERS' INTEREST IN CBD PRODUCTS IN THE FOLLOWING SIX MONTHS



NONCONSUMERS' INTEREST IN CBD PRODUCTS IF OFFERED BY A TRUSTED SOURCE



Source: New Frontier Data 2019 European CBD Survey

Potential Purchasers' Brand Awareness and Buying Behaviors

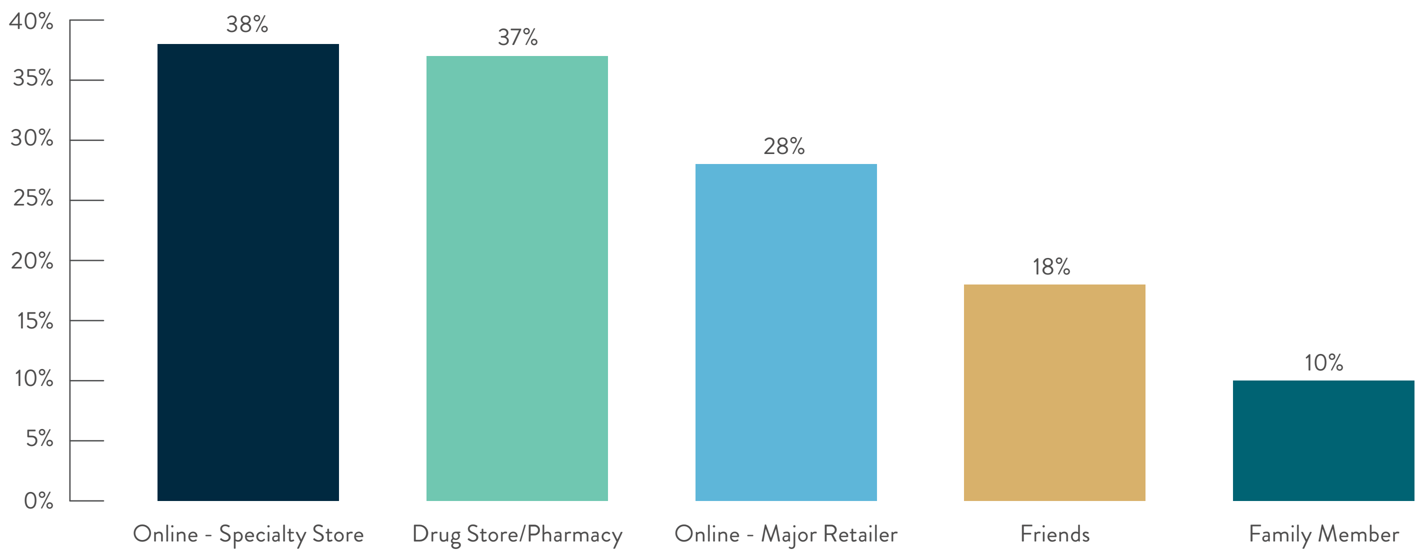
Predictably, there was limited brand recognition reported among those who had not previously bought CBD. No brand exceeded a reported 10% likelihood for purchases among that cohort. Notwithstanding, the brands cited for the highest potential share of those respondents (approximately 7%) included both Nordic Oil and Natural Oil and Fibers.

Potential purchasers indicate that they would source CBD through retail channels. Online specialty stores (38%), major retailers (28%), and drug stores (37%) were the top potential sources for CBD nonconsumers.

Potential CBD purchasers were asked about a range of factors that could influence their decision-making about whether to purchase CBD products. Top purchase influencing factors include dosing information (84%), price (83%), CBD per serving (82%), and lab testing results (82%). Less important factors include celebrity endorsement (31%) or label design (32%).

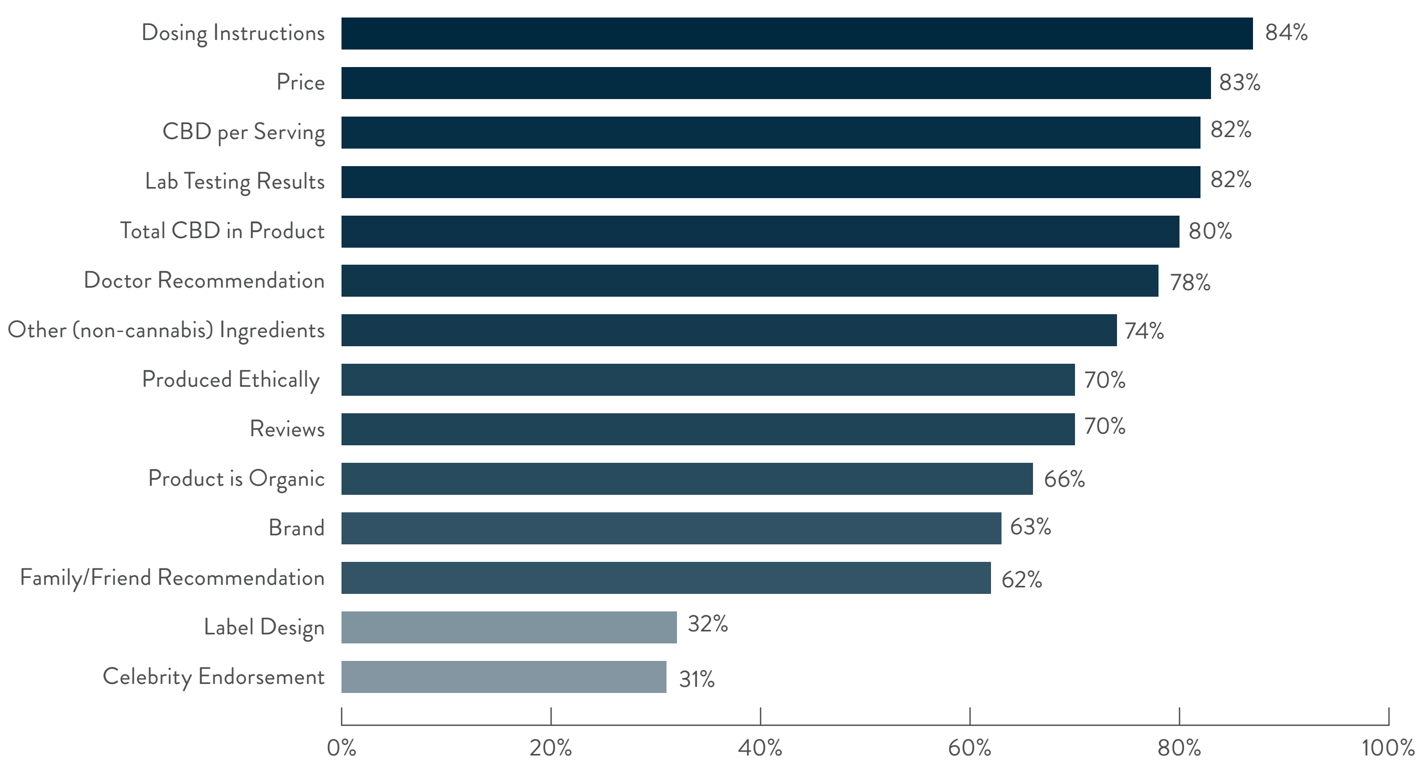
Non-purchasers were asked to rate factors which might influence their choices among sources for CBD. Such factors include the quality of products available (84%), being able to ask about products (78%), receiving advice or consultation (77%), and doctor recommendation (76%).

POTENTIAL LIKELY SOURCES OF CBD



Source: New Frontier Data 2019 European CBD Survey

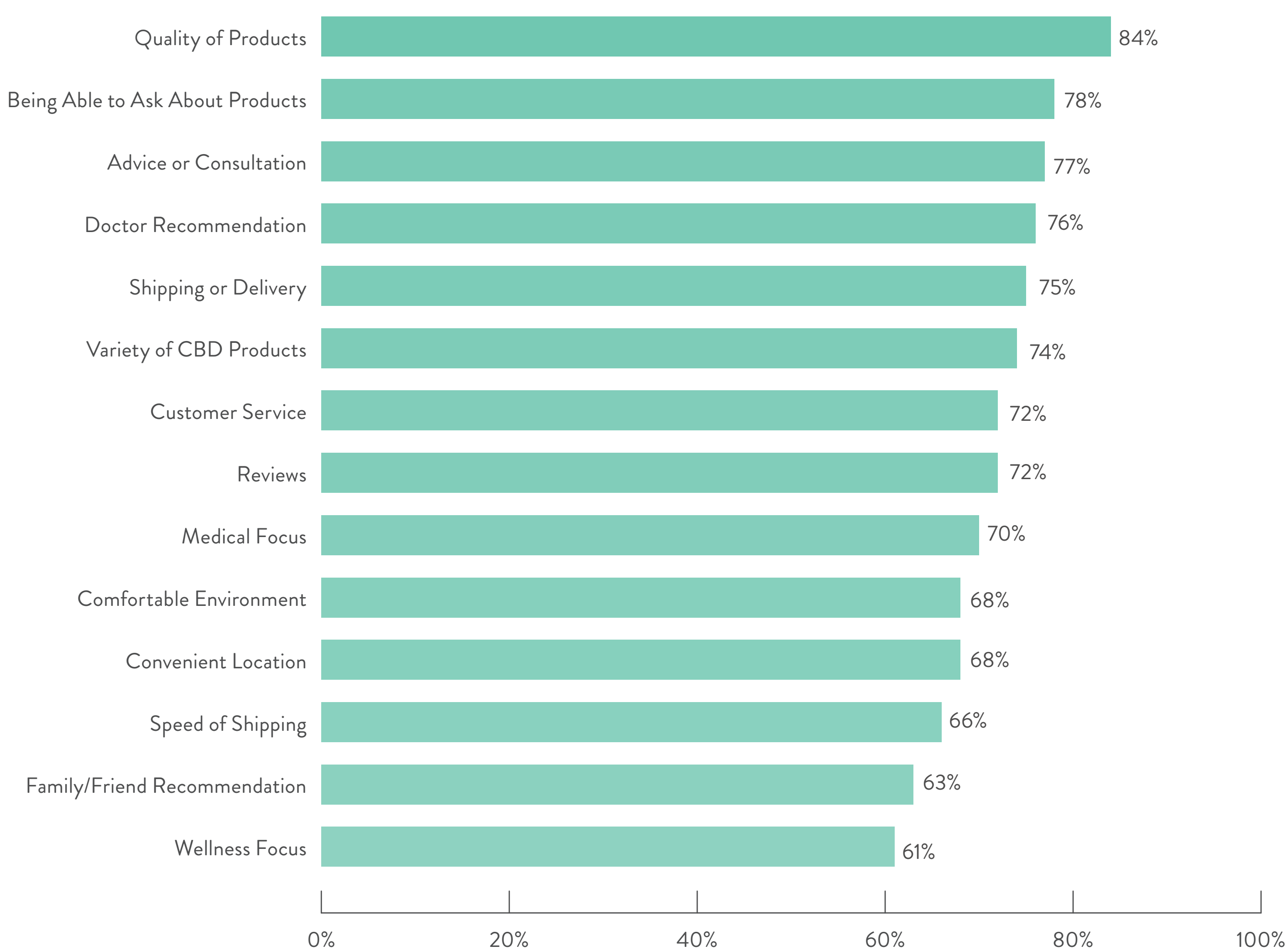
IMPORTANT FACTORS IMPACTING THE POTENTIAL PURCHASE OF CBD



Source: New Frontier Data 2019 European CBD Survey

Two of the top three factors influencing decisions around purchase sources suggest that consumers are still relying heavily on the place they buy from to educate/inform their decision. For brands and CBD retailers, this highlights the need for a well-trained staff to discuss the effects and applications of CBD, as well as about the specific applications and outcomes of the products carried. Well-informed and effectively delivered educational content can be an important differentiator as the CBD environment becomes more crowded.

IMPORTANT FACTORS INFLUENCING THE POTENTIAL SOURCE OF CBD



Source: New Frontier Data 2019 European CBD Survey

PART II:
REGIONAL MARKET PROFILES

	Ch/Aus	Benelux	Swe/Den	UK/Ire	Germany	Italy	Sp/Port	France
Have Heard of CBD	**69%**	**69%**	**55%**	**78%**	**49%**	**52%**	**44%**	**36%**
Have a positive general impression of CBD	54%	53%	45%	56%	43%	37%	50%	28%
Agree with "CBD has valid medical uses"	62%	57%	50%	62%	59%	45%	53%	46%
"Regulated CBD is safer than unregulated CBD"	52%	48%	43%	59%	46%	49%	56%	40%
"CBD is best described as a nutritional supplement"	25%	27%	24%	24%	18%	17%	22%	13%
[Nonusers] Somewhat or very likely to try CBD if offered by trusted person	47%	42%	36%	38%	33%	35%	38%	27%

CONSUMERS

	Ch/Aus	Benelux	Swe/Den	UK/Ire	Germany	Italy	Sp/Port	France
Have Consumed CBD	**33%**	**25%**	**20%**	**14%**	**14%**	**11%**	**10%**	**7%**
Only ever tried once or twice	23%	15%	15%	22%	20%	6%	24%	17%
First used less than 3 months ago	34%	31%	40%	24%	40%	38%	18%	57%
Use CBD at least once a day	26%	31%	22%	50%	35%	24%	18%	23%
Have tried CBD oil/drops/tincture	57%	59%	43%	54%	73%	47%	45%	30%
Top form after oil/drops/tincture	Flower (34%)	Capsules (19%)	Capsules (22%)	Vape pen (25%)	Capsules (22%)	Capsules (26%)	Capsules (32%)	Capsules, Vape pen (30%)
Consume less than 10 mg at a time	46%	47%	30%	39%	40%	50%	47%	47%
Use CBD for pain management	38%	39%	27%	35%	44%	44%	45%	57%
Use CBD for relaxation	37%	28%	20%	31%	45%	41%	34%	43%
Use CBD to prevent disease	23%	31%	18%	17%	25%	9%	32%	17%
Top retail CBD sources	Pharmacy (24%)	Pharmacy (29%)	OL Specialty Store (32%)	OL Specialty Store (33%)	Major OL Retailer (33%)	OL Specialty Store (38%)	OL Specialty Store (34%)	Pharmacy, OL Specialty Store (27%)
CBD positively affected quality of life	63%	76%	65%	74%	76%	85%	92%	67%

PURCHASERS

	Ch/Aus	Benelux	Swe/Den	UK/Ire	Germany	Italy	Sp/Port	France
Have purchased a CBD product	**32%**	**26%**	**18%**	**14%**	**14%**	**11%**	**10%**	**6%**
Buy CBD only in home country	68%	54%	34%	66%	67%	63%	52%	48%
Top brand in region	Swiss Cannabis (14%)	Cannabigold (12%)	Nordic Oil (19%)	Cannabigold (16%)	CBDVital, Cannapower (13%)	CBD Code Pharma (18%)	CBD Code Pharma (17%)	Cannabigold (16%)
Always use the same brands	37%	35%	42%	44%	25%	39%	26%	44%
Generally satisfied with purchased CBD	65%	68%	49%	71%	67%	85%	69%	84%
Spend under €50 per month on CBD	45%	45%	40%	56%	47%	45%	20%	56%

LOW INCIDENCE — HIGH INCIDENCE

Source: New Frontier Data 2019 European CBD Survey

Note: Looking for more data points? Buy this data set at Equio.solutions

CH/AUS: SWITZERLAND & AUSTRIA

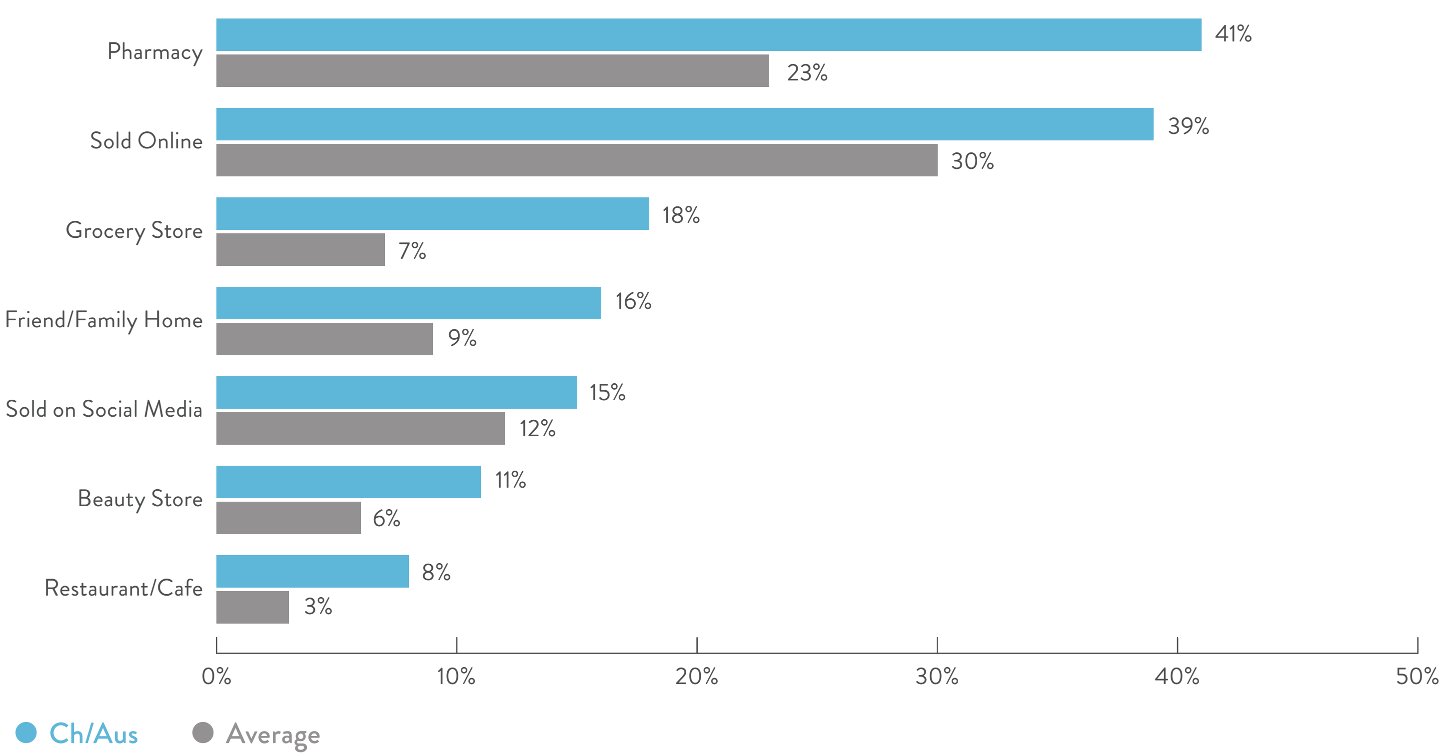
Ch/Aus has the highest rates of CBD consumption and purchasing of any of the regions profiled. The general public is familiar with CBD, and consumers there share positive information as well as their experiences with others, increasing the degree of comfort with and interest in CBD. This comfort and familiarity lent to the products by friends and through interpersonal networks has led to a broad range of use drivers and behaviors—including a considerable number of people who have tried it out of curiosity but decided after trying it once or twice not to continue using it. Most of those who would purchase or consume CBD in the region already have, although there are some potential consumers who are holding out for more information about it before considering trying it.

Broad Exposure to CBD

People in Ch/Aus are more likely to have heard of CBD than is the average European (69% vs. 56%).

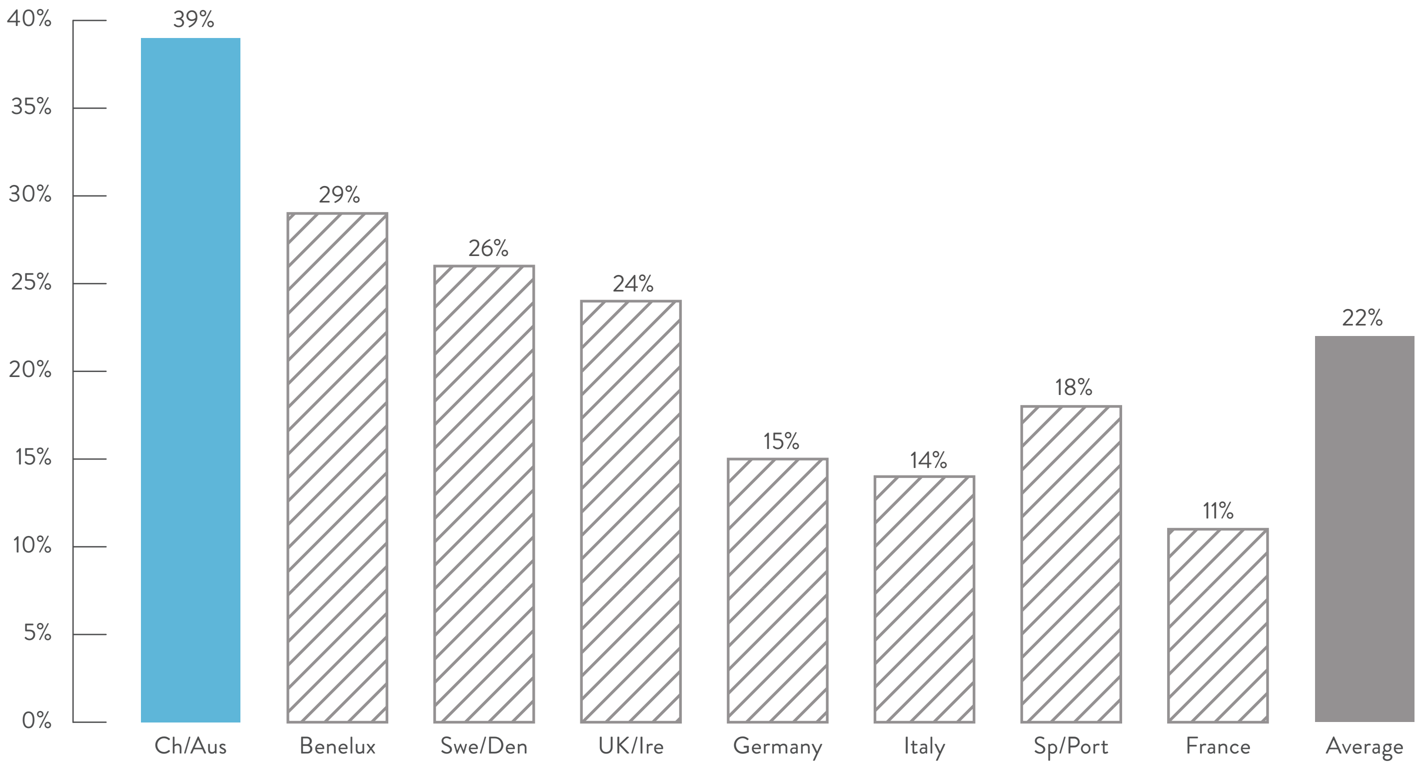
Ch/Aus respondents also have the broadest exposure to CBD. Nearly three-quarters (74%) of Ch/

CH/AUS: WHERE CBD IS FOUND



Source: New Frontier Data 2019 European CBD Survey

SOMEONE I KNOW HAS RECOMMENDED I TRY CBD



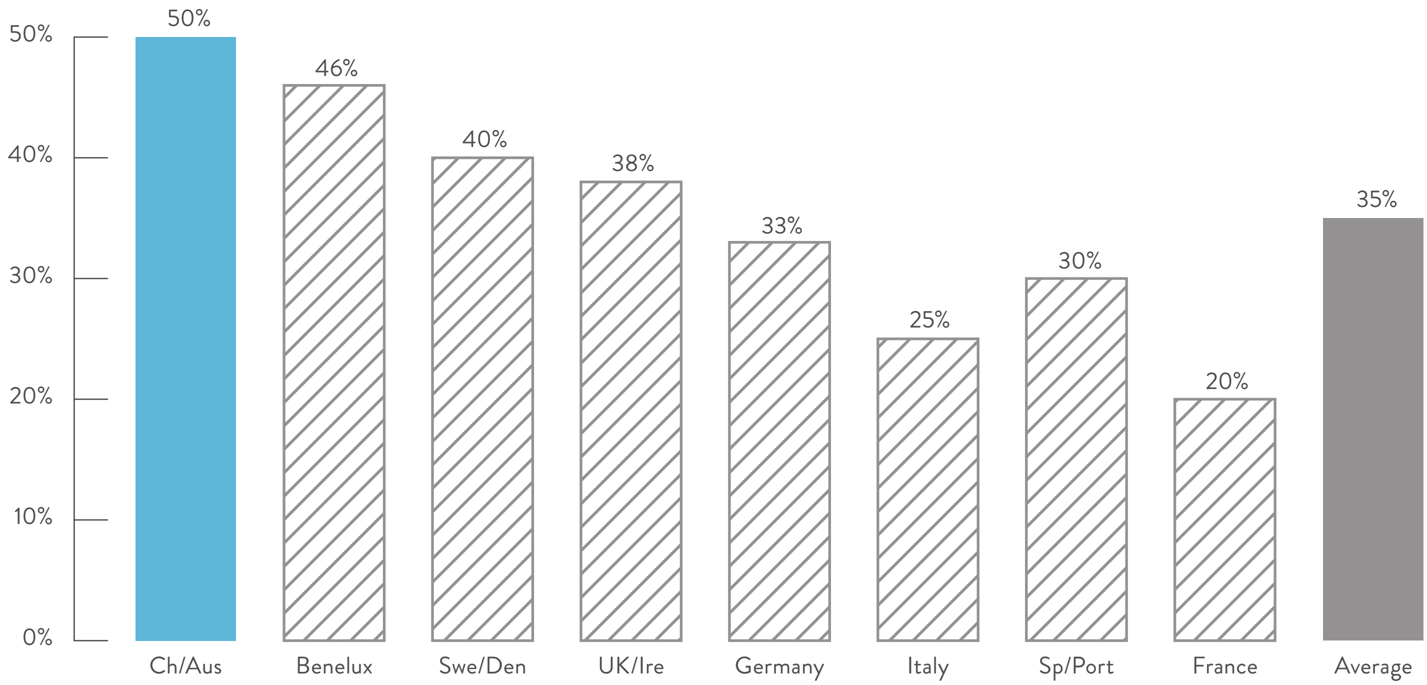
Source: New Frontier Data 2019 European CBD Survey

Aus residents have seen a CBD product (either in person or for sale online), compared to 55% of surveyed Europeans on average. Ch/Aus respondents had also seen CBD in the most different locations and situations of any regional group.

Respondents from Ch/Aus were also the most exposed to CBD by other people. They were the most likely to know a friend or family member who consumes CBD (53% vs. 34% on average), with one in 10 saying they have “many” friends or family that consume CBD. Nearly three-quarters (74%) of Ch/Aus respondents had had a conversation about CBD with someone, compared to 60% of Europeans overall. They were also the most likely to talk about CBD with people outside their immediate social circle, with nearly one in five (18%) having discussed CBD with a coworker and 16% having discussed it with a medical professional (compared to averages of 9% and 8%, respectively).

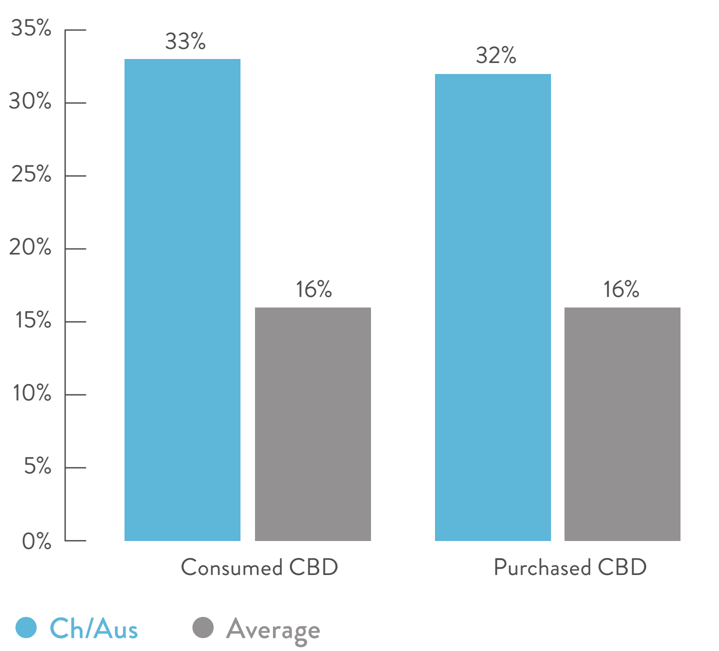
Such high rates of being exposed to CBD products and others’ ideas and experiences, combined with high use rates and generally positive views of CBD in Ch/Aus, mean that respondents from these countries were most likely of any region to have been recommended CBD by someone they know (39% vs. 22% on average).

AGREE: CBD SHOULD BE FREELY AVAILABLE WITHOUT A DOCTOR'S RECOMMENDATION



Source: New Frontier Data 2019 European CBD Survey

CH/AUS: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

Policy Views

Slightly more Ch/Aus respondents agree that CBD has valid medical uses than do respondents overall (62% vs. 55%), and they are most likely to say that CBD should be available without a doctor or medical professional's recommendation (50% vs. 35% on average).

Ch/Aus residents have the most positive feelings about CBD in the region; more than half (53%) reported positive feelings about CBD, compared to 42% of Europeans on average.

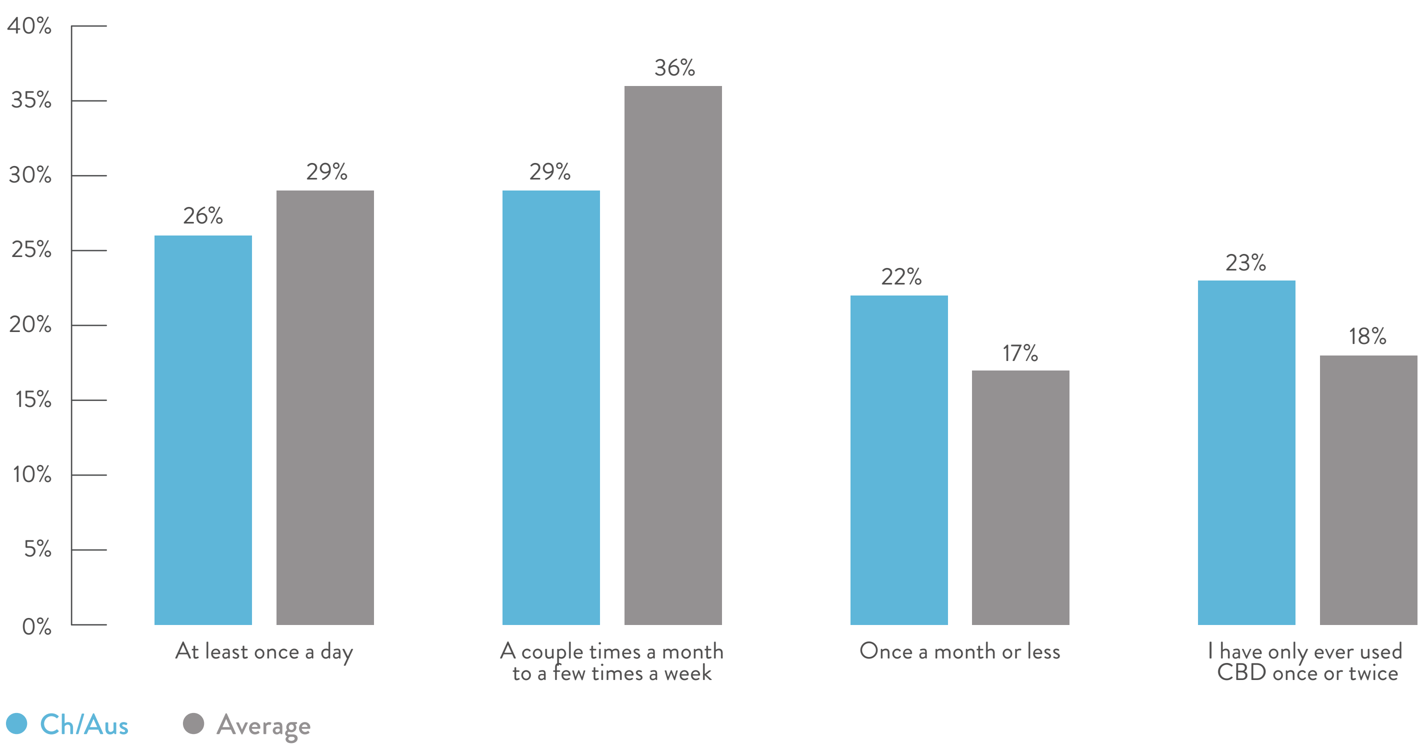
High Prevalence of Consumption, Wide Variety of Behaviors

Ch/Aus residents reported the highest rates of having consumed CBD, at over twice the average rate of European countries surveyed (33% versus 16%). However, Ch/Aus also has high rates of experimentation with CBD, with nearly a quarter (23%) of those respondents who had consumed CBD only doing so once or twice (the average rate of limited experimentation among consumers was 18%). This high rate of discontinuation brings the prevalence of ongoing CBD use in Ch/Aus to 26%.

Both the high rates of consumption and the high rates of trying and discontinuing use are indicators of a more mature consumer market. A large number of people have enough information about and confidence in the safety of the products to feel comfortable trying it, many of whom later decide it is not for them.

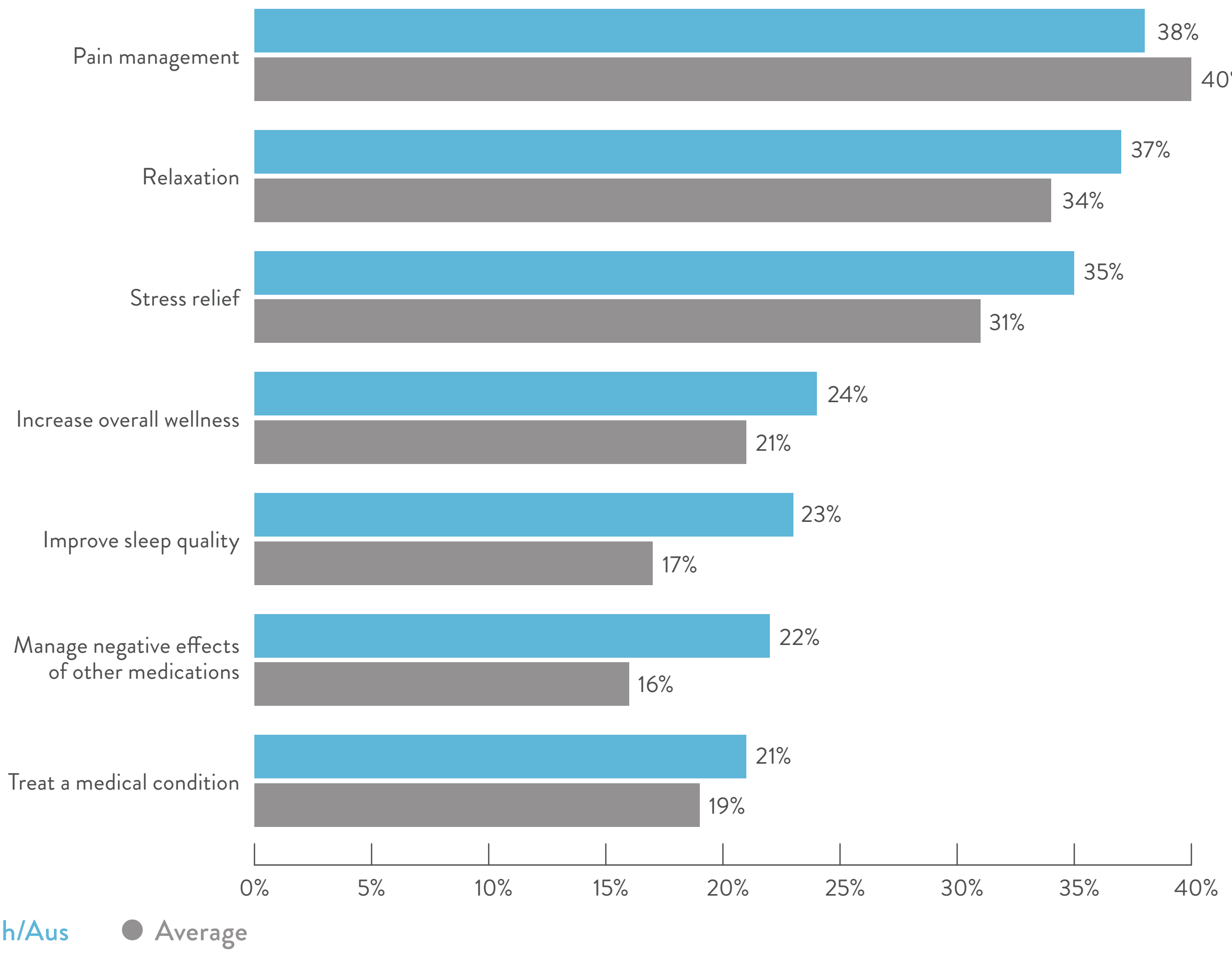
Ch/Aus CBD consumers reported using CBD at a wide range of frequencies. This variety is another indication of a more mature market, where people have had longer to learn about what consumption behaviors work for them, and have been exposed to the wide variety of ways others in their social circles use CBD.

FREQUENCY OF CBD USE



Source: New Frontier Data 2019 European CBD Survey

TOP REASONS FOR CBD USE



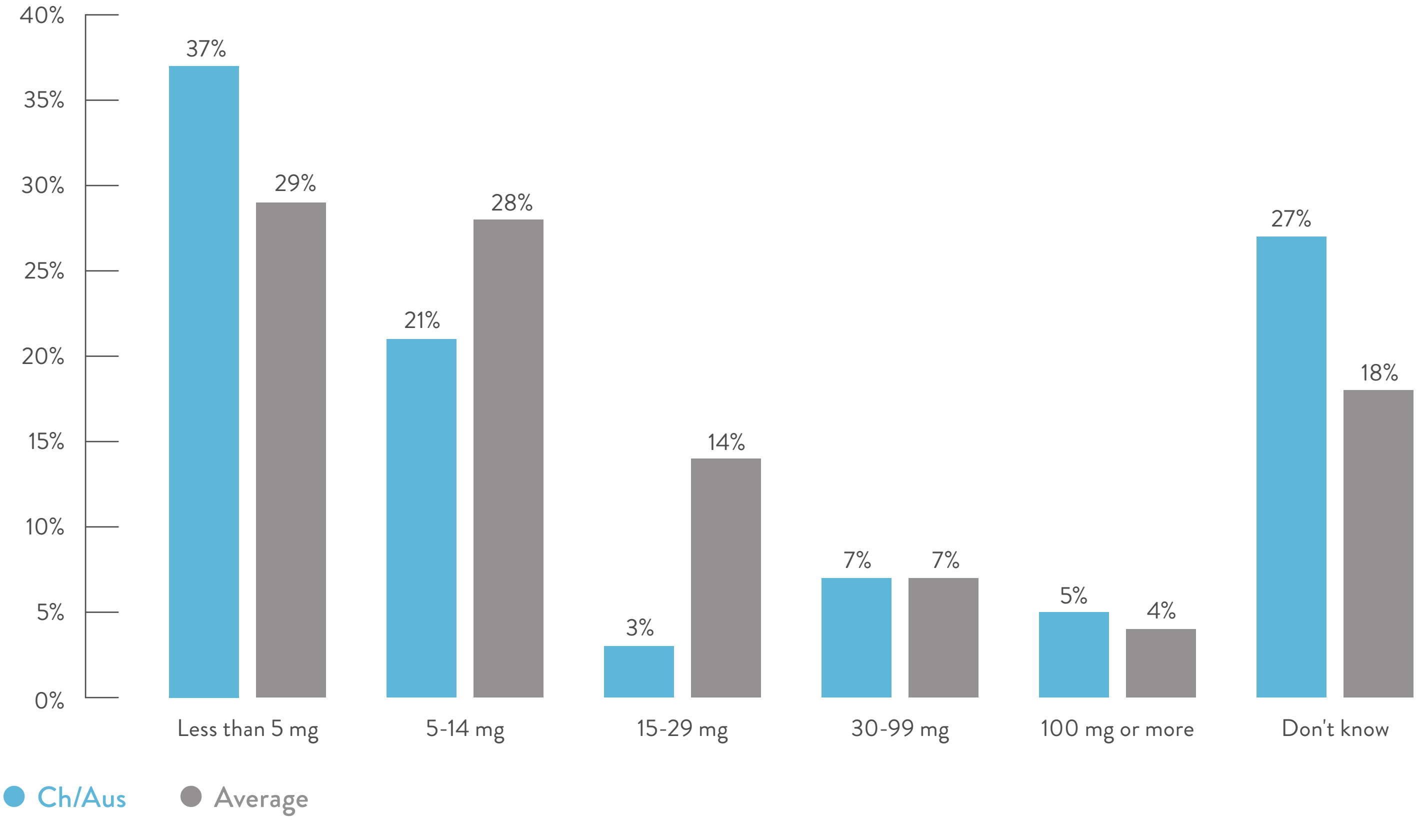
Source: New Frontier Data 2019 European CBD Survey

The top reasons for CBD use in Ch/Aus are the same as those Europe-wide: Pain, relaxation, and stress relief.

Oil was the most commonly consumed form of CBD in Ch/Aus (as it was in all markets), with 57% of consumers having used it. The second most commonly consumed form was CBD-only cannabis flower, with over a third of consumers having tried it, twice the average rate of 17%.

This singularly high rate of consumption of CBD flower, whose CBD content is not as easy to discern, may contribute to Ch/Aus having the highest rates of consumers not knowing how many milligrams of CBD they consume in a session/serving, with over a quarter (27%) of consumers indicating not knowing their typical CBD dose. Among those consumers who do know their typical dose, a higher than average 37% consume less than 5 mg per serving (compared to 29% of Europeans on average consuming such small doses).

TYPICAL DOSE OF CBD PER SERVING



Source: New Frontier Data 2019 European CBD Survey

Interpersonal information and product sharing seem to be a major drivers of consumption in the region; friends are the most-used source, with a third of consumers having sourced CBD from friends. This correlates to Ch/Aus's high rates of not only familiarity with CBD, but also knowing people who consume it and recommend it. Pharmacies (24%) and online specialty stores (23%) are the top retail sources for CBD, with about a quarter of consumers having used each as a source.

Nearly two-thirds (63%) of CBD consumers in Ch/Aus indicated that CBD had a positive impact on their quality of life, slightly less positive than the European average, probably owing to the relatively large number of people in the region who have tried CBD but chosen not to continue consuming it.

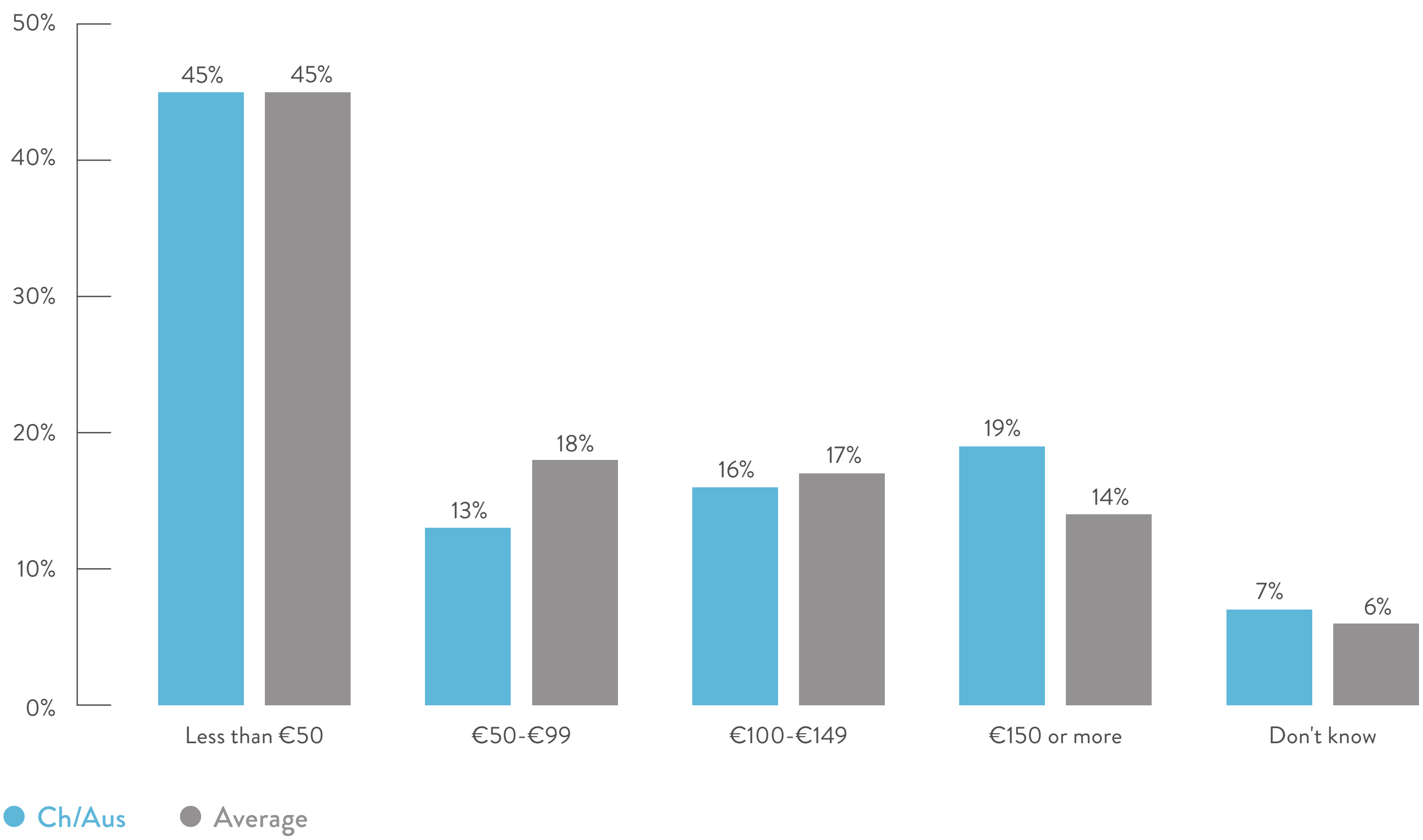
Half (49%) of respondents expect the amount of CBD they consume to remain steady over the next six months, with a third (33%) expecting the amount to increase and 18% expecting it to decrease.

High Rates of CBD Purchasing, but Average Rates of Spending

Just as Ch/Aus has the highest rates of CBD consumption, they also have the highest rates of having purchased CBD—32%, or double the survey average of 16%. The distribution of spending on CBD in Ch/Aus, however, remains very close to the average, with nearly half of purchasers spending below €50 on CBD products per month.

> **"Just as Ch/Aus has the highest rates of CBD consumption, they also have the highest rates of having purchased CBD—32%, or double the survey average of 16%."**

MONTHLY SPENDING ON CBD



Source: New Frontier Data 2019 European CBD Survey

Local Brands and High Brand Loyalty

Respondents in Ch/Aus had the highest rates (68%) of exclusively domestic CBD purchases of any regional group (compared to 56% of all European CBD purchasers). Swiss Cannabis (14%) and Formula Swiss (12%) were the brands most commonly purchased in the region.

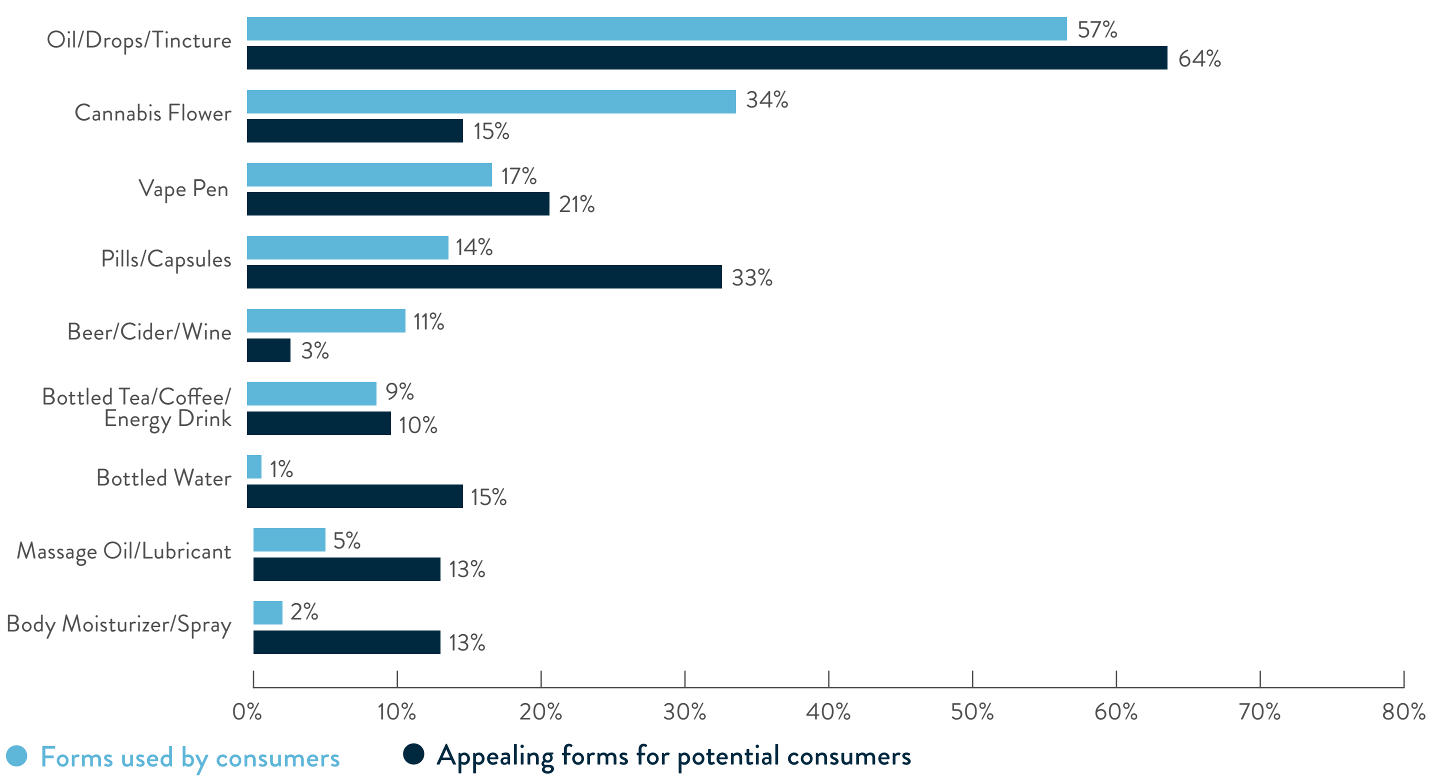
Over a third (37%) in Ch/Aus reported always purchasing the same brand(s), the same rate as the European average. Among those who do switch CBD brands, wanting variety was the most common reason to switch (32%).

Ch/Aus CBD purchasers reported average rates of satisfaction with the products they had purchased, with about two thirds agreeing they were generally satisfied, as well as average rates of likelihood to purchase CBD in the next six months (73% somewhat to very likely).

A Saturated Consumer Market

The high degree of awareness and widespread use of CBD in Ch/Aus has led to a deep penetration in the consumer market; it is likely that a majority of those Ch/Aus residents who will consume CBD already have done so. An average one in five of those who have not consumed or purchased CBD

CH/AUS: FORMS MOST POPULAR AMONG CONSUMERS VS. FORMS MOST APPEALING TO POTENTIAL CONSUMERS



Source: New Frontier Data 2019 European CBD Survey

in Ch/Aus indicate they are somewhat or very likely to try (20%) and purchase (19%) CBD in the next six months.

Interpersonal connections are important in influencing potential consumer behavior. Nearly half (47%) of those who reported not consuming CBD indicated they would be at least somewhat likely to try a CBD product if it were offered by a trusted source, the highest likelihood of any region, and above the European average of 37%. This high rate of willingness to try CBD provided through trusted personal connections creates a potential for brands to leverage the high rates of current consumption to reach new consumers more effectively.

While respondents from Ch/Aus exhibit high levels of awareness of and exposure to CBD, many potential consumers still feel that they do not have enough information about CBD. The most common reason for abstaining from CBD use among those who had not tried it was not knowing enough about it (30%). This is one market where CBD companies might consider investing in an education campaign to reach additional consumers.

Across all regional markets, CBD oil and capsules were the most appealing forms to potential consumers; in Ch/Aus oil was nearly twice as appealing as capsules (64% vs. 33%). The relatively higher interest in oil over capsules is likely due to oil's 4x higher prevalence among CBD consumers in the region; 57% of consumers have used CBD oil whereas only 14% have consumed CBD capsules.

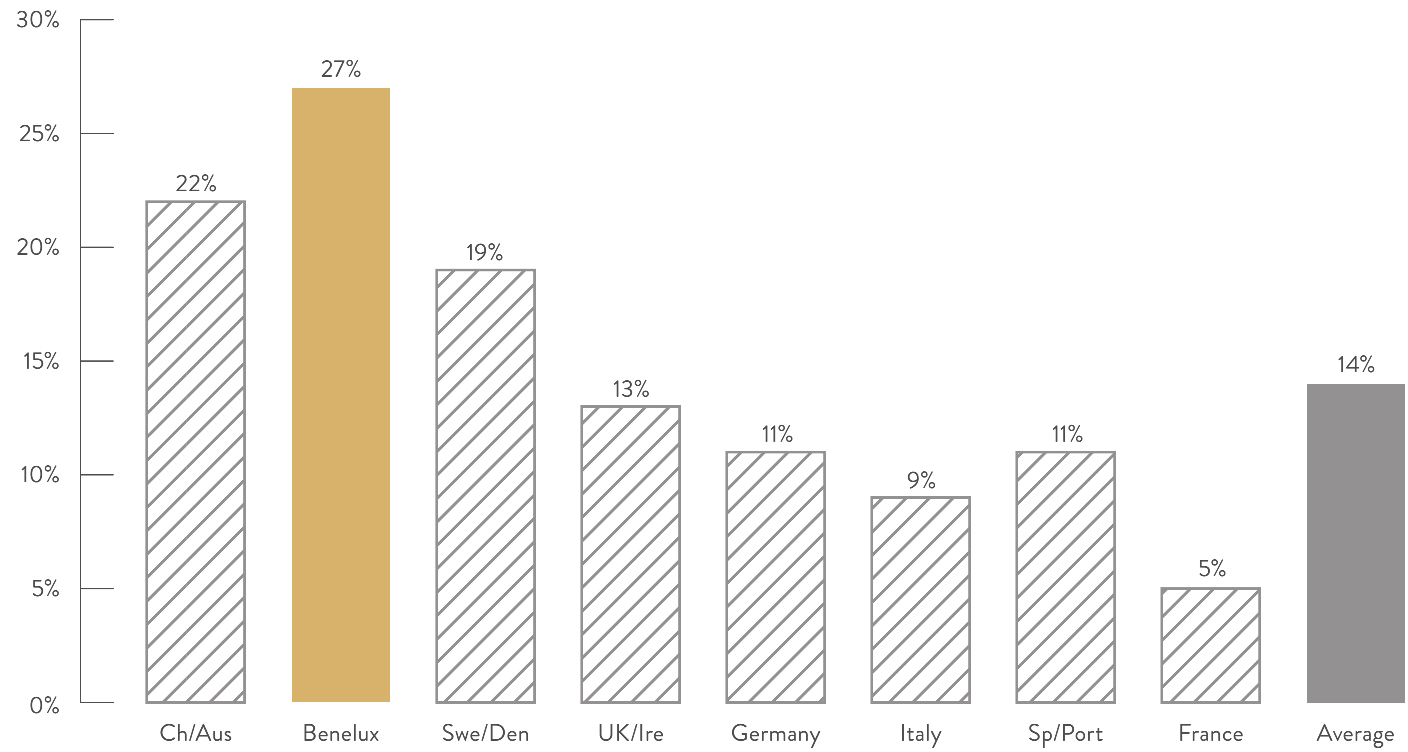
BENELUX: BELGIUM, NETHERLANDS & LUXEMBOURG

Belgium, the Netherlands, and Luxembourg (Benelux) together are another region with high rates of CBD use and purchasing as well as broad exposure and positive feelings toward the cannabinoid. While respondents from Benelux know CBD consumers and share information and experiences socially, the level of buzz surrounding it does not reach the same degree as in Ch/Aus. Beneluxers tend to believe that CBD, when used regularly, promotes general health by managing ongoing symptoms and preventing disease—they see CBD as a nutritional supplement instead of a miracle cure. CBD consumers in Benelux use somewhat frequently at a wide range of doses, and are concerned about contaminants and quality. Purchasers here are most likely of any region to have purchased CBD for family and for pets instead of only themselves. The consumer market for CBD in Benelux seems largely saturated, with many of those who have not yet tried it expressing a lack of interest or an unlikeliness to consider using it.

Broad Exposure to CBD

Respondents from Benelux (69%) are more likely than the average European surveyed (56%) to have heard of CBD, the same degree of awareness of CBD as those surveyed in Ch/Aus. Respondents from Benelux expressed broad exposure to CBD products (with 71% having previously seen

I HAVE RECOMMENDED CBD TO SOMEONE I KNOW



Source: New Frontier Data 2019 European CBD Survey

CBD products, versus 55% on European average), in a broad range of places, similar to Ch/Aus.

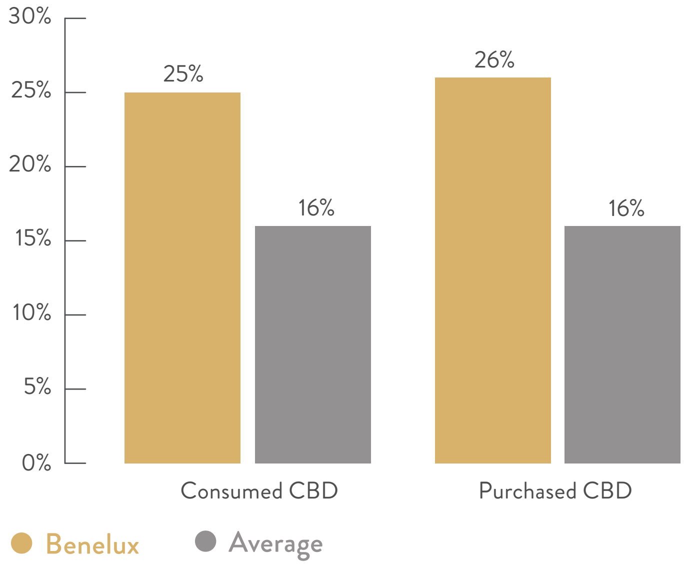
Nearly half (47%) of respondents from Benelux reported knowing someone who consumes CBD—the second highest rate after Ch/Aus, and well above the European average of 34%. Respondents in the region also report high rates of recommending and being recommended CBD: 27% of respondents from Benelux say they have recommended CBD to someone, nearly double the European average (14%).

About three in five respondents from Benelux report that the information they have heard about CBD through conversation (64%) or other sources (62%) was positive, which is in line with or marginally above average (64% and 57%, respectively). Thus, the general impression of CBD in the region is the same or slightly more positive (53%) than the European average (46%).

Policy Views

More than half of respondents from Benelux believe CBD has valid medical uses (56%), comparable to the European average. Like Ch/Aus respondents, those from Benelux believe CBD should be available without a recommendation from a medical professional (46% vs. 35% European average).

BENELUX: CBD CONSUMPTION AND PURCHASING RATES

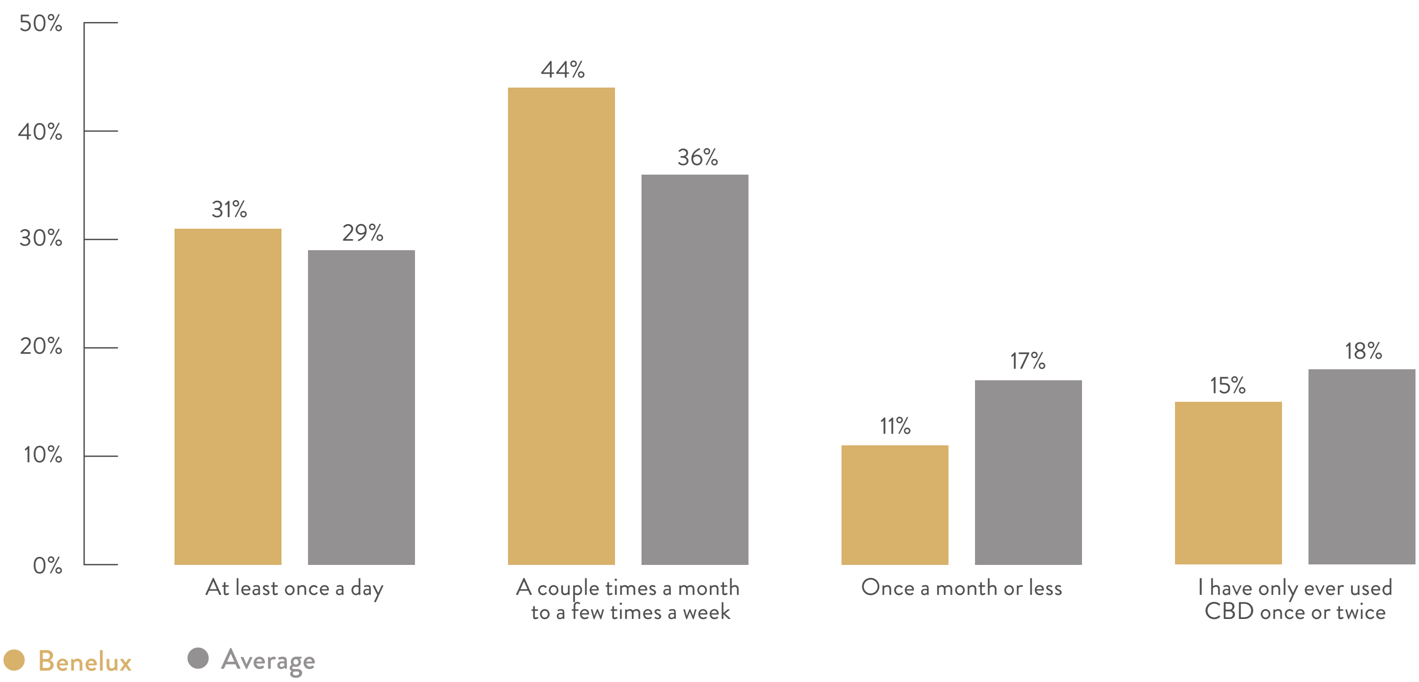


Source: New Frontier Data 2019 European CBD Survey

High Use Rates, Disease Prevention, and Concerns About Safety and Quality

One quarter of respondents from Benelux indicate they have tried a CBD product—the second highest rate of the regions surveyed, and above the average European rate of 16%. Of those respondents who have ever consumed CBD, 15% only tried it once or twice, close to the European average experimentation rate of 18%. Therefore, 21% of those surveyed in Benelux are continuing consumers of CBD. Those who consumed CBD more than a couple times in Benelux are more likely than average to consume between a few times a week and a couple of times a month.

FREQUENCY OF CBD USE



Source: New Frontier Data 2019 European CBD Survey

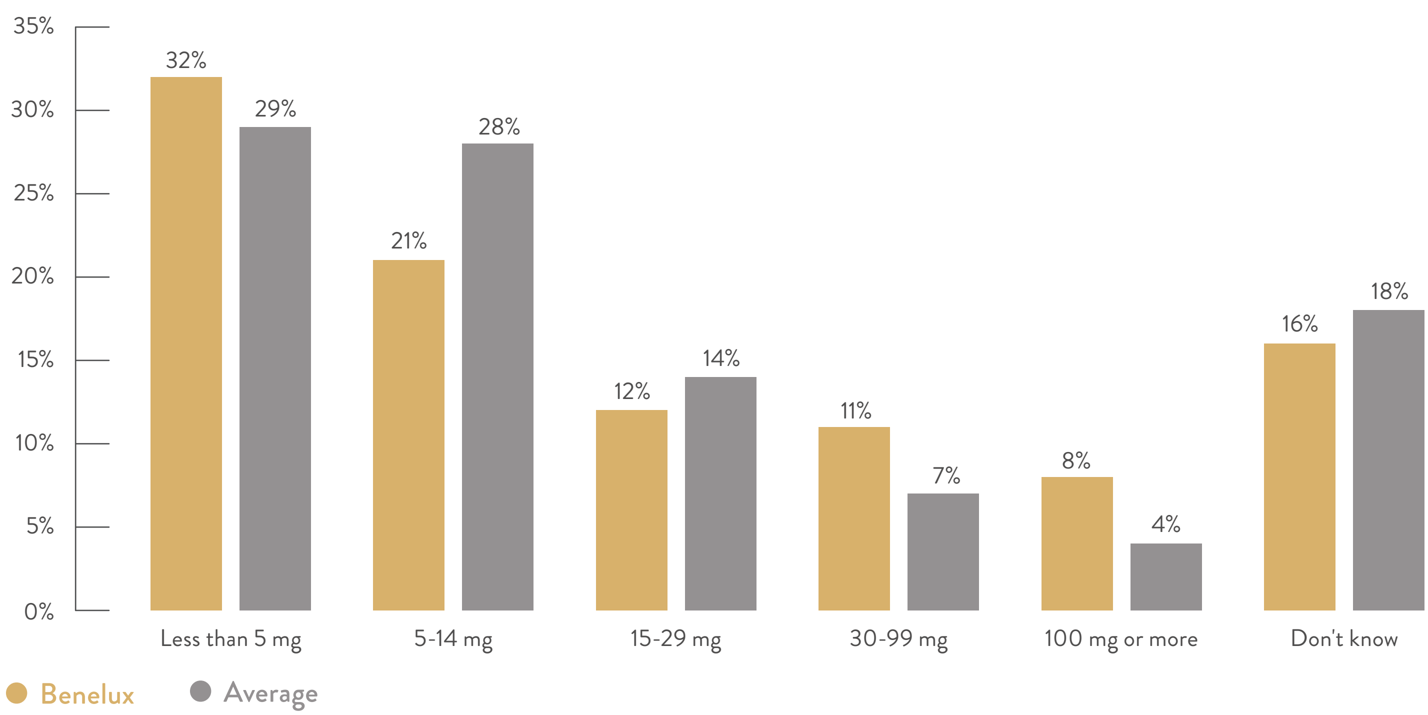
The top reasons for CBD consumption in Benelux —pain (39%), relaxation (28%), stress (24%) and help falling asleep (24%)—are generally in line with the top reasons continent-wide. Benelux consumers report using CBD with the goals of managing chronic conditions/symptoms (35%) and preventing a disease (31%).

The top forms among Benelux consumers align closely with European average consumption rates: CBD oil was used by 59% of consumers, capsules by 19%, flower by 17%, and vape pens by 16%.

Benelux consumers are uniquely concerned about the presence of contaminants in their CBD (43% are "very concerned" compared to the European average of 27%), as well as about the quality of the CBD they consume (37% "very concerned" vs. 25% average). The region is also characterized by a high prevalence of sourcing CBD informally from friends (40%), the highest rate of any mature market surveyed. The top retail sources of CBD were pharmacies (29%) and online specialty stores (27%).

More than three-quarters (76%) of consumers in Benelux said CBD has had a positive effect on their quality of life. Nearly half (48%) expect the amount of CBD they consume to increase over the next six months, and 47% expect the amount to stay the same.

TYPICAL DOSE OF CBD PER SERVING



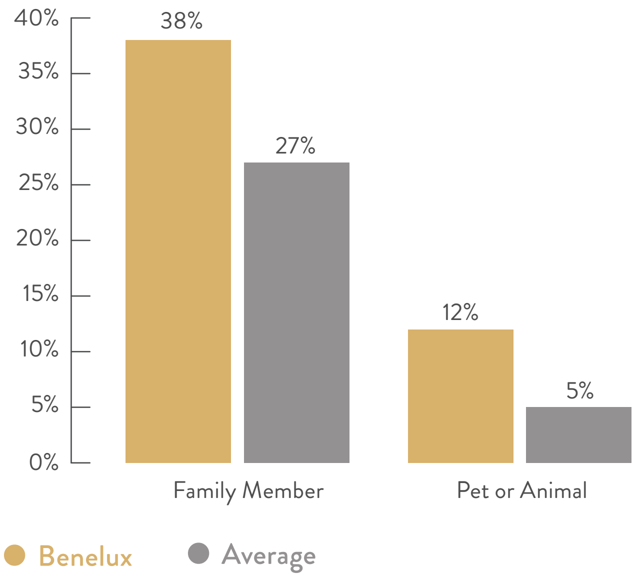
Source: New Frontier Data 2019 European CBD Survey

High Purchasing Rates and Buying CBD for Others

One quarter (26%) of respondents from Benelux had purchased CBD, compared to 16% of Europeans on average, but the spending breakdown among purchasers was closely matched to the continental average.

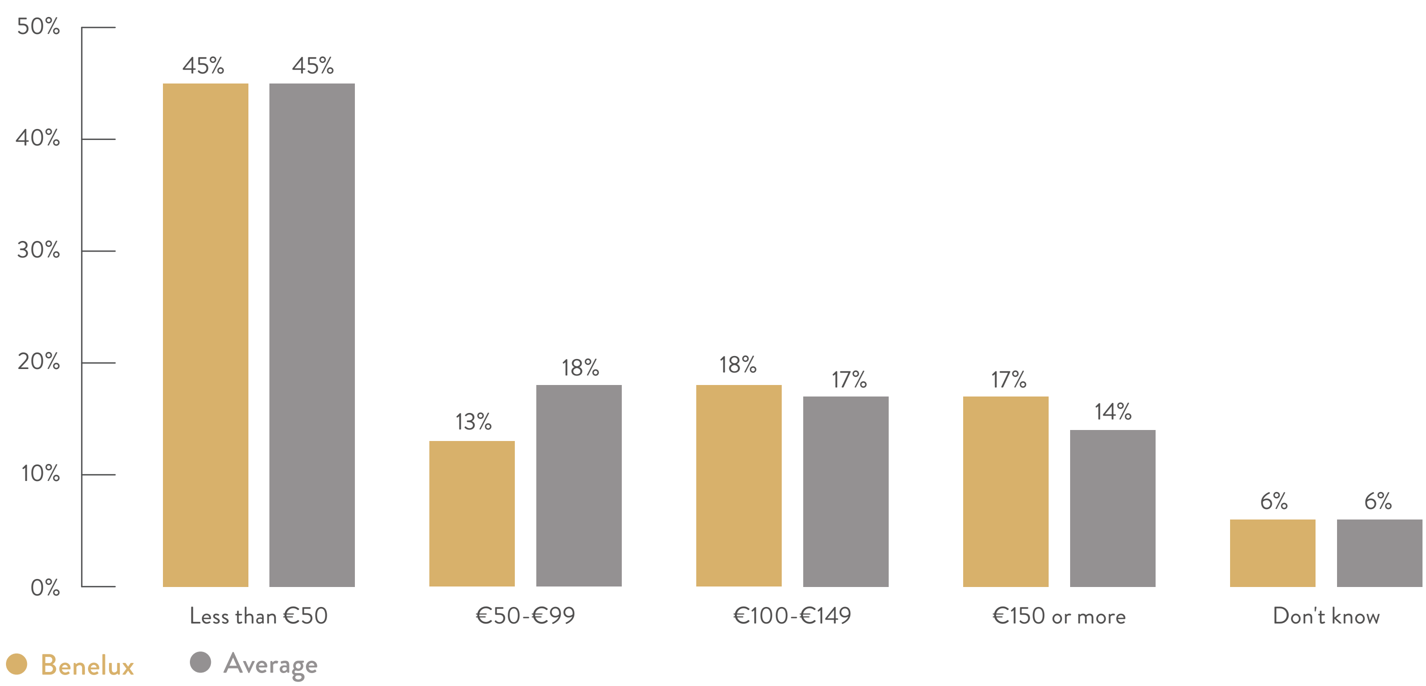
Respondents from Benelux were the most likely of any regional group to have purchased CBD products for family members (38% versus 27% European average). Because of this relatively high rate of purchasing products for others, CBD purchasers from Benelux were also the most likely to say that someone else chooses what to purchase and therefore they do not make product or

WHOM CBD PURCHASERS HAVE PURCHASED FOR



Source: New Frontier Data 2019 European CBD Survey

MONTHLY SPENDING ON CBD



Source: New Frontier Data 2019 European CBD Survey

brand decisions (47% compared to 39% European average). Benelux purchasers were also the most likely to have purchased CBD for pets or other animals (12% versus 5% average).

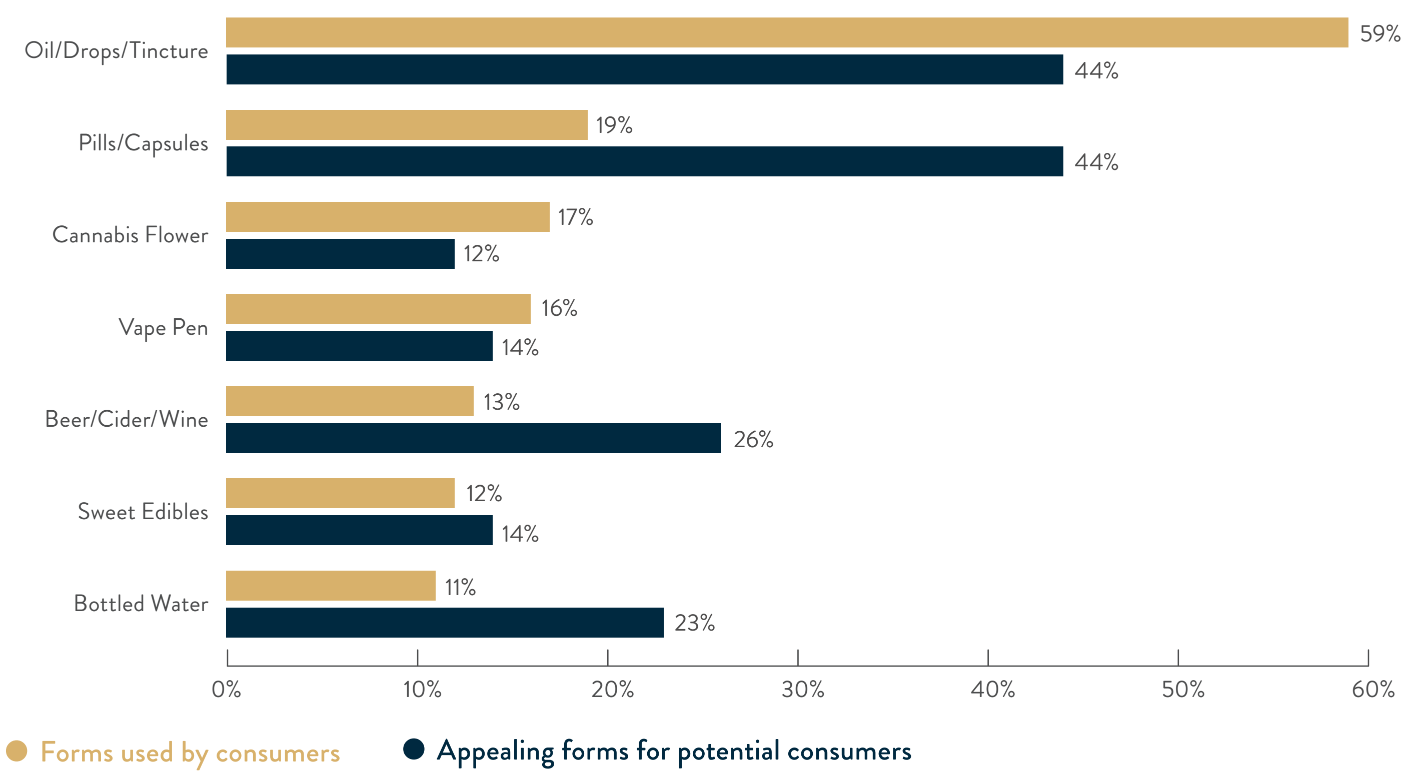
Low Brand Awareness

Perhaps another result of the high rates of purchasing products specified by someone else, CBD purchasers in Benelux showed low brand affinity. They are the most likely (along with those in Germany) to not know which brands they have purchased (22% vs. 16% European average). The most commonly purchased brands in Benelux were Cannabigold (12%) and Jacob Hooy (10%).

CBD purchasers in Benelux are about as likely as Europeans on average to say they always purchase the same brand(s) (35%). Among those switching brands, four in 10 (40%) did so for a better price.

Two-thirds of Benelux CBD purchasers say they are generally satisfied with the products they have purchased, and three-quarters say they are somewhat or very likely to purchase CBD again in the next six months, both rates aligned with the European averages.

BENELUX: FORMS MOST POPULAR AMONG CONSUMERS VS. FORMS MOST APPEALING TO POTENTIAL CONSUMERS



Source: New Frontier Data 2019 European CBD Survey

Saturated Consumer Market

One-fifth of those who have not already consumed CBD in Benelux say they are somewhat or very likely to try (19%) or purchase (19%) CBD in the next six months.

But it seems unlikely that there will be significantly more adoption of CBD use among those who have not already tried it in these countries. The most common reason given for not having tried CBD was a lack of interest (27%), and when asked what reasons they would consider for consuming CBD, the most common response was "I would not consider trying CBD" (32%).

Among those that have not yet purchased but would consider purchasing CBD products, oil and capsules were the most appealing forms (44% each) followed by CBD-infused beverages: beer, cider or wine (26%) and bottled water (23%). This affirms the higher preference for non-combustion products among potential consumers relative to the stronger preference for CBD flower and vaporizers among current consumers.

SWE/DEN: SWEDEN & DENMARK

Despite slightly higher than average rates of CBD use and purchasing in the region, Swe/Den is a less mature consumer market than Ch/Aus or Benelux. Respondents there have had some exposure to CBD, and while they tend to believe it poses no safety risk, they are more conservative in their beliefs about the medical benefits of CBD, and some have avoided CBD over confusion about its legal status.

Swe/Den CBD consumers are more likely to use on a weekly than daily basis, and express fewer specific reasons motivating their use, as well as a high degree of concern about contaminants. It seems that many there are still settling into their new consumption patterns, and a majority of consumers expect the quantity they consume to increase in the next six months. As the market is still maturing, it is likely that some potential consumers will convert as broadening awareness will increase curiosity and knowledge.

Average Exposure Rates, Indirectly Mediated Through the Internet

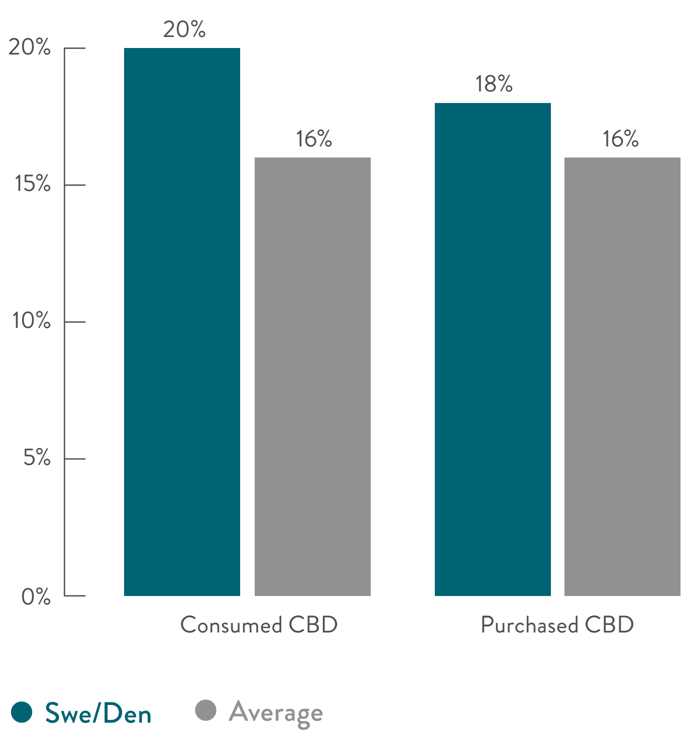
Exposure to and awareness of CBD in Swe/Den was lower than for the regions previously discussed, and more closely aligned with the average European rates; just over half (55%) of respondents from Swe/Den indicated having heard of CBD, in line with the European average.

Swe/Den respondents were more likely to have seen CBD (62% versus 55%), with most exposure to CBD happening indirectly online or on social media. Around one in five (21%) had seen CBD in a pharmacy, but exposure through other channels was low, in line with European averages.

Likewise, Swe/Den respondents were more likely (17%) than those from any other region and twice as likely as the average European (9%) to have discussed CBD on social media. Swe/Den respondents were marginally more likely than average to have been recommended CBD (26% vs. 22% European average), to have recommended it to another person (19% vs. 14% average), and to know a friend or family member who uses it (39% vs. 34%).

Swe/Den respondents were exposed to generally positive attitudes toward CBD in line with the European average; 56% said sources of information about CBD they encountered were generally positive, and 59% said the conversations they had about CBD were generally positive (European average attitudes for both were 57% positive). Just over half (55%) of respondents from Swe/Den indicated they were interested in learning more about CBD, the same as the continental average.

SWE/DEN: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

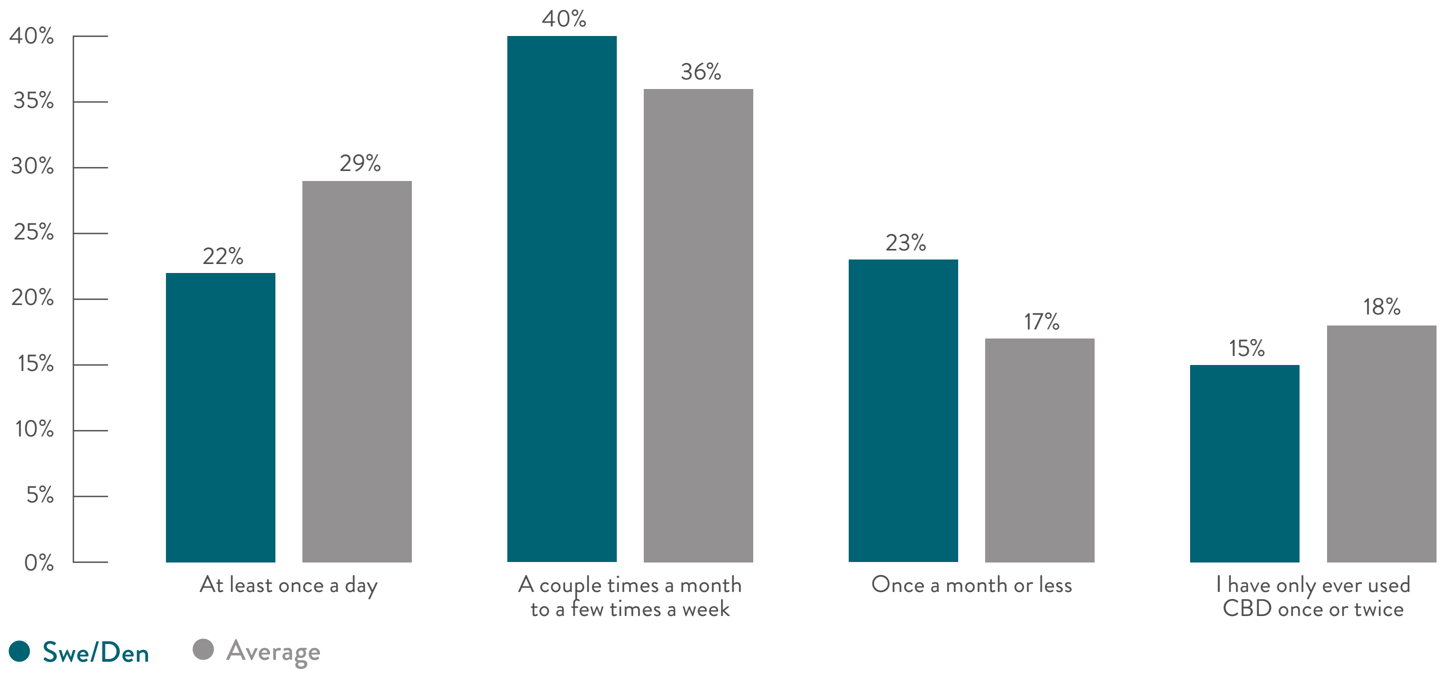
Policy Views

Half (50%) of respondents from Swe/Den said they believe CBD has valid medical uses, marginally below the continental average of 55%, but they were slightly more likely than average to believe that CBD should be available without a doctor's recommendation (40% vs. 35%). Swe/Den respondents were also less likely than average (48% vs. 58%) to believe that all CBD sold should be required to be tested by an analytical lab.

Developing Consumption Behaviors and Preferences

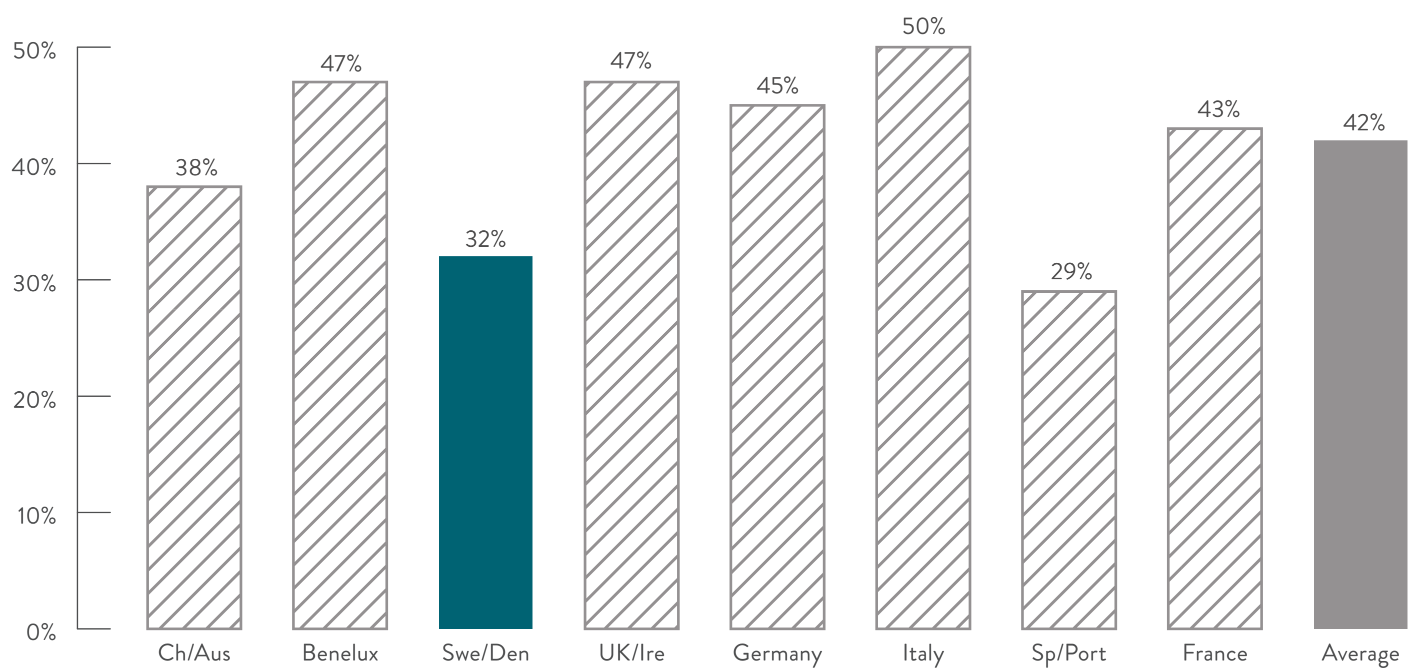
One in five (20%) respondents from Swe/Den had ever consumed CBD, with 15% of those consumers only trying it once or twice, resulting in a 17% prevalence rate of continuing CBD use. Consumers who reported continuing using CBD more than a couple times are slightly less likely than average to consume it daily.

FREQUENCY OF CBD USE



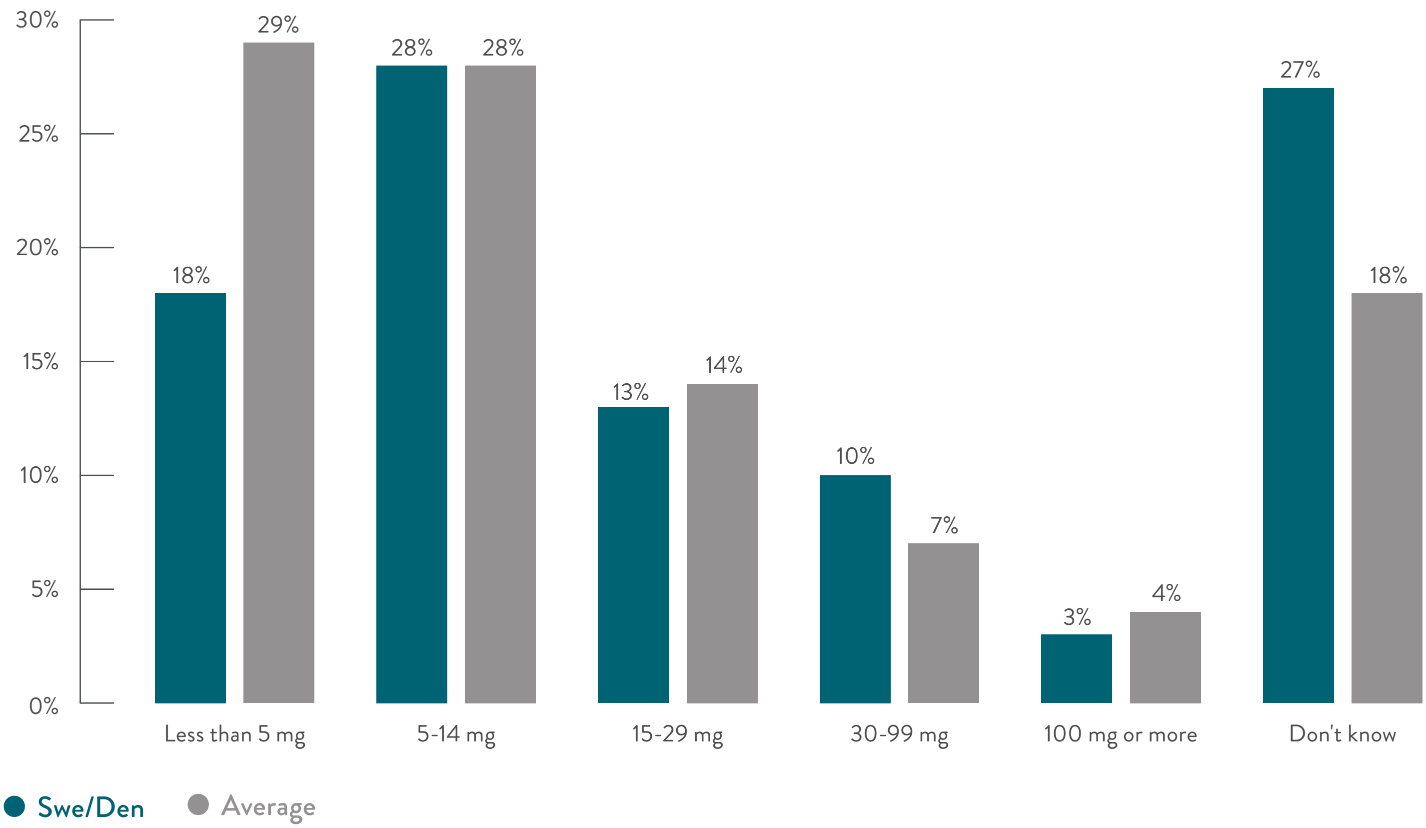
Source: New Frontier Data 2019 European CBD Survey

CONSUMED CBD IN THE LAST WEEK



Source: New Frontier Data 2019 European CBD Survey

TYPICAL DOSE OF CBD PER SERVING



Source: New Frontier Data 2019 European CBD Survey

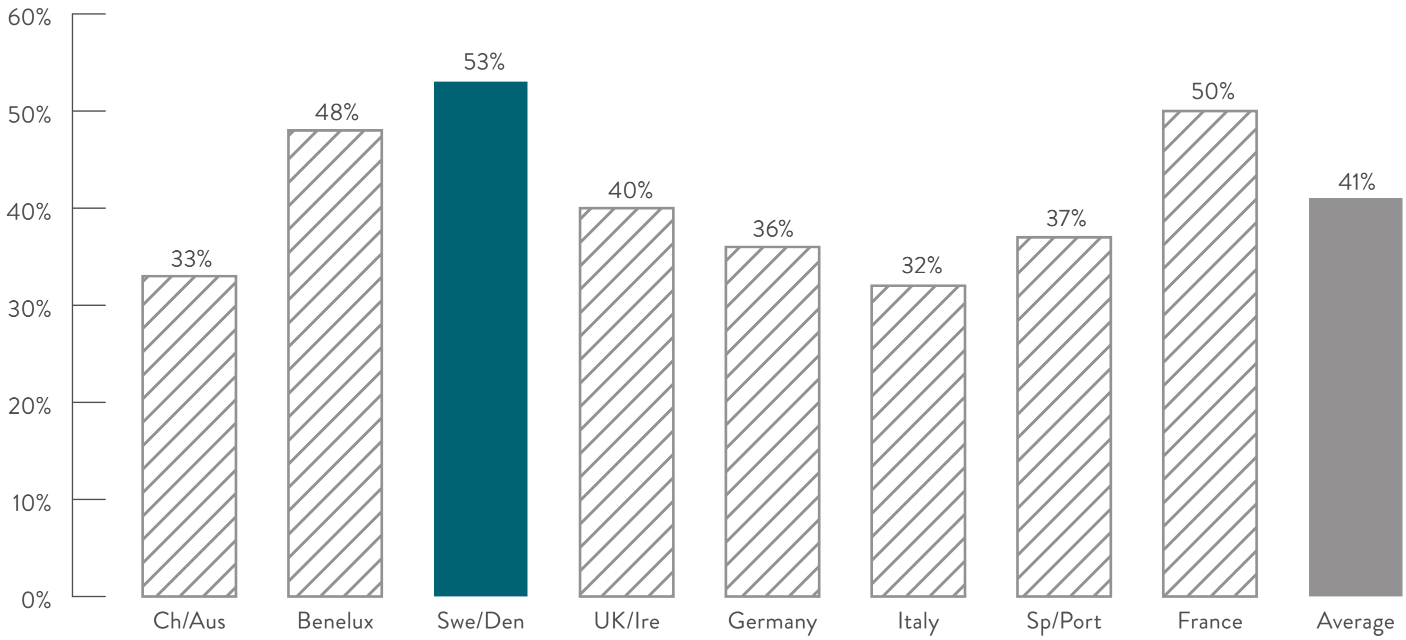
CBD consumers in Swe/Den were among the least likely to have consumed CBD within a week of the survey. Consumers there were also most likely to say they typically consumed CBD in the morning (35%), making this region one of only two where morning consumption was more frequent than was consumption in the evening.

Swe/Den respondents on average named the fewest reasons for CBD use of any region, with 27% indicating use for pain and 23% apiece using CBD for stress and to treat a medical condition.

Oil (43%) and capsules (22%) are reportedly the most commonly consumed forms of CBD in Swe/Den, as they are on average across all regions surveyed. This region (along with Ch/Aus) also has the highest rate (27%) of consumers not knowing what amount of CBD they consume per serving.

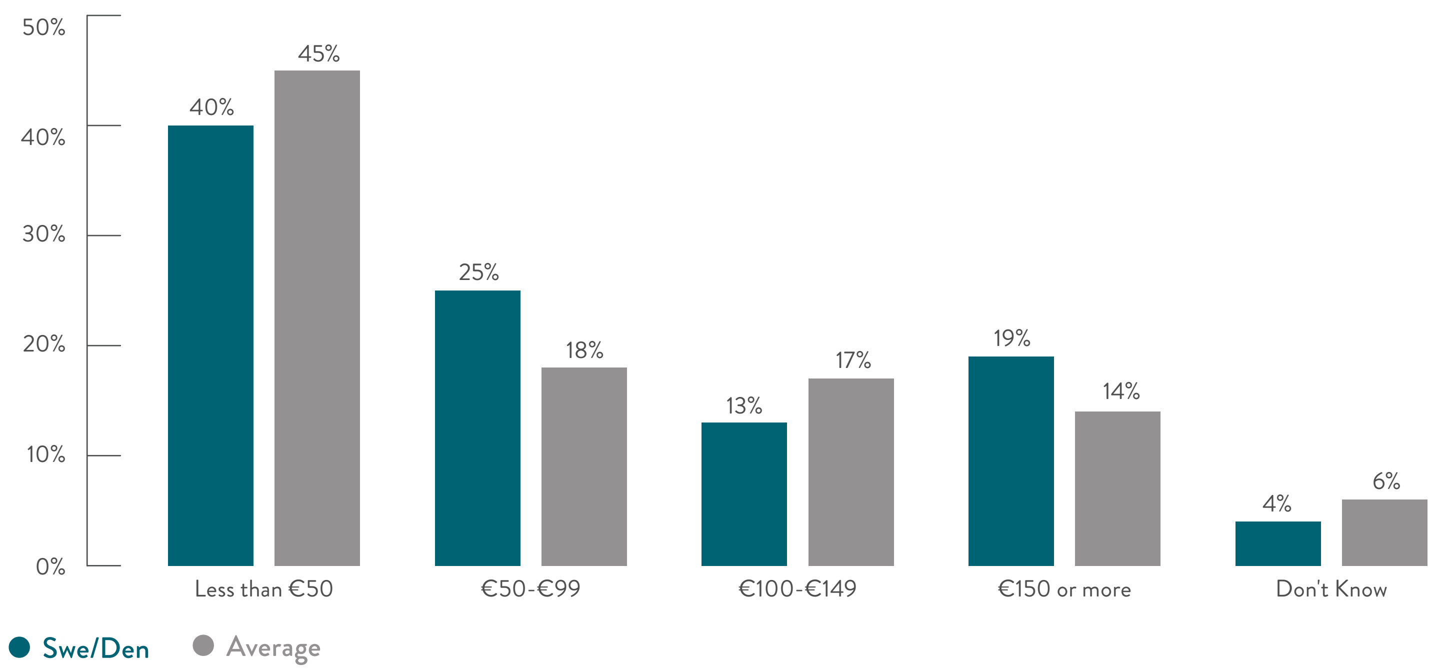
Nearly two-thirds (65%) of Swe/Den CBD consumers described CBD as having a positive effect on their quality of life, and more than half (53%) said they expected the amount they consume to increase in the following six months, considerably above the average European rate of expected increase in use (41%), and the highest of any region surveyed.

EXPECT AMOUNT CONSUMED TO INCREASE IN THE NEXT 6 MONTHS



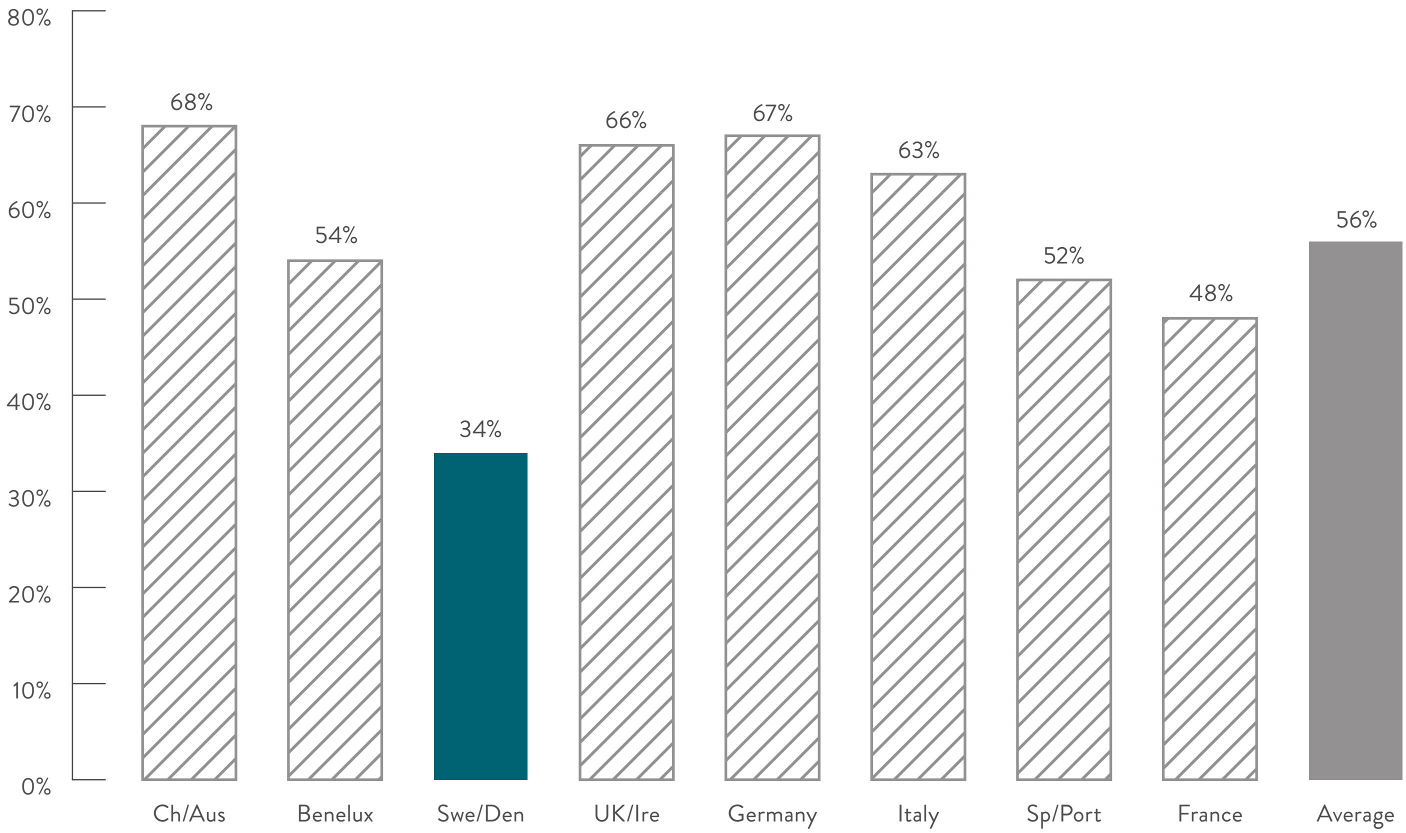
Source: New Frontier Data 2019 European CBD Survey

MONTHLY SPENDING ON CBD



Source: New Frontier Data 2019 European CBD Survey

ALL OF MY CBD PURCHASES HAVE BEEN IN MY COUNTRY



Source: New Frontier Data 2019 European CBD Survey

CBD Purchasing Behaviors

Just under one in five (18%) respondents from Swe/Den had purchased CBD, comparable to the average European rate of 16%. These Northern European respondents were also slightly more likely than average to spend more than €50 per month on CBD.

Swe/Den respondents were also the most likely group to have purchased CBD from abroad.

Higher Brand Awareness Among CBD Purchasers

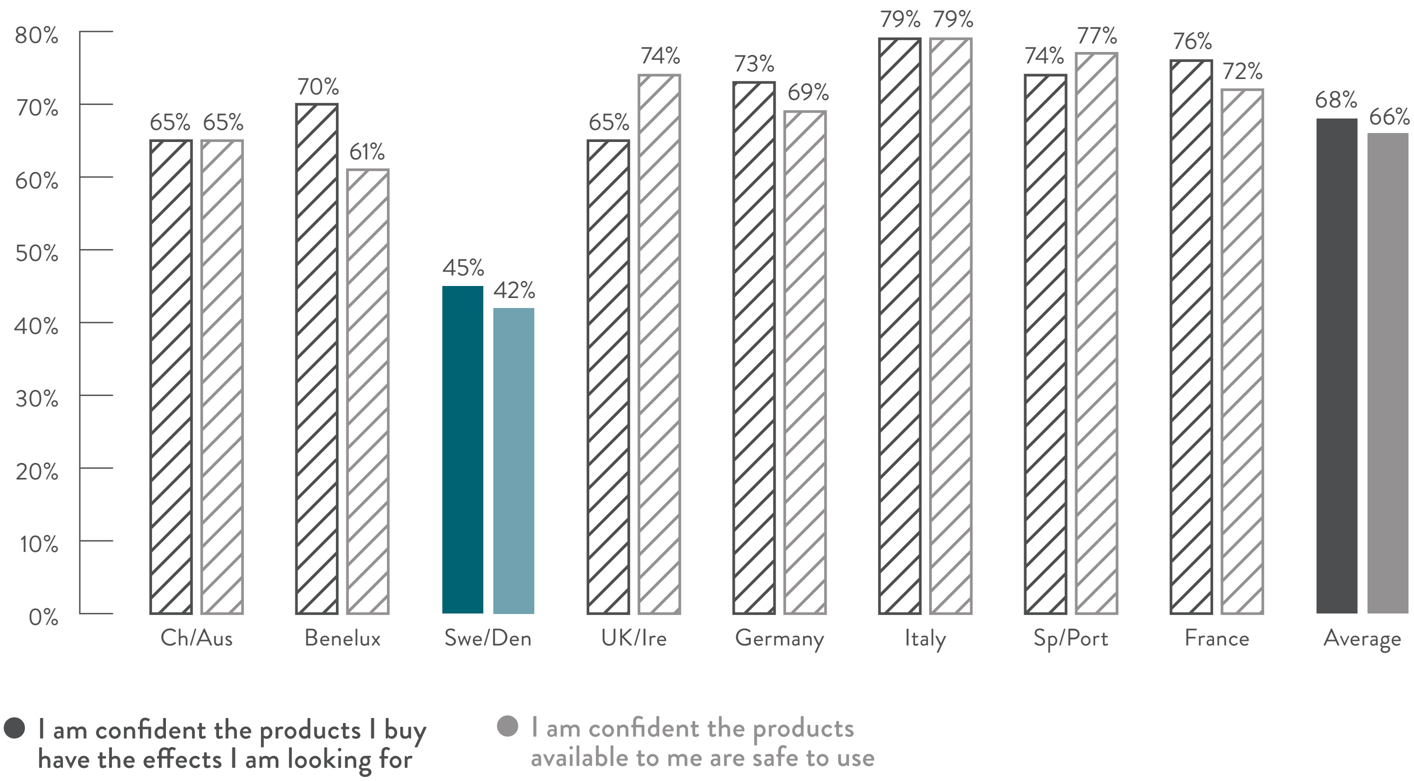
The top brands purchased by respondents in Swe/Den were Nordic Oil (19%), followed by A-Ware and Annabis (each bought by 11% of CBD purchasers). Swe/Den buyers are more brand-aware than average, with only 9% saying they were unsure of which brands they had purchased, compared to 16% on average.

Purchasers in the region were also slightly more likely than average (42% vs. 37%) to say they always purchase from the same brand(s). The most common reasons given for switching brands were better price and a personal recommendation (each 35%).

Despite their relatively higher brand awareness and loyalty, Swe/Den CBD purchasers indicated the lowest rates of product satisfaction (49% vs. 68% European average) among any regions surveyed. They also had the least confidence in the safety and efficacy of the products they purchased.

> **"Swe/Den CBD purchasers indicated the lowest rates of product satisfaction (49% vs. 68% European average) among any regions surveyed."**

CONFIDENCE IN PRODUCT SAFETY AND EFFICACY
(AMONG CBD CONSUMERS)



Source: New Frontier Data 2019 European CBD Survey

Still, more than two-thirds (68%) of CBD purchasers in Swe/Den indicated they expected to purchase CBD again in the following six months, slightly below the European average of 75%.

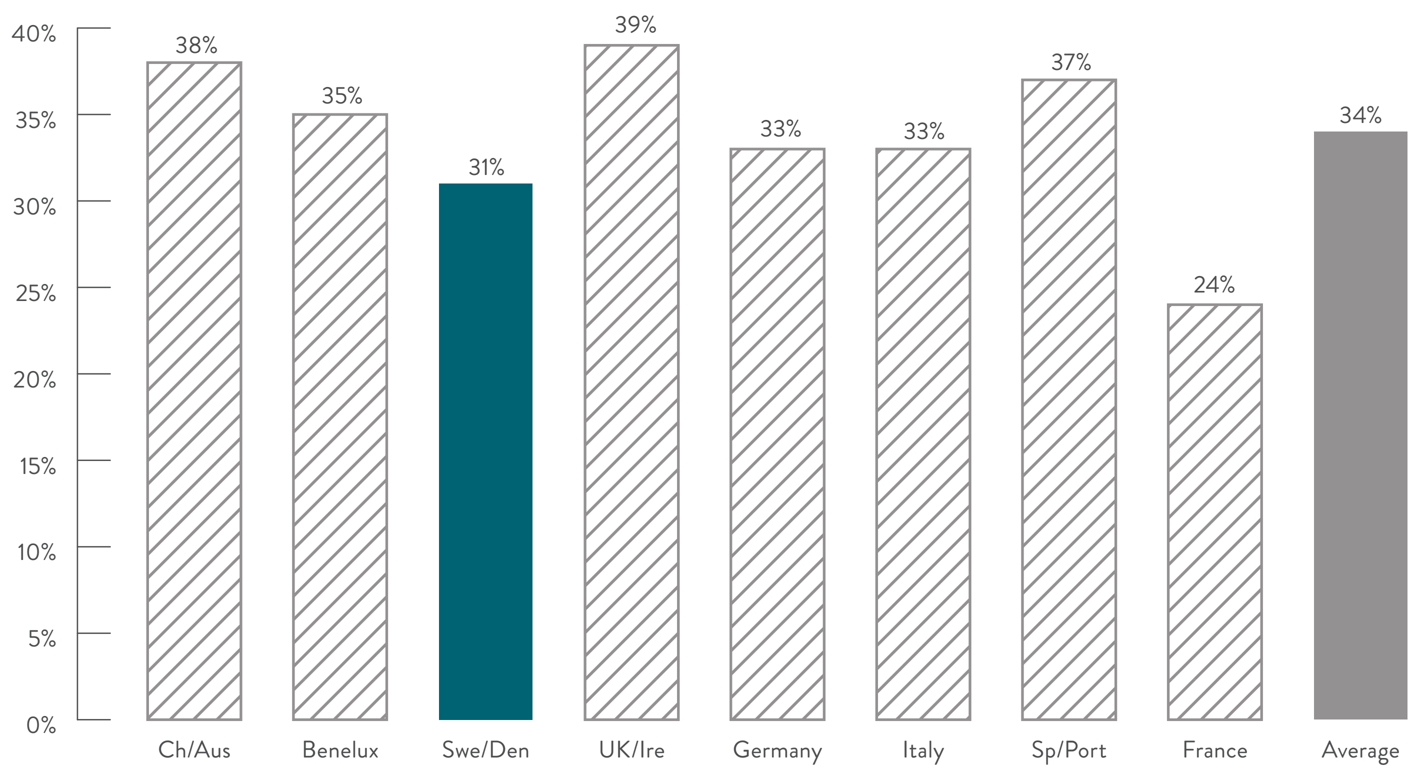
Somewhat Uninterested Potential Consumers

One-fifth of Swe/Den's potential consumers (18%) said they would consider trying CBD, and interest in trying CBD doubles to 36% if it is offered by a trusted source, in line with the European average (37%).

Swe/Den was among the regions least curious about trying CBD. This may be a result of less broad exposure to, and awareness of, CBD and could increase as the market matures.

Nearly a quarter (24%) of nonconsumers in Swe/Den reported not trying CBD because they are not interested, though a singularly high number (19% vs. 11% European average) gave lack of clarity on the legal status of CBD as a reason for not having tried it. Among those who have not purchased CBD but would consider it, oil (43%) and capsules (41%) are the most appealing forms.

I AM SOMEWHAT/VERY CURIOUS ABOUT TRYING CBD



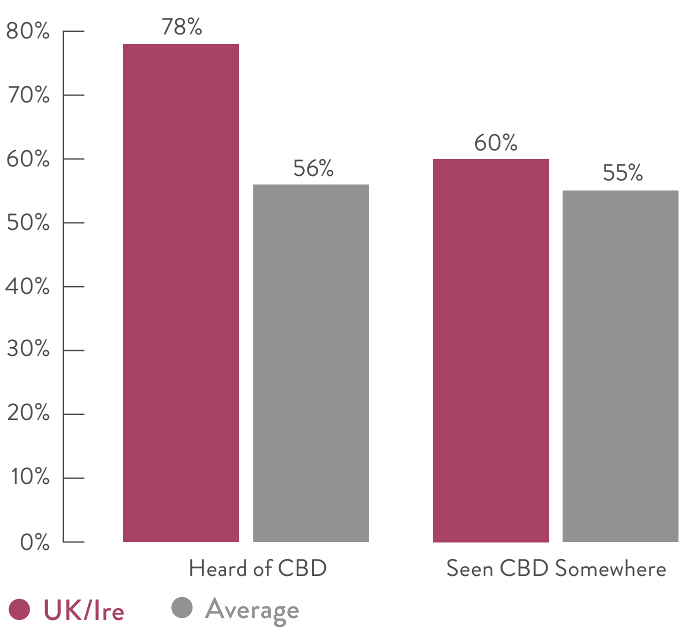
Source: New Frontier Data 2019 European CBD Survey

UK/IRE: THE UNITED KINGDOM & IRELAND

While rates of CBD use and purchasing in UK/Ire are marginally below average compared to the rest of Europe, exposure to CBD was significantly higher. The region has by far the highest degree of awareness of CBD and is exposed to positive buzz from all sides, but respondents there were less likely than in other mature markets to have been directly exposed to CBD products, suggesting slower market penetration in the UK/Ire market.

The region is also characterized by strong support for the medical benefits of CBD as well as a preoccupation with safety, regulation, and testing. UK/Ire CBD consumers are the most frequent users in Europe, and do so to manage anxiety and stress. The widespread fascination has stoked curiosity about trying CBD among potential consumers, but a significant proportion still feel they do not know enough or have too many concerns about the safety of available products to try it.

UK/IRE: AWARENESS OF CBD VS. EXPOSURE TO CBD



Source: New Frontier Data 2019 European CBD Survey

Very High Awareness of CBD, but Average Degree of Direct Exposure

Respondents from UK/Ire were the most aware of CBD of any region surveyed, with 78% having heard of CBD, compared to 56% among all Europeans surveyed. Despite their high rate of awareness, UK/Ire respondents were only marginally more likely than average (60% vs. 55%) to have seen CBD, the biggest difference between awareness and exposure of any market surveyed.

Of the top three locations where UK/Ire respondents had seen CBD products (for sale online, 33%; at a pharmacy, 28%, and for sale on social media 15%), only one was in-person, and rates of having seen CBD in other in-person locations were low among the more mature CBD markets profiled. The region's high rates of awareness of CBD and more indirect exposure to CBD products contribute to interest without necessarily making consumers more comfortable with them.

Moderate Interpersonal Information-Sharing, Extremely Positive Attitudes

The region had average rates of interpersonal information sharing about CBD. About a third (34%) of UK/Ire respondents knew a friend or family member who used CBD, with nearly a quarter (24%) saying they had been recommended CBD and one in eight (13%) reporting having recommended CBD to someone else.

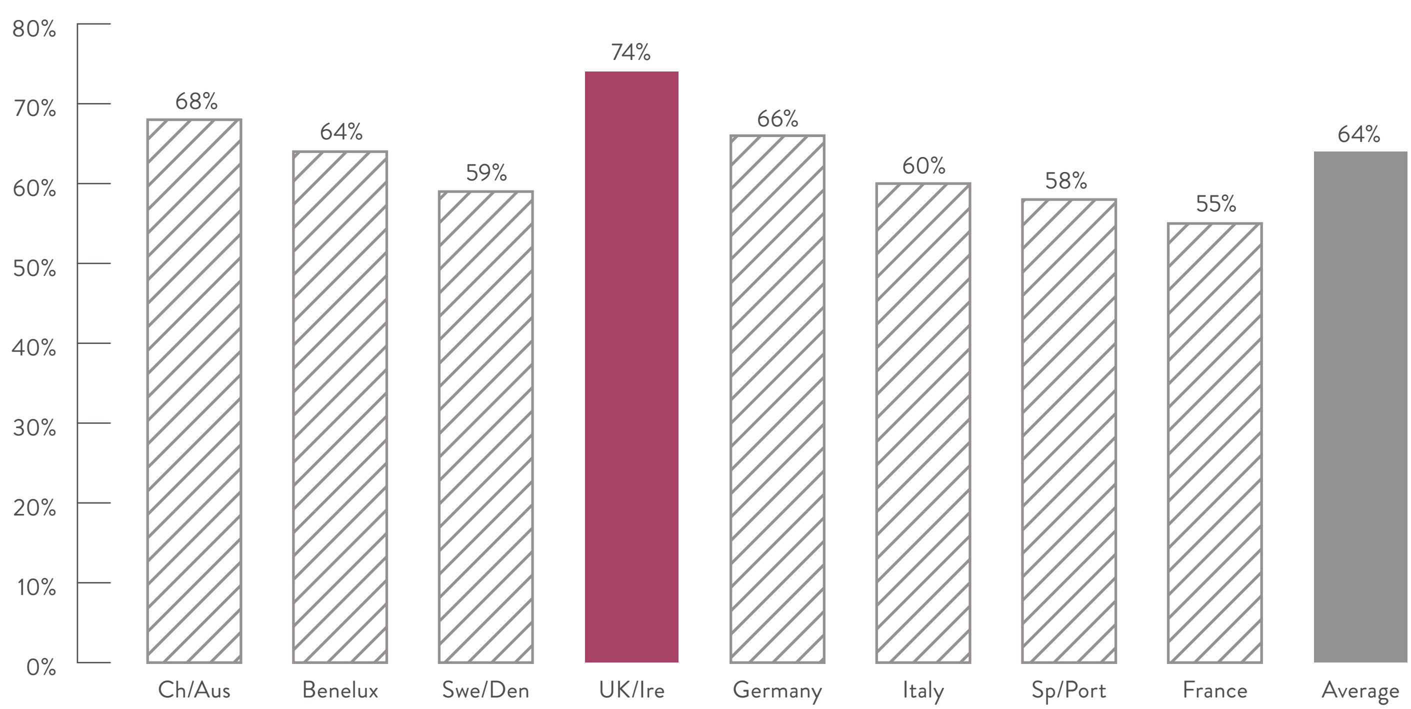
UK/Ire respondents were more likely to report seeing positive content and having positive conversations about CBD. Sixty-two percent said the information from internet and news sources was positive (vs. 57% continental average), and three-quarters (74%) said conversations they had about CBD were positive (vs. 64% European average).

Belief in CBD's Medical Applications and Regulation to Increase Safety

The region believes strongly in the medical validity of CBD, as well as the ability of regulation to increase safety of CBD products. Along with Ch/Aus, UK/Ire respondents were the most likely to agree (62%) that CBD has valid medical uses (versus 55% survey average).

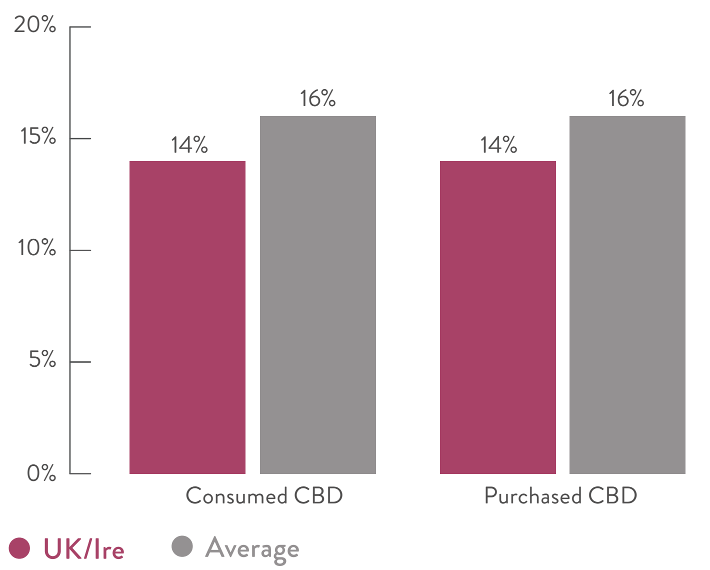
The extreme positivity of attitudes which respondents have been exposed to is likely the reason for the region having the most positive impression of CBD of Europeans surveyed, with more than

CONVERSATIONS I HAVE HAD ABOUT CBD ARE GENERALLY POSITIVE



Source: New Frontier Data 2019 European CBD Survey

UK/IRE: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

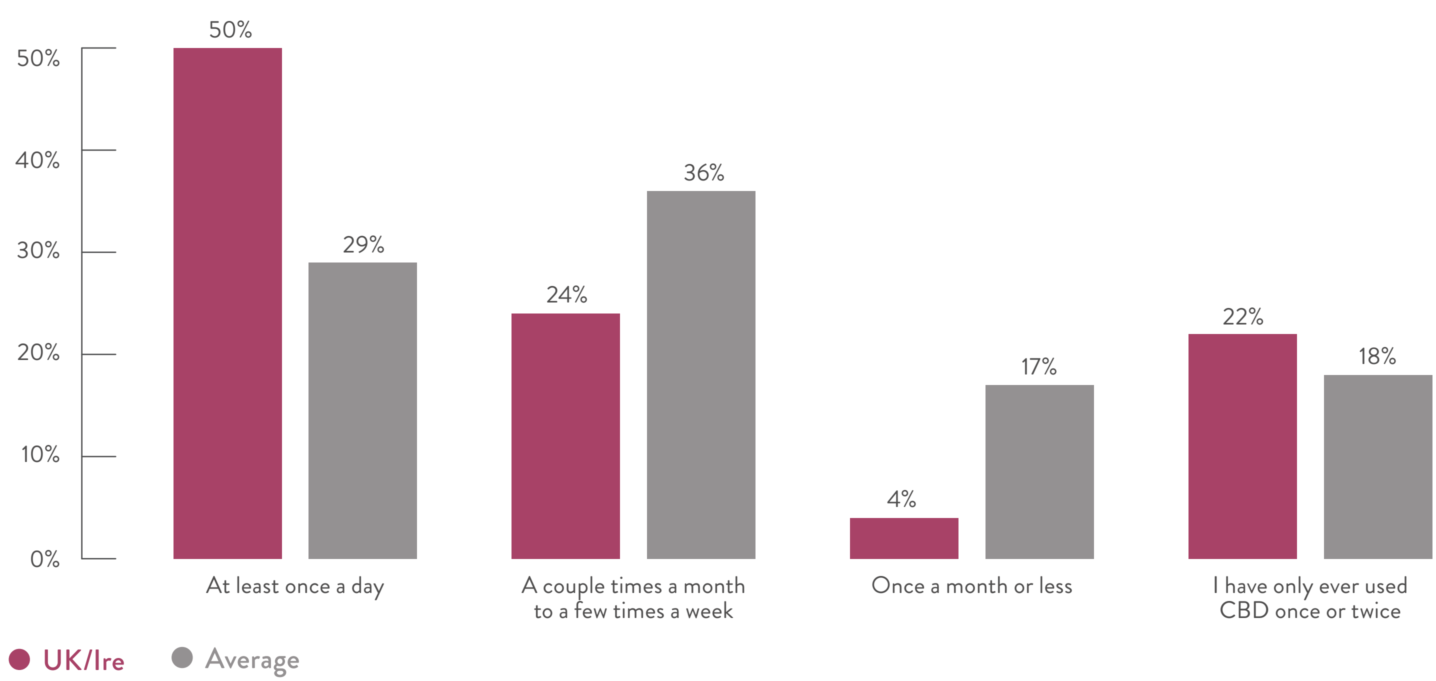
half (56%) describing their general impression of CBD as positive (compared to 46% on average).

Nearly three in five (59%) among respondents believed regulated CBD to be safer than unregulated CBD, the highest rate of any region (average 49%). They also believed that all CBD sold should be required to be tested at similar rates (63%). Concern around the safety of CBD is singularly high among UK/Ire respondents.

Lower Consumption Rates Overall, but Extremely Frequent Use

Interestingly, the region's extremely high awareness and positive impression of CBD have not translated to widespread use of CBD. Only 14% of UK/

FREQUENCY OF CBD USE



Source: New Frontier Data 2019 European CBD Survey

Ire respondents reported having ever tried CBD, comparable to the European average of 16%. The region also had relatively high rates of limited experimentation, with nearly a quarter (22%) of those who had tried CBD limiting their use to only one or two occasions, meaning the prevalence of ongoing CBD use in the region is 11%.

While the incidence of continuing CBD use is marginally lower than average there, consumers in UK/Ire use it considerably more frequently than any other region, with 50% of UK/Ire respondents who have ever tried CBD using it at least once a day.

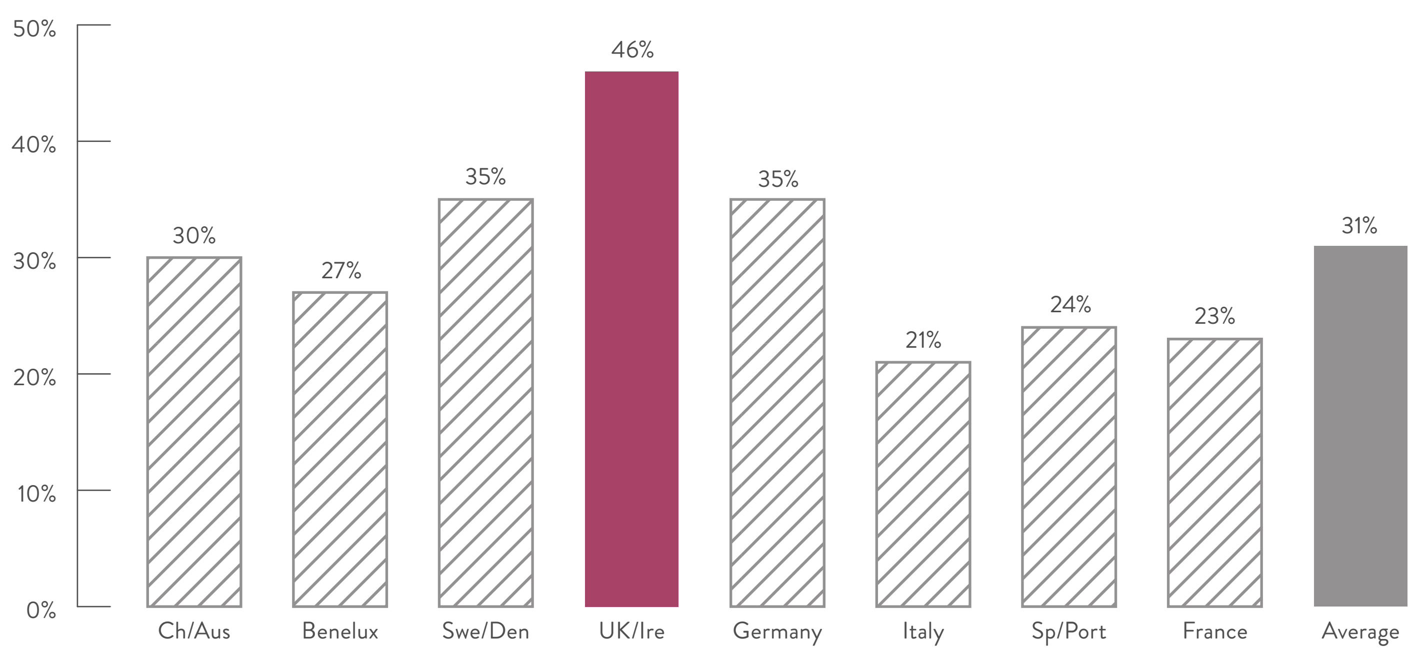
Another characteristic aspect of CBD use in UK/Ire is that consumers there most commonly use it in the morning, whereas European consumers tend more often to use it in the evening.

Treating Anxiety with Slightly Larger than Average Doses

The most common reason for CBD use in UK/Ire is anxiety reduction (42% compared to a European average of 26%), followed by stress relief (38%). Pain management and relaxation, the top reasons for CBD use named by all Europeans surveyed, are also popular reasons for it in UK/Ire (35% and 31%, respectively).

CBD oil (54%) and capsules (22%) are among the three forms used by the most UK/Ire CBD consumers (rates which align to the European average), and CBD vapes are relatively more popular in the region than elsewhere in Europe, having been used by a quarter of UK/Ire CBD consumers.

TYPICALLY CONSUME CBD IN THE MORNING



Source: New Frontier Data 2019 European CBD Survey

CBD users in UK/Ire tend to consume slightly larger doses of CBD per serving than average—38% reportedly consume between 5-14 mg at a time (compared to 28% of Europeans overall), while 21% typically consume 5 mg at a time (vs. the 29% European average).

Nearly three-quarters (74%) of CBD consumers in the region (vs. 73% across Europe overall) believe that CBD has positively impacted their quality of life, and nearly three in five (57%) expected the amount the consumed to remain steady over the following six months, with nearly all the rest (40%) anticipating an increase in their consumption.

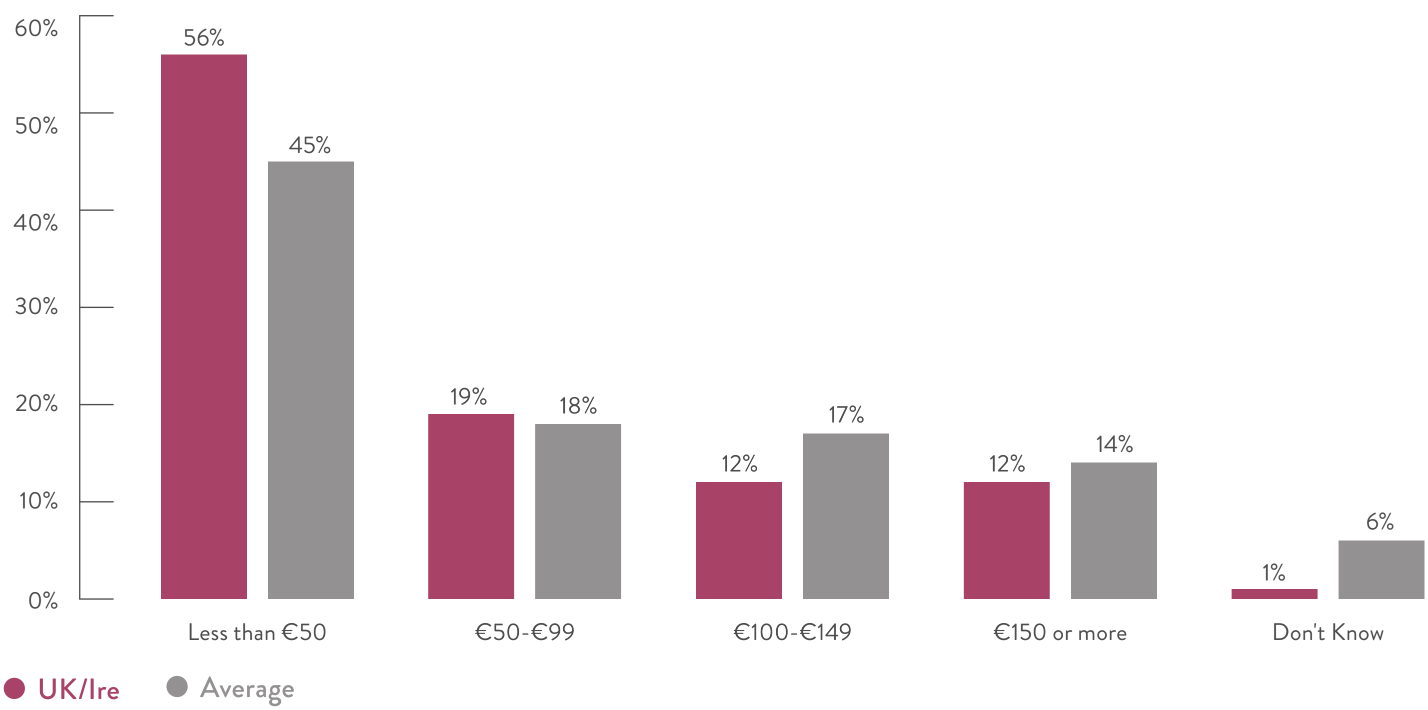
Average Purchasing Rates and Modest Spending

As with CBD consumption rates, CBD purchasing among UK/Ire respondents was in line with continental averages at 14%. Those who have purchased CBD in the region tend to spend slightly less than other Europeans, with more than half (56%) spending less than €50 per month on average.

High Brand Loyalty

UK/Ire CBD purchasers report high rates of brand loyalty, with 44% saying they always purchase the same brands (the highest, along with France, of

MONTHLY SPENDING ON CBD



Source: New Frontier Data 2019 European CBD Survey

any region). Among those CBD purchasers that do switch brands, the top reason for switching was a recommendation from someone they know (45%). The CBD brands bought by the most CBD purchasers in UK/Ire are Cannabigold (16%), CBD Vital (15%), and Cannapower (10%).

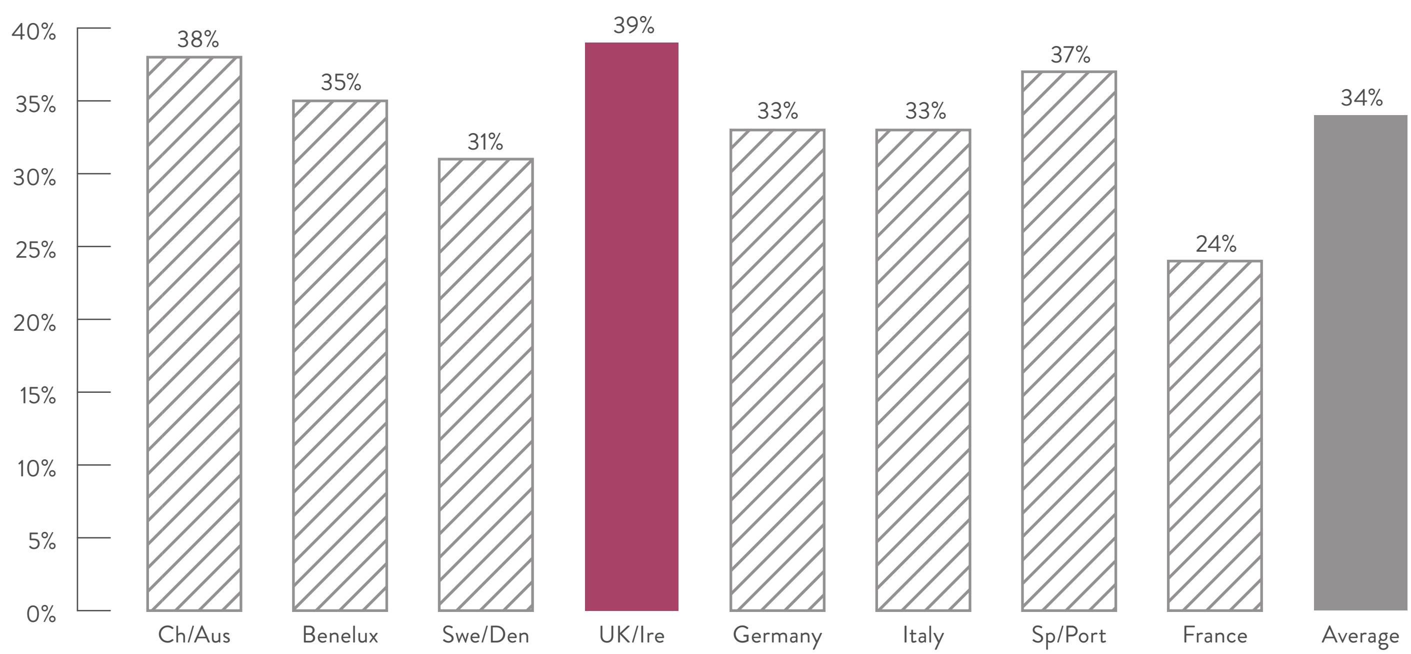
The most common sources for CBD among UK/Ire consumers are online retail (specialty stores, 33%, and major retailers, 29%) and friends (32%). Only about one in 10 (11%) of consumers source CBD from pharmacies or drugstores. Nearly two-thirds (66%) of CBD purchasers in UK/Ire purchase it exclusively within their countries, compared to 56% of European purchasers on average.

UK/Ire CBD purchasers are generally satisfied (71%) with the products they have purchased, and have higher confidence than average (74% vs. 66%) that the products they purchase are safe to consume. More than three-quarters (76%) indicated being somewhat or very likely to purchase CBD again in the following six months.

Curiosity and the Need for Education

UK/Ire respondents who had not tried CBD indicated the highest degree of curiosity among any region about trying it, but as in other countries surveyed, only about one in five indicated that they were somewhat or very likely to try (20%) or purchase (18%) CBD in the following six months,

I AM SOMEWHAT/VERY CURIOUS ABOUT TRYING CBD



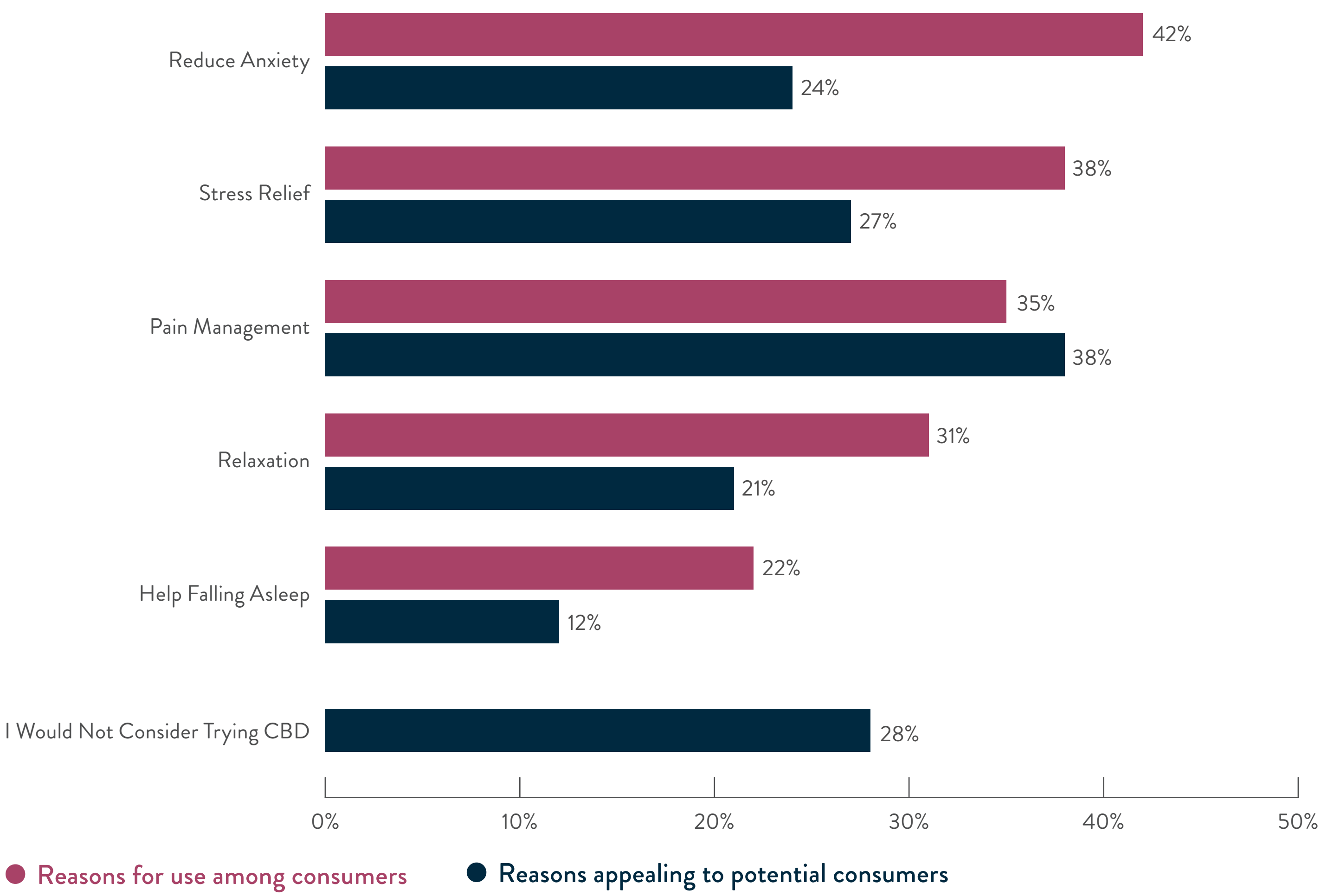
Source: New Frontier Data 2019 European CBD Survey

with the likelihood of trying approximately doubling to 38% if offered by a trusted source.

The top reasons given by those who have not consumed CBD were not knowing enough about it (29%), not being interested (24%) and not being confident in its safety (19%). While just over a quarter (28%) of nonconsumers said they would not consider trying CBD, a considerable proportion (38%) said they would consider using it for pain management.

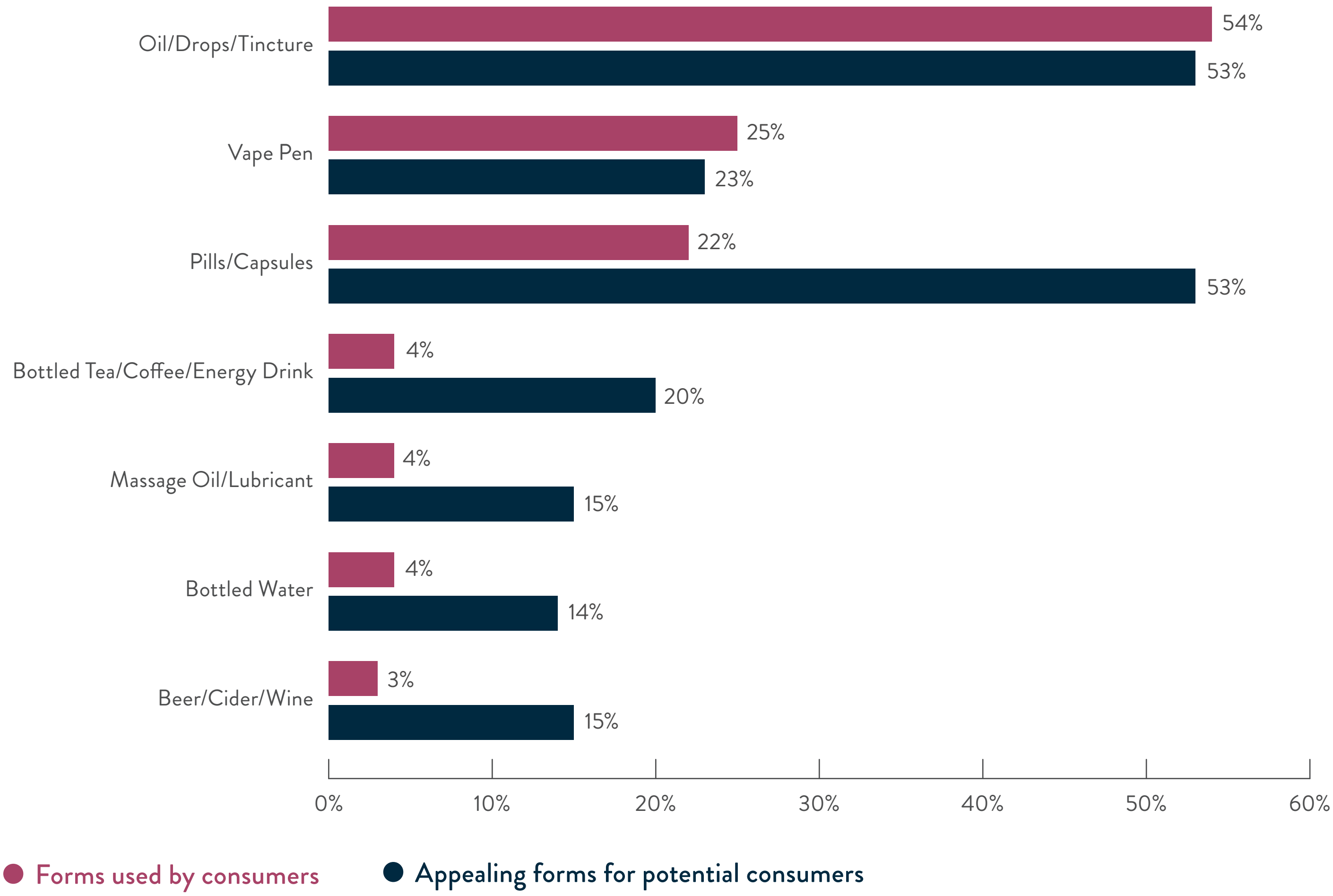
As with potential consumers in other European markets, those in UK/Ire would be most likely to consider the product forms of oil and capsules (53% each), in addition to some forms less broadly appealing to potential consumers in other markets, such as vape pens (23% vs. 17% European average), infused tea, coffee, or energy drinks (20% vs. 14% average), and massage oil or lubricant (15% vs. 10%).

UK/IRE: REASONS FOR CBD USE AMONG CONSUMERS VS. POTENTIAL CONSUMERS



Source: New Frontier Data 2019 European CBD Survey

UK/IRE: FORMS MOST POPULAR AMONG CONSUMERS VS. FORMS MOST APPEALING TO POTENTIAL CONSUMERS



Source: New Frontier Data 2019 European CBD Survey

GERMANY

Germany mirrors regional average rates of CBD consumption and purchasing, and at this time interest in the cannabinoid is mostly limited to current consumers. The German public is slightly less aware of and exposed to CBD than the European average and do not seem to feel a sense of personal relevancy. Germans are confident in the medical applications of CBD, but feelings about it are more neutral than overwhelmingly positive. German CBD consumers seem to still be learning about the products and figuring out what works for them; few consumers have used products other than oil/tinctures, and many do not know the dose or the brands they consume. As the market matures and potential consumers learn more about the various applications of CBD, use rates will likely increase.

Below Average Awareness and Exposure, and Low Social Information Sharing

Germans were slightly less likely than the European average either to have heard of CBD (49% vs. 55%) or seen it (48% vs. 55%). Those who had seen CBD were most likely do so for sale online (26%) or at a pharmacy/drugstore (20%). Germans were also among the least likely to know a friend or family member who used CBD.

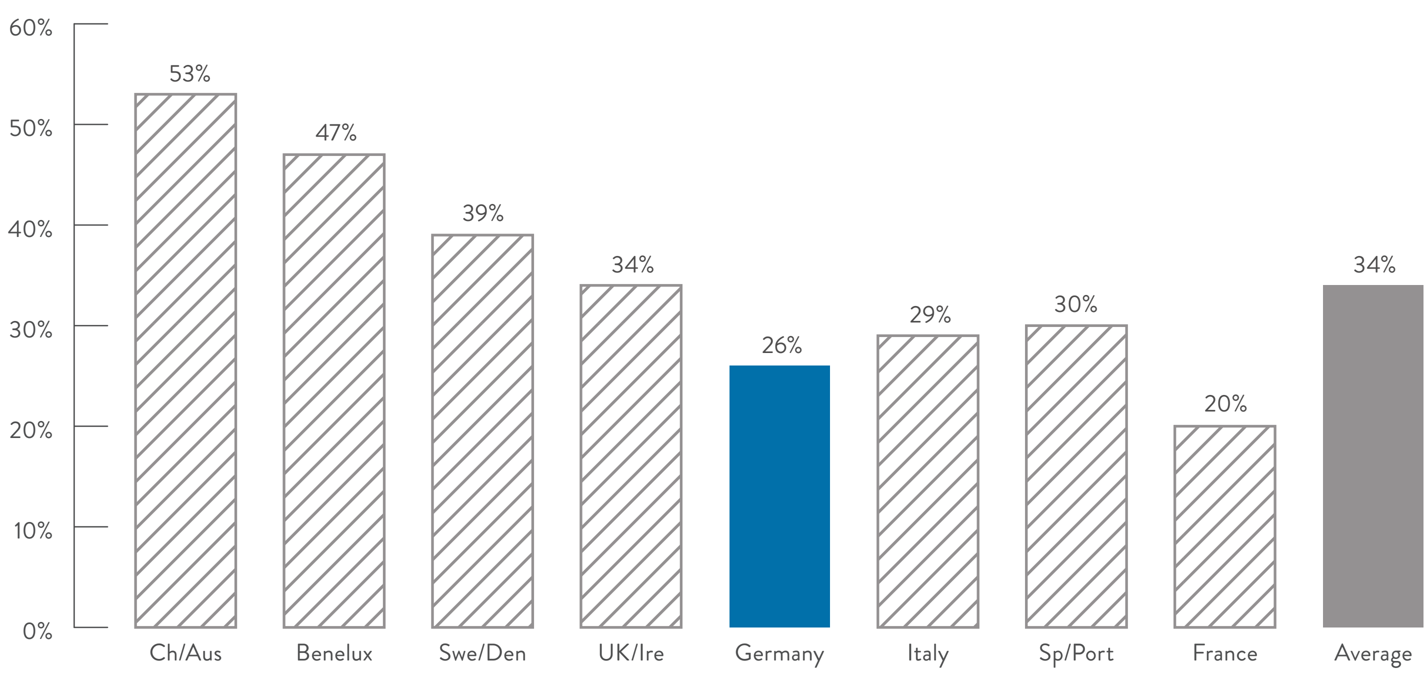
Accordingly, German respondents were less likely than average to have recommended CBD (11% vs. 14% average) or to have had it recommended to them (15% vs. 22% average) , but just over half (51%) expressed interest in learning more about it (marginally below the 55% European average).

Among those who had heard of or discussed CBD, the attitudes they were exposed to from news and internet sources (57%) and in conversation (66%) were generally positive, and in line with European averages.

Policy Views

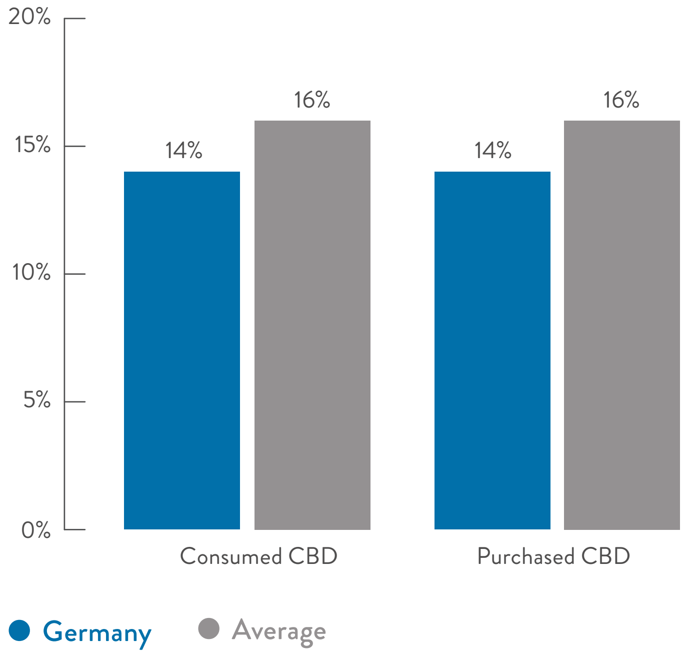
German respondents were slightly more likely than the average European surveyed (59% vs. 55%) to agree that CBD had valid medical uses, as well as slightly more likely to believe that CBD product testing should be required (63% vs. 58%).

I HAVE FRIENDS OR FAMILY THAT CONSUME CBD



Source: New Frontier Data 2019 European CBD Survey

GERMANY: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

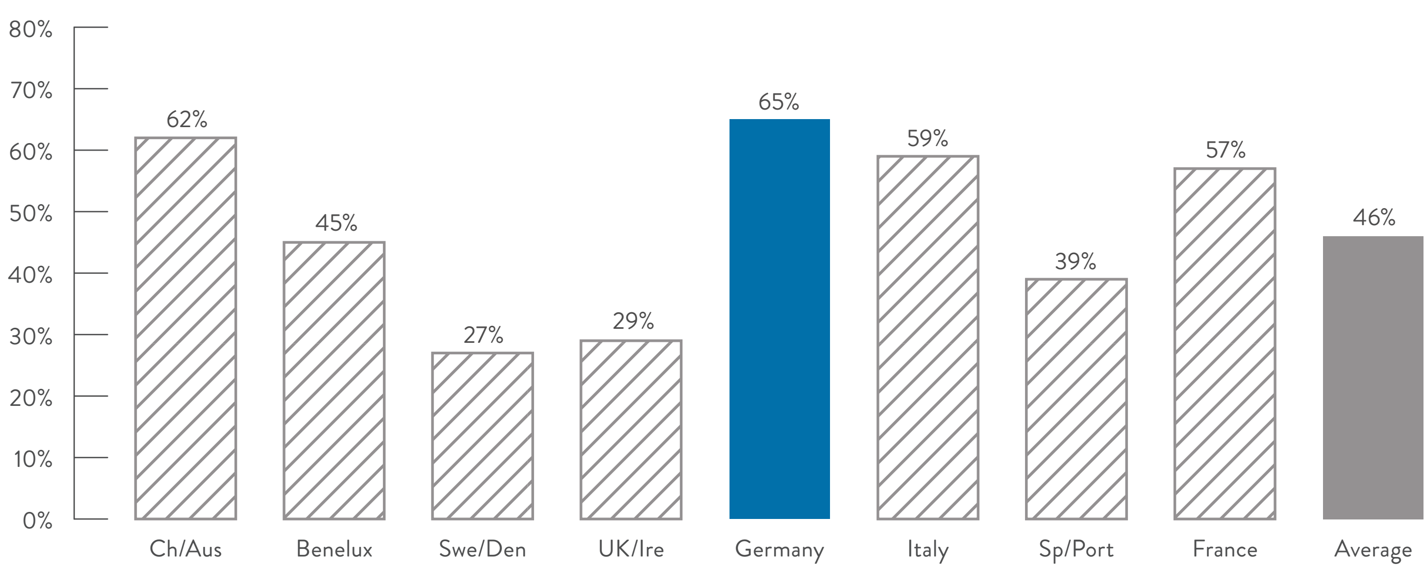
Overall, Germans expressed slightly more neutral (43%) than positive (39%) feelings about CBD, the reverse of Europeans on average.

Generally Modest Consumption Rates, and A Strong Preference for Oil

CBD consumption rates among Germans surveyed (14%) matched those in UK/Ire, marginally below the European average (16%). One in five (20%) respondents who had tried CBD in Germany said they only did so once or twice, bringing the ongoing CBD consumption rate in the country to 11%.

Among those who have ever tried CBD in Germany, over a third (35%) indicated they consume it at least once a day, slightly higher

TYPICALLY CONSUME CBD IN THE EVENING



Source: New Frontier Data 2019 European CBD Survey

than the European average of 29%. As with most markets surveyed, the time of day when Germans most commonly consume CBD is the evening, but they do so at higher rates than average (65% vs. 46% European average).

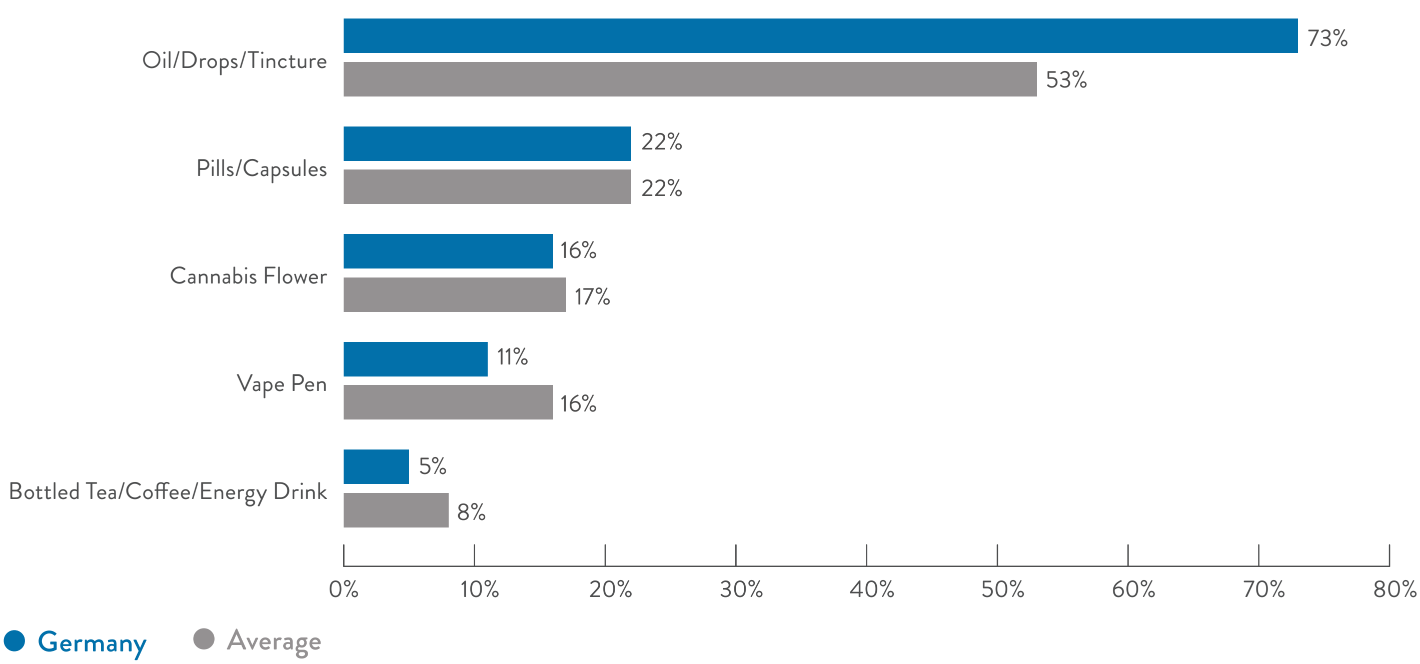
German consumers reported using CBD for the same reasons as those in other European markets, but they tend to list more reasons for their use than do consumers in other markets, making the proportion of consumers who consume for each reason higher than average. Nearly half consume CBD for relaxation (45%), pain management and stress relief (each 44%), and around a third do so for help falling asleep (35%) and overall wellness (33%).

Oil is by far the form consumed by the largest proportion of German CBD consumers (73%), having been used by more than 3x more consumers than the next most common form, capsules (22%).

CBD consumers in Germany are among the most likely in regions surveyed to not know how many milligrams they consume at a time (25%). Another quarter (25%) of consumers typically take less than 5 mg per serving.

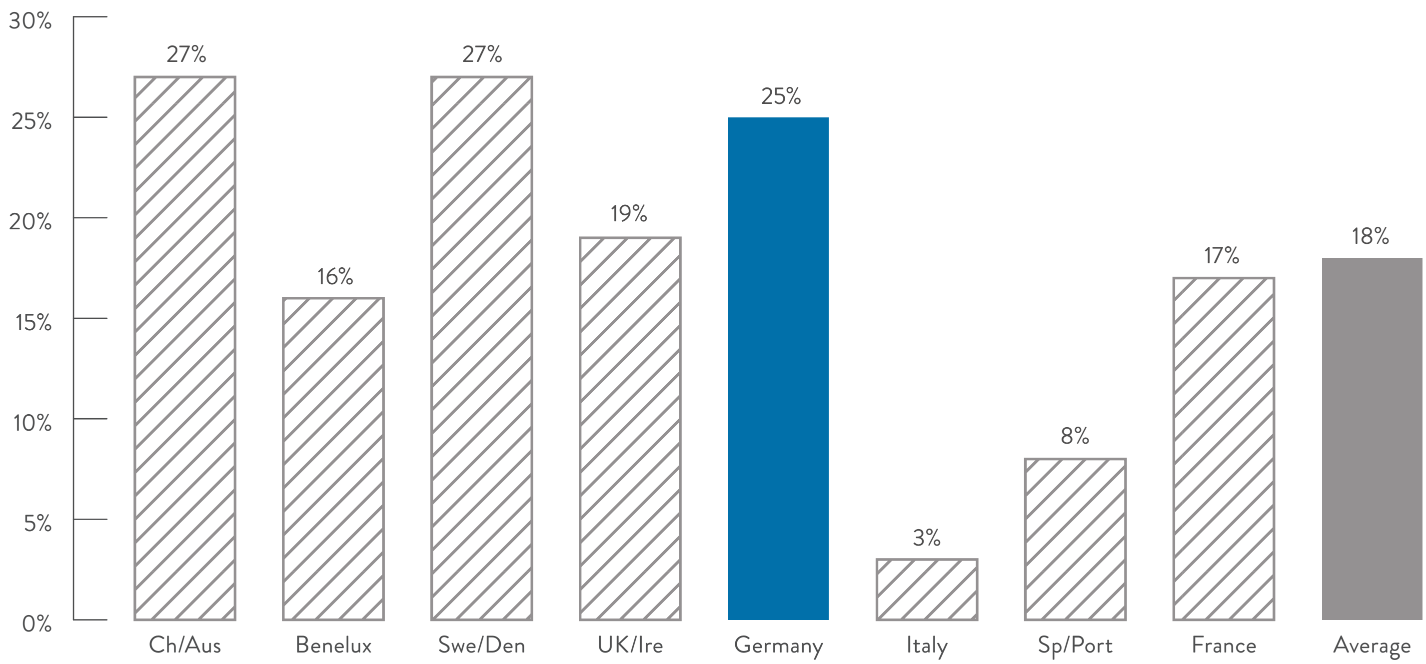
More than three-quarters (76%) of German consumers say CBD has had a positive effect on their quality of life, and more than a third (36%) expected it to increase in the following six months. Nearly half (49%) expected the amount they consume to remain unchanged.

TOP FORMS OF CBD



Source: New Frontier Data 2019 European CBD Survey

UNSURE OF DOSE (MG) OF CBD CONSUMED PER SEVING



Source: New Frontier Data 2019 European CBD Survey

Average Spending and Low Brand Awareness and Loyalty

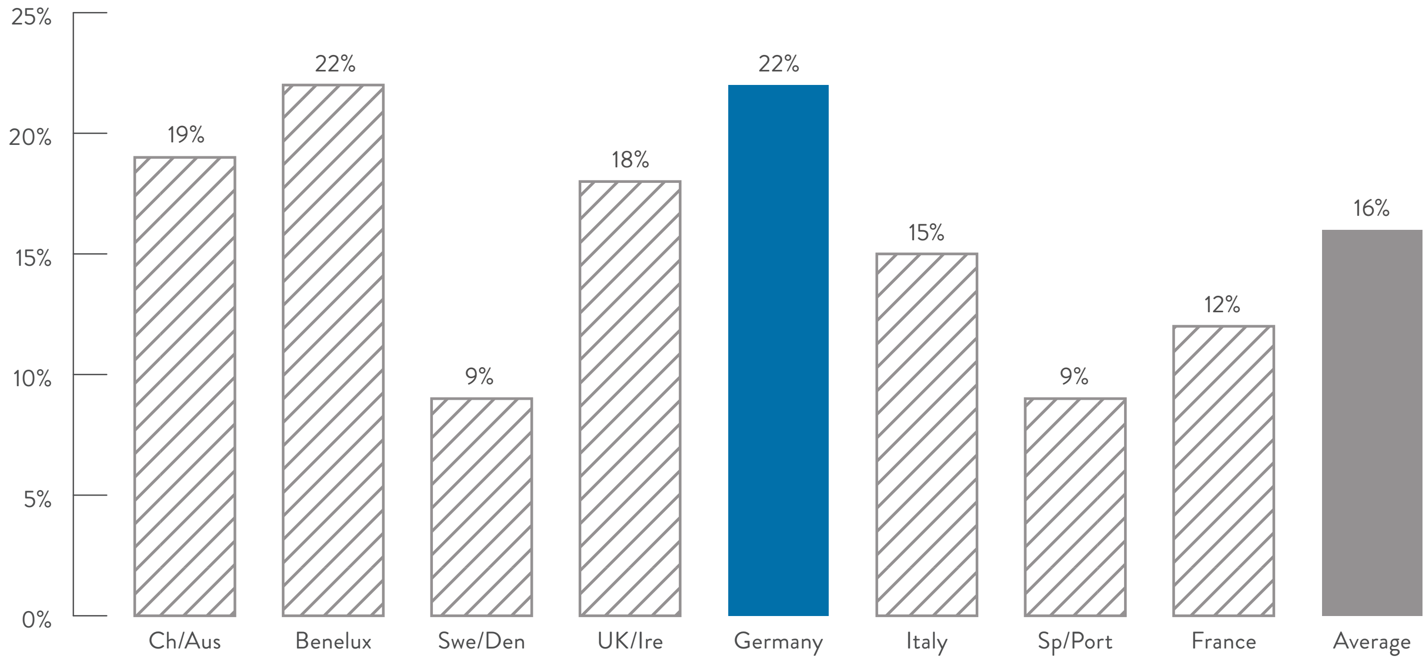
Just 14% of Germans surveyed had purchased CBD, on par with the European average of 16%. Likewise, the distribution of spending among Germans who have purchased CBD follows the European average, with just under half (47%) spending under €50 per month. Most of that spending remains in-country, as two-thirds (67%) of Germans purchasing CBD say they never purchase CBD from abroad.

Among European consumers surveyed, German CBD purchasers seem to be the least loyal to specific brands, with only 25% (vs. the European average of 37%) saying they always purchase from the same brand(s). Nearly half (46%) of purchasers who do switch brands say they do so for a better price, and 37% because they do not always have access to the brand they want.

German CBD purchasers (along with those from Benelux) are also the most likely not to know which brands of CBD they have purchased. The brands most commonly identified as having been bought by German CBD purchasers are Cannapower and CBD Vital (13% each), and Cannabigold (11%).

Two-thirds of Germans who had bought CBD indicated they were satisfied with the products they purchased (67%), and said they were somewhat or very likely to purchase CBD in the following six months (69%).

DO NOT KNOW WHAT BRANDS THEY HAVE PURCHASED



Source: New Frontier Data 2019 European CBD Survey

Potential Consumers/Purchasers

About a sixth of German respondents who had not tried or purchased CBD before expressed a likelihood to try (17%) or purchase (16%) it in the following six months, and a third each expressed curiosity or a likelihood to try it if offered by a trusted source.

The most common reasons given for not having tried CBD before were not knowing enough about it or lacking a reason to try it (25% each). More than one-third (35%) indicated they would not consider trying CBD; among those who would consider it, pain management was the most compelling reason, and oil (67%) or capsules (58%) were the most appealing forms.

> **“German CBD purchasers (along with those from Benelux) are also the most likely not to know which brands of CBD they have purchased.”**

ITALY

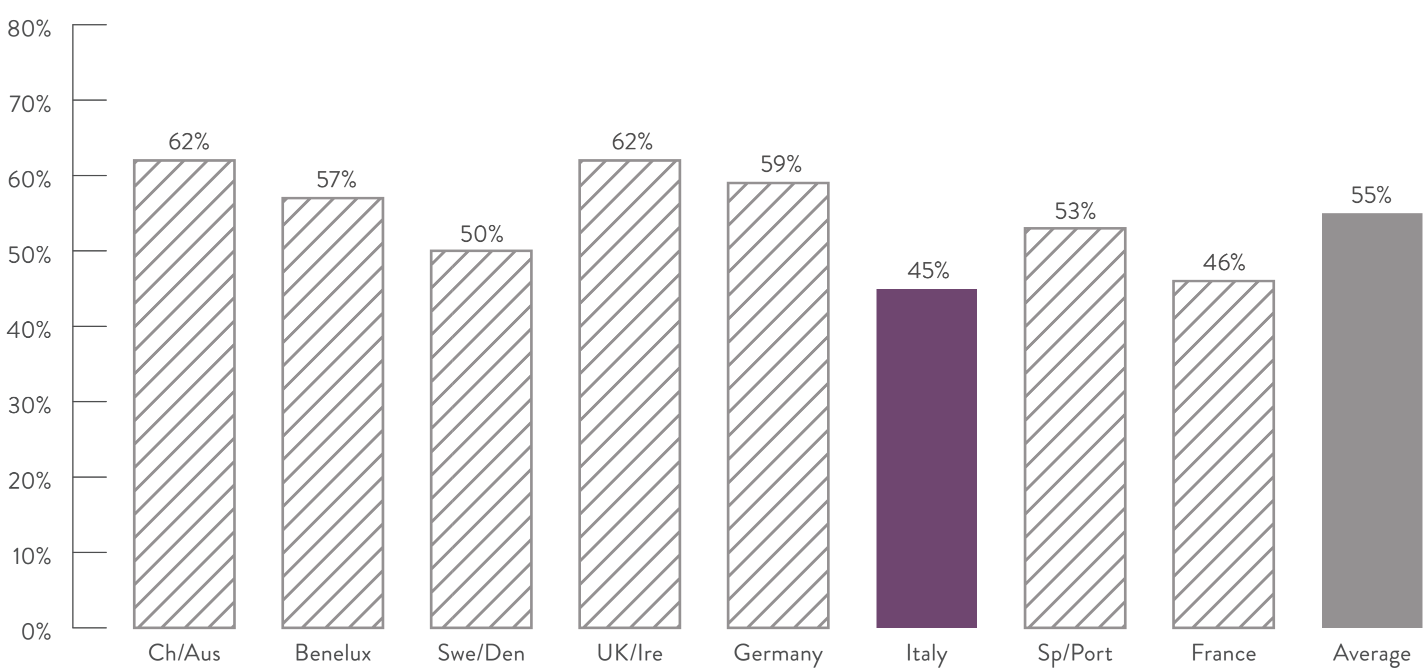
Lack of awareness, exposure, and general interest in CBD has limited consumption and purchasing in Italy to a small but highly satisfied group. The general public hears largely neutral commentary on CBD and expresses uncertainty about its policy and uses. Consumers there tend to use it less than daily but credit CBD with improvements to their quality of life. Most consume oil and pills acquired online as the local market is still relatively immature. Potential consumers often show little interest in CBD, but many are curious and find infused beverages intriguing.

Below-Average Exposure, But Openness to Learning

About half of Italians surveyed had heard of or seen CBD (52% each), marginally below European averages (56% and 55%, respectively). They were also slightly less likely than average to know a friend or family member who uses CBD (29% vs. 34% average), and relatively unlikely to have recommended (9%) or been recommended (14%) CBD.

Those who had heard of or discussed CBD were exposed to slightly less positive than average attitudes toward it online or in the media (49% positive vs. 57% European average) or in conver-

AGREEING THAT CBD HAS VALID MEDICAL USES

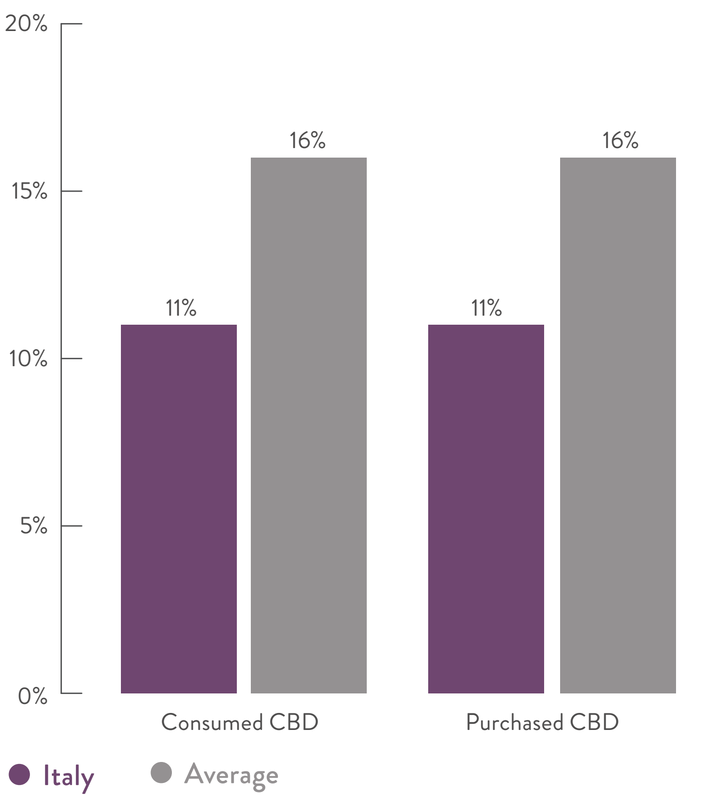


Source: New Frontier Data 2019 European CBD Survey sations (60% positive vs. 64% average). Still, just more than half (54%) of Italians surveyed—in line with the European average—expressed an interest in learning more about CBD.

Generally Uncertain About CBD

Italians were the least likely to agree that CBD has valid medical uses, with 45% of those surveyed agreeing, compared to 55% of Europeans on average. Italians were not any more likely to disagree that CBD has medical uses, but rather were likely to express uncertainty (45% compared to 35% of Europeans on average).

ITALY: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

Despite the uncertainty about CBD's medical efficacy, Italians were less likely than the average European to believe that obtaining CBD should require a doctor's recommendation (25% vs. 35%, respectively). They are also more likely to be neutral, not positive, about CBD. Nearly half (45%) were neutral, with just over a third (36%) saying their feelings were positive, compared to 42% of Europeans who had positive feelings about CBD.

Low Rates of Use, but High Rates of Continuation

About one in 10 (11%) among Italians surveyed had ever tried CBD, among the lowest rates of the regions profiled. However, it was also the region with the highest continuation of use; 94% of Italians who tried CBD continue to consume it, bringing the rate of continued CBD use in the region to 10%.

Italian CBD consumers were slightly less likely than average to consume CBD every day; nearly half (47%) said they use it between a couple times a month and a few times a week. The most common reasons for CBD use among Italian consumers were pain management (44%), relaxation (41%), and stress relief (32%), and the most widely used forms were oil (47%) and capsules (26%).

While CBD use may be less common in Italy than in other markets, those who do consume are considerably more likely than average to say CBD has had a positive effect on their quality of life (85% vs. 73% average).

Low Rates of Purchasing, Average Spending, and High Satisfaction

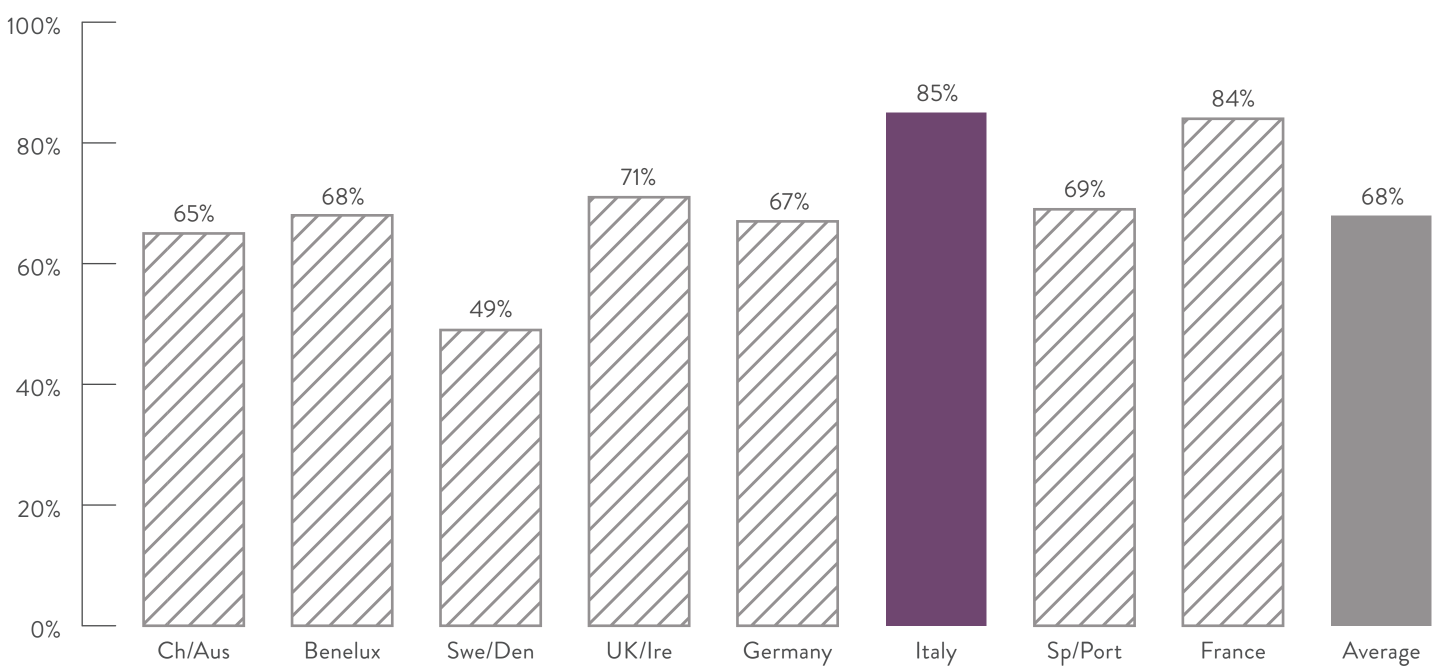
As with CBD use, CBD purchasing is relatively low in Italy, with only 11% having previously purchased a CBD product. Just under half (45%, also the European average) of Italian CBD purchasers spend under €50 per month on CBD.

The top brands among CBD purchasers in Italy are CBD Code Pharma (18%) and Cibdol (15%). About two in five (39%) Italian CBD purchasers say they always buy the same brand(s), about the same as the average. Those who do switch brands are likeliest to do so to experience variety (40%).

Italian CBD purchasers are also more likely than average to prefer brands that are not white-labeled (75% vs. 55% European average), and have higher-than-average confidence in the safety of products they buy (79% vs. 66% average) and that those products have the desired effects (79% vs. 68% average).

Italians who have purchased CBD are also the likeliest of any regional group in Europe to say they are satisfied with the products they have purchased (85% vs. 68% average). Accordingly, three-quarters (75%) indicated planning to purchase CBD again in the following six months.

AGREE: IN GENERAL, I AM SATISFIED WITH THE CBD PRODUCTS I HAVE PURCHASED



Source: New Frontier Data 2019 European CBD Survey

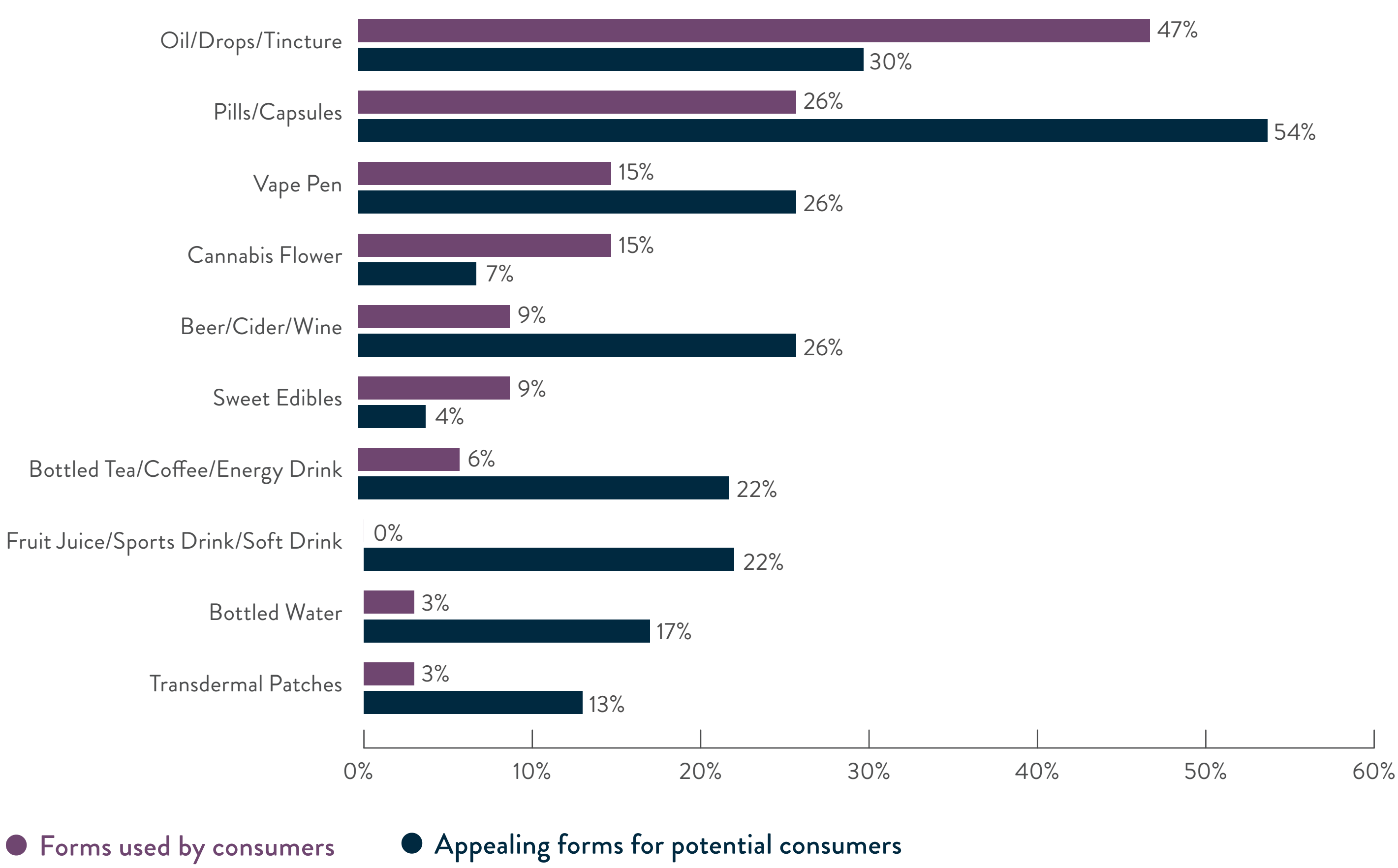
Potential Consumers/Purchasers

Italians surveyed who had not consumed or purchased CBD indicated roughly average rates of likelihood to try (16%) or buy (17%) CBD in the following six months, as well as average rates of curiosity (33%) about trying CBD.

About a third (32%) indicated they would not consider trying CBD, and among those who would consider its use, pain management (27%) was the most widely compelling reason.

CBD capsules (54%), oil (30%), and vape pens (26%) were the most appealing forms among potential consumers in Italy. Italians also are more likely than average to express interest in several types of CBD-infused beverages, including beer/cider/wide (26%), fruit juice/sport drinks/soft drinks (22%) and tea/coffee/energy drinks (22%).

ITALY: FORMS MOST POPULAR AMONG CONSUMERS VS. FORMS MOST APPEALING TO POTENTIAL CONSUMERS

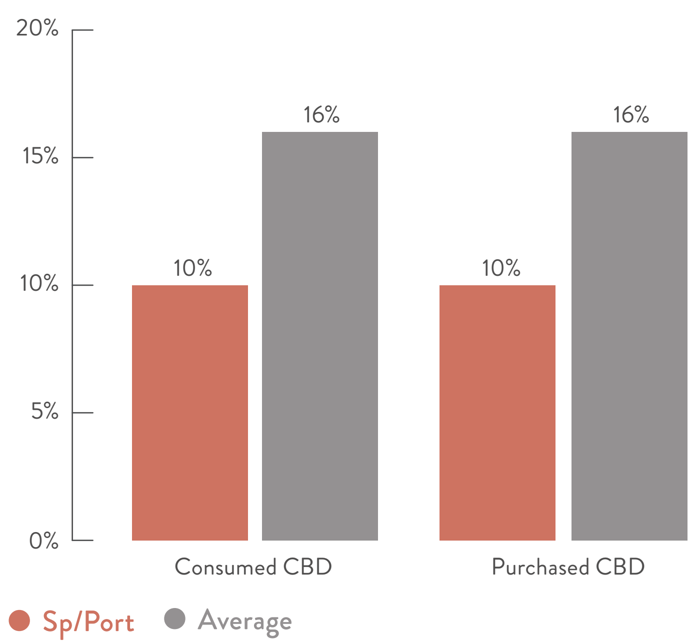


Source: New Frontier Data 2019 European CBD Survey

SP/PORT: SPAIN & PORTUGAL

Like Italy, Sp/Port has low rates of CBD use and purchasing. The public there is interested in CBD but unfamiliar with it and unsure about its benefits and policy. Sp/Port consumers use CBD less frequently and at smaller doses than average but report very positive effects. The market for consumers in Sp/Port seems highly informal, with the most consumers having sourced it from friends, but purchasers spend more on CBD monthly than the average European. It is likely that brand loyalty, which is currently relatively low, will increase as the market matures and consumers' preferred brands are regularly available to them.

SP/PORT: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

Lower Awareness and Exposure, but Interest in Learning More

CBD awareness and exposure are considerably lower in Sp/Port than most regions surveyed. Fewer than half of respondents from Sp/Port reported having heard of (44%) or seen (49%) CBD products. Those respondents were also slightly less likely than Europeans on average to have recommended CBD (11% vs. 14%), been recommended CBD by others (18% vs. 22%), or to know of friends or family who consume CBD (30% vs. 34%).

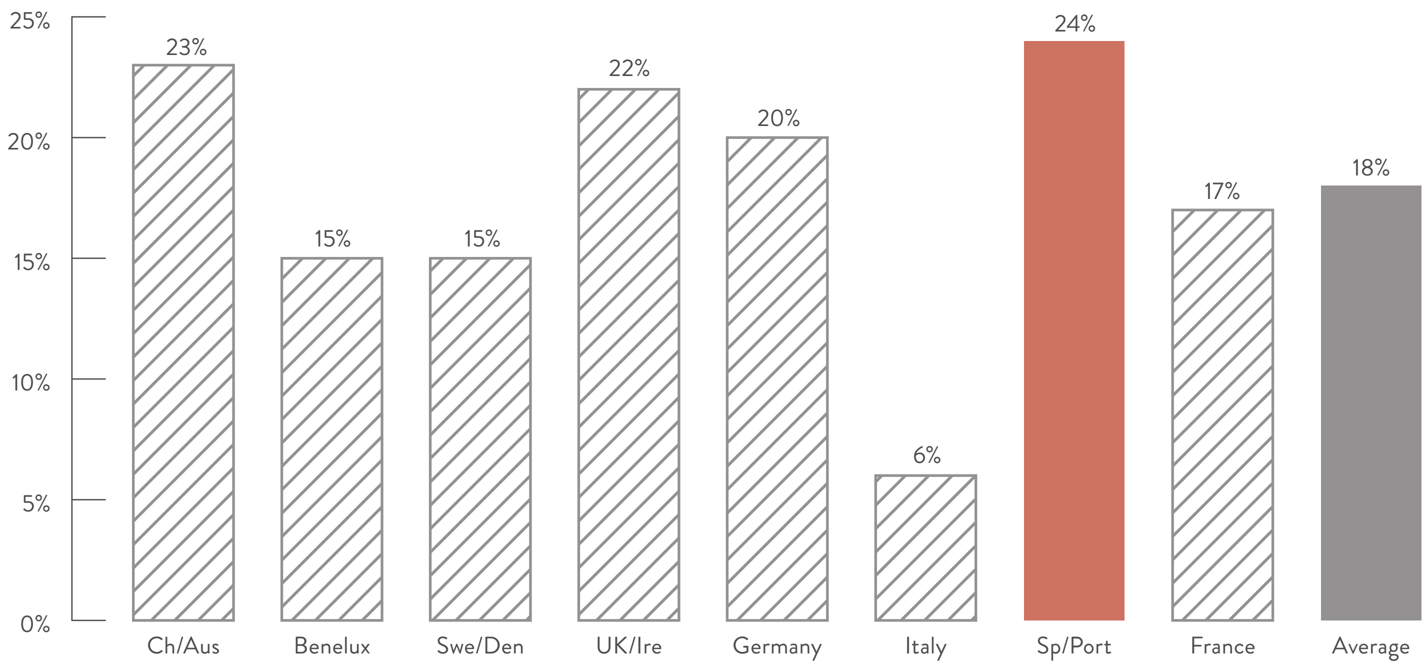
A majority of those who had heard of or discussed CBD agreed that attitudes toward it were generally positive, and the majority (about 60%) expressed interest in learning more about CBD.

Given the lower degrees of awareness and exposure to CBD in Sp/Port than in most other markets, respondents there expressed generally more uncertainty on issues like whether accessing CBD should require a doctor's recommendation.

Low CBD Consumption Rates and Less Frequent Consumption

Sp/Port had the second lowest rates of CBD consumption, at 10% of those surveyed. The region also had the highest rate of experimentation, with nearly a quarter (24%) of those who had tried CBD only doing so once or twice. Thus, the proportion of continuing CBD consumers in Sp/Port is just 8%. Among CBD consumers, Sp/Port had the lowest rates of consuming it at least once a day (18% vs. 29% European average daily use).

CBD EXPERIMENTATION: PROPORTION OF CONSUMERS WHO HAVE ONLY EVER USED IT ONCE OR TWICE



Source: New Frontier Data 2019 European CBD Survey

Low Doses of CBD for General Wellness

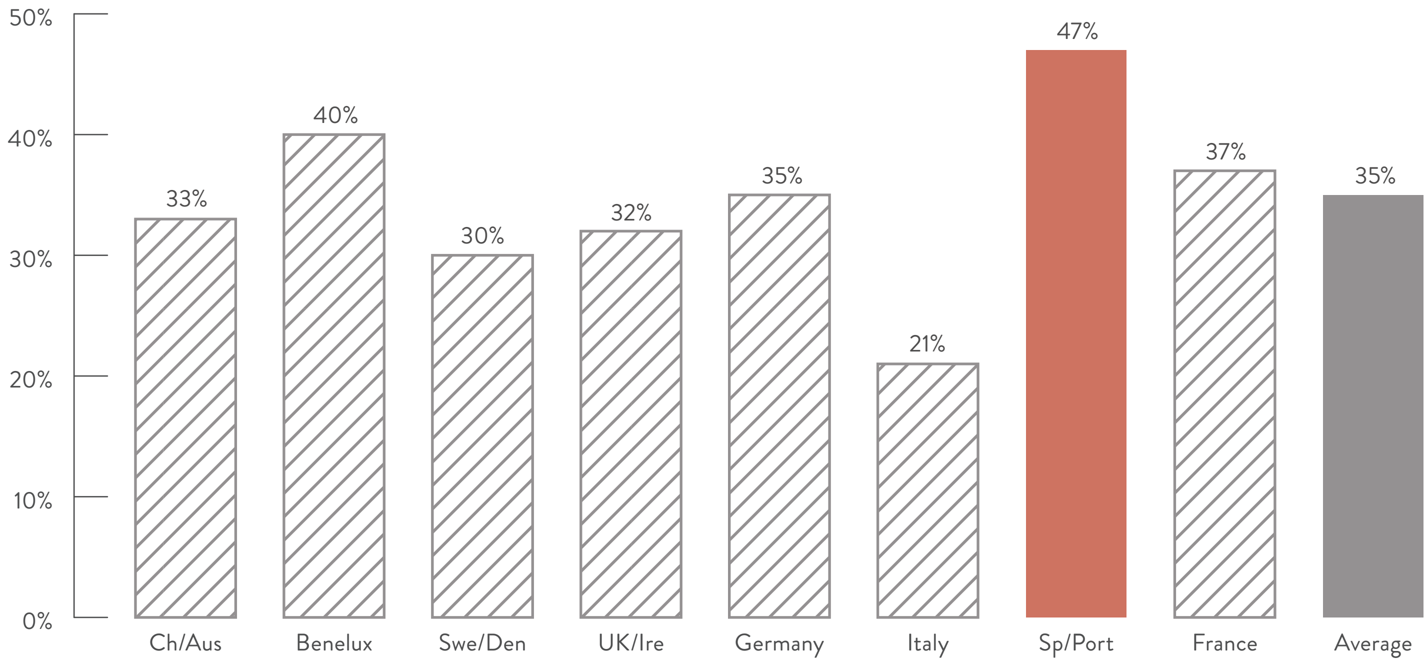
The top reasons for using CBD among consumers in Sp/Port were pain management (45%) and relaxation (34%), at rates similar to the European average. Those consumers were also more likely than average to use CBD for increasing overall wellness (32% vs. 21%), and with the goal of preventing disease (32% vs. European average 23%).

CBD oil (45%) and capsules (32%) were the most widely used forms, and consumers in Sp/Port were the most likely of any region to consume under 5 mg of CBD at a time (39% vs. 29% European average).

In most regions surveyed, friends were the source that had been used by the greatest number of CBD consumers (35% of Europeans surveyed have sourced CBD from friends at some point). In Sp/Port, which are still immature and less formal markets for CBD, nearly half (47%) of CBD consumers have at some point used friends as a source for CBD products.

Interestingly, while it was a source for only about one in 10 CBD consumers in the region (and less commonly used than online shops, drugstores, and naturopaths), Sp/Port CBD consumers were considerably more likely than the average European consumer to have purchased CBD as a part of a treatment at a spa, or skin/hair salon (11% vs. 3%).

SOURCE CBD FROM FRIENDS



Source: New Frontier Data 2019 European CBD Survey

Though a small minority of the overall population, those in Sp/Port were the most likely of all European consumers to say that CBD had positively affected their quality of life (92% vs. 73% European average).

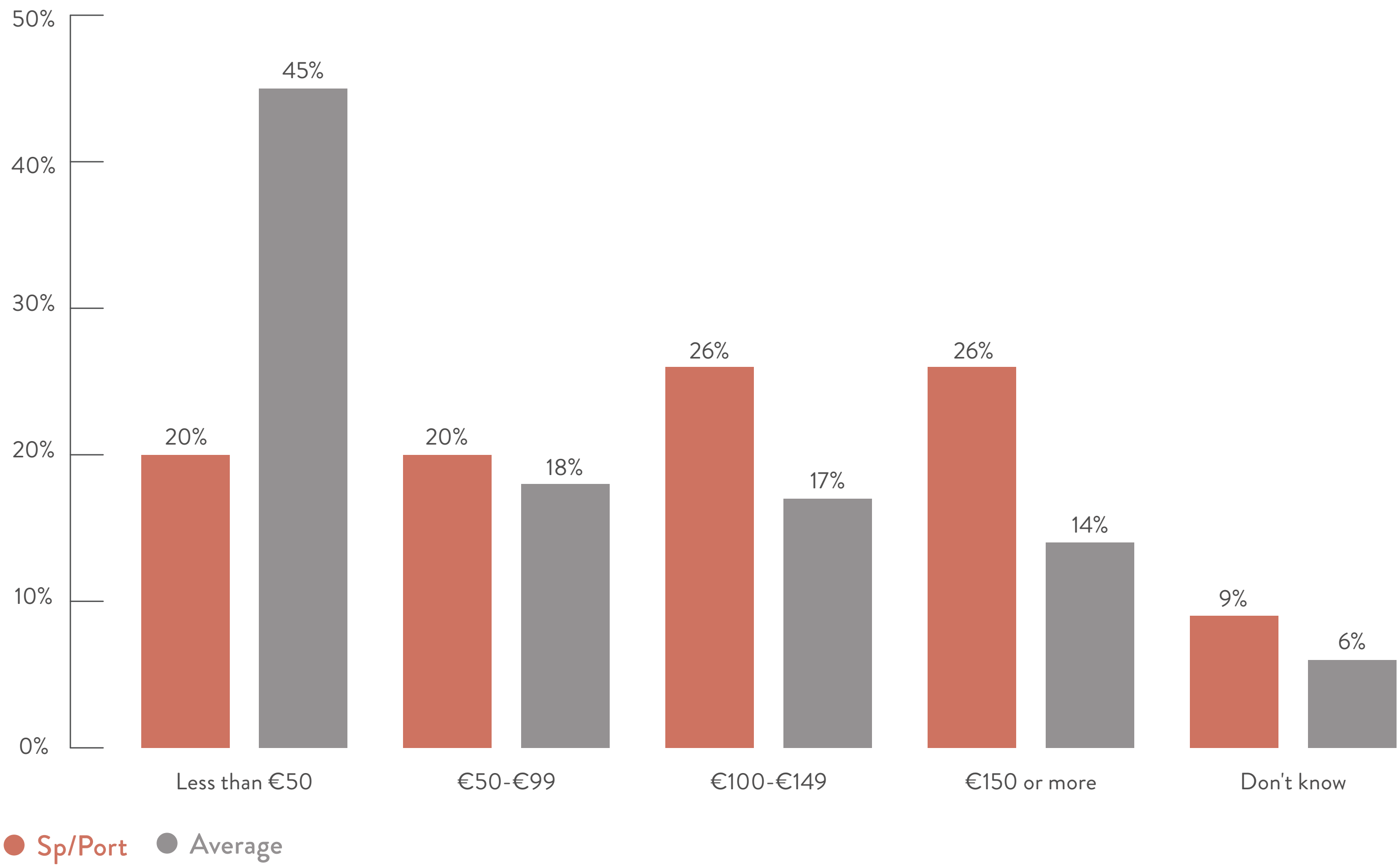
Fewer CBD Purchasers, Higher Spenders

Sp/Port had among the lowest rates of having purchased CBD (10%), but those who had purchased CBD there spent more on it than other markets, with half (51%) of purchasers spending more than €100 per month.

The brands most often purchased were CBD Code Pharma (17%), Deep Nature (14%), and Cannabigold (14%). However, CBD purchasers in Sp/Port had among the lowest brand loyalty, with just over a quarter (26%) of those who had ever purchased CBD saying they always purchased the same brand(s). The most common reason for switching brands (among those purchasers who did so) was a recommendation from a friend (38%). At this stage the consumer market is still informal and driven by interpersonal connections and input. The influence of brands and brand loyalty will likely increase as the market matures.

Three-quarters of Sp/Port CBD purchasers expressed high confidence in the safety of the products they had purchased, and indicated they were likely to purchase CBD again in the following six months.

MONTHLY SPENDING ON CBD



Source: New Frontier Data 2019 European CBD Survey

Potential Consumers Need More Information

Those surveyed in the region who had not consumed or purchased CBD expressed average rates of likelihood (about one in five) to both try and to purchase CBD in the following six months. The primary reason given for not having tried CBD was a lack of information, with one-quarter (26%) of Sp/Port respondents who had not tried CBD saying they did not know enough about it.

The forms potential consumers were most likely to consider purchasing were oil (55%) and capsules (54%), while also expressing higher-than-average rates of interest in topical CBD products like massage oil/lubricant (17% vs. 10% European average) and body moisturizer/spray (14% vs. 7% average).

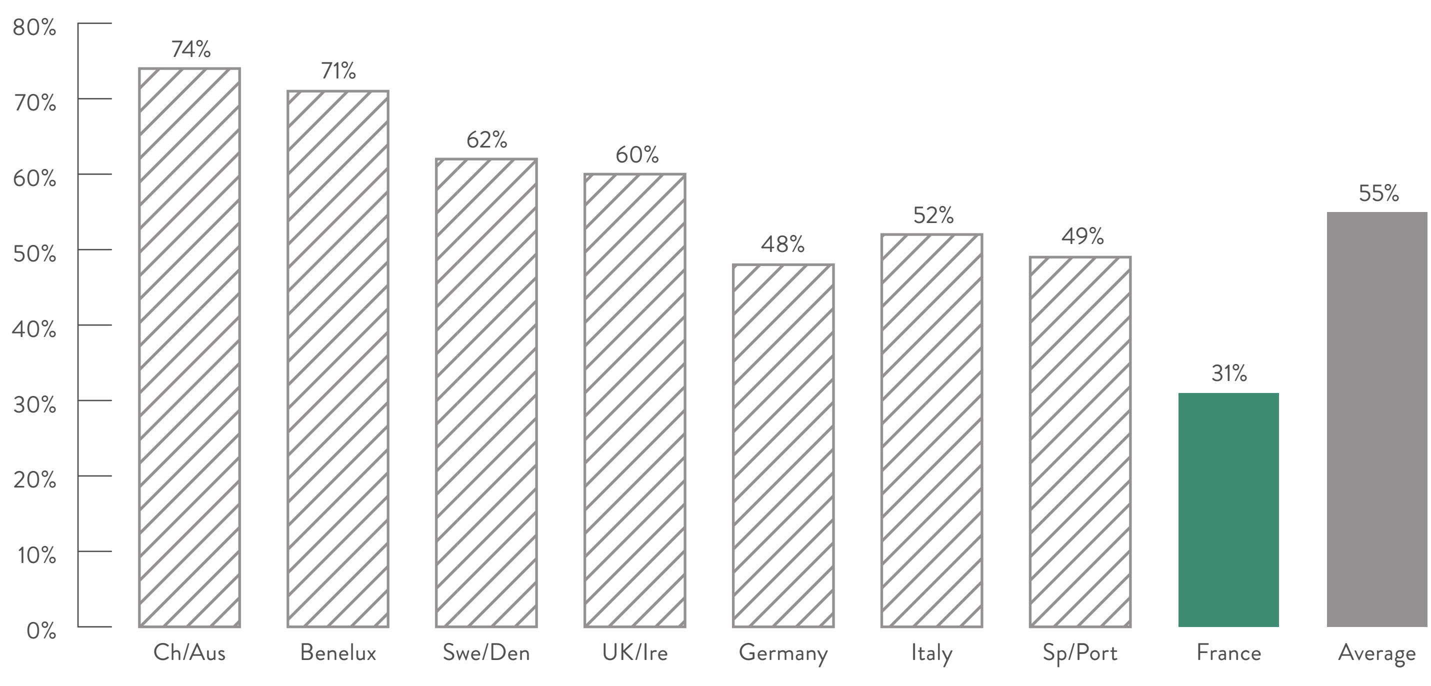
FRANCE

France is among the least CBD-friendly markets in Europe; it has the lowest rates of CBD use and purchasing, as well as the least awareness and exposure to CBD among the general public. The French in general are not only uninterested in CBD, they are the least accepting of its medical applications and availability to consumers. They report the most negative attitudes toward it of any region in Europe. As such, the market for consumers in France is immature, with many consumers sourcing from friends and switching brands based on price and convenience. While lack of interest and curiosity make it unlikely that CBD use will expand significantly beyond current consumers in the near term, the consumption and purchasing behaviors of the French who do consume CBD there—many of whom are recent adopters—will continue to evolve.

Extremely Low Awareness and Exposure to CBD

The French respondents to the survey were by far the least likely of all regional groups to have heard of (36% vs. 56% average) or seen CBD (31% vs. 55% average). They were also the least likely to know someone who consumes CBD (20% vs. 34% average).

SEEN CBD SOMEWHERE



Source: *New Frontier Data 2019 European CBD Survey*

Furthermore, French respondents were the only regional group more likely to hear mixed positive and negative attitudes toward CBD (47%) than positive attitudes (43%) from the media and online sources. French respondents were also the least likely to be interested in learning more about CBD of any region (41% vs. 55% average).

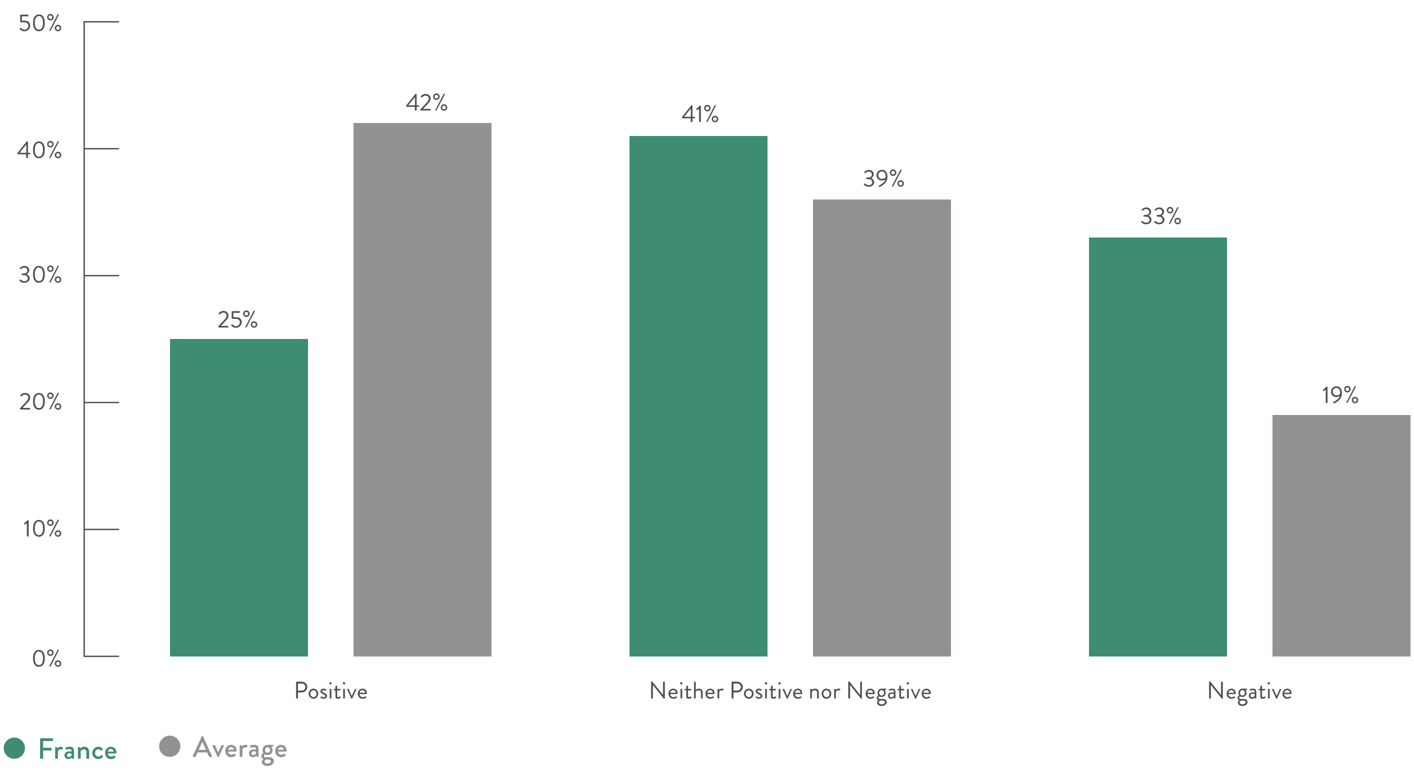
Skepticism about Medical Uses and Generally Negative Views

French respondents were the least likely to agree that CBD had valid medical uses (46% vs. 55% average), and the most likely to believe that CBD should only be available with a doctor's recommendation (49% vs. 36% average).

The French were also the least likely to have positive feelings about CBD, and the only region where more respondents' feelings about it were more negative than positive.

The higher skepticism of CBD and views that it should be used under medical supervision suggests that CBD brands in France may need to lead with a strong medically focused messaging relative to other markets where acceptance of CBD's medical value is higher.

GENERAL FEELINGS ABOUT CBD
FRANCE VS. AVERAGE



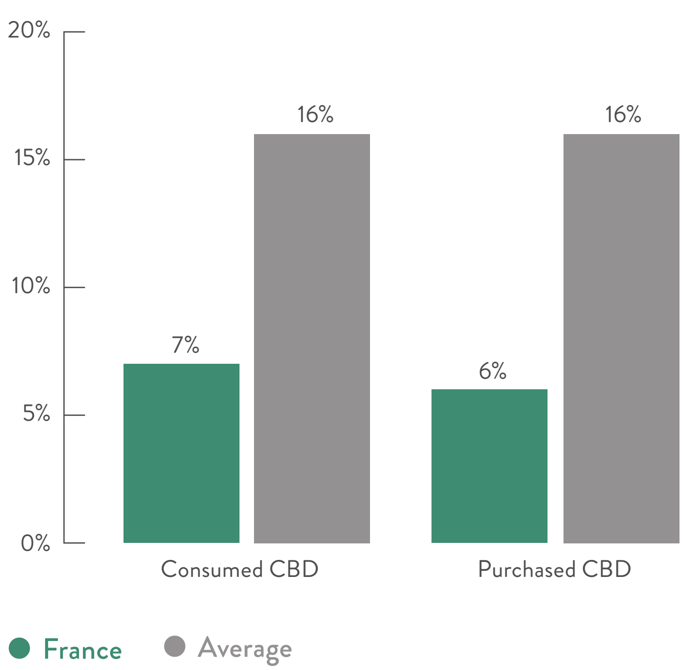
Source: New Frontier Data 2019 European CBD Survey

CBD Use and Purchasing Uncommon and Habits Are Still Forming

France had the lowest rate of CBD consumption of any region surveyed, with only 7% of respondents having ever tried CBD, less than half the European average of 16%. Of those who had ever consumed CBD, 17% only did so once or twice, leaving the rate of current CBD consumers in France at 6%.

Those who do consume CBD in France are slightly less likely than average to use it daily; the greatest proportion do so a few times a week. Such use patterns are likely to change, however, because of how new most consumers in the country are to CBD. Of all regions surveyed, CBD consumers in France were the most likely to have begun using it recently; 57% of French respondents who had ever tried CBD first did so less than three months prior, compared to a third of all European consumers.

FRANCE: CBD CONSUMPTION AND PURCHASING RATES



Source: New Frontier Data 2019 European CBD Survey

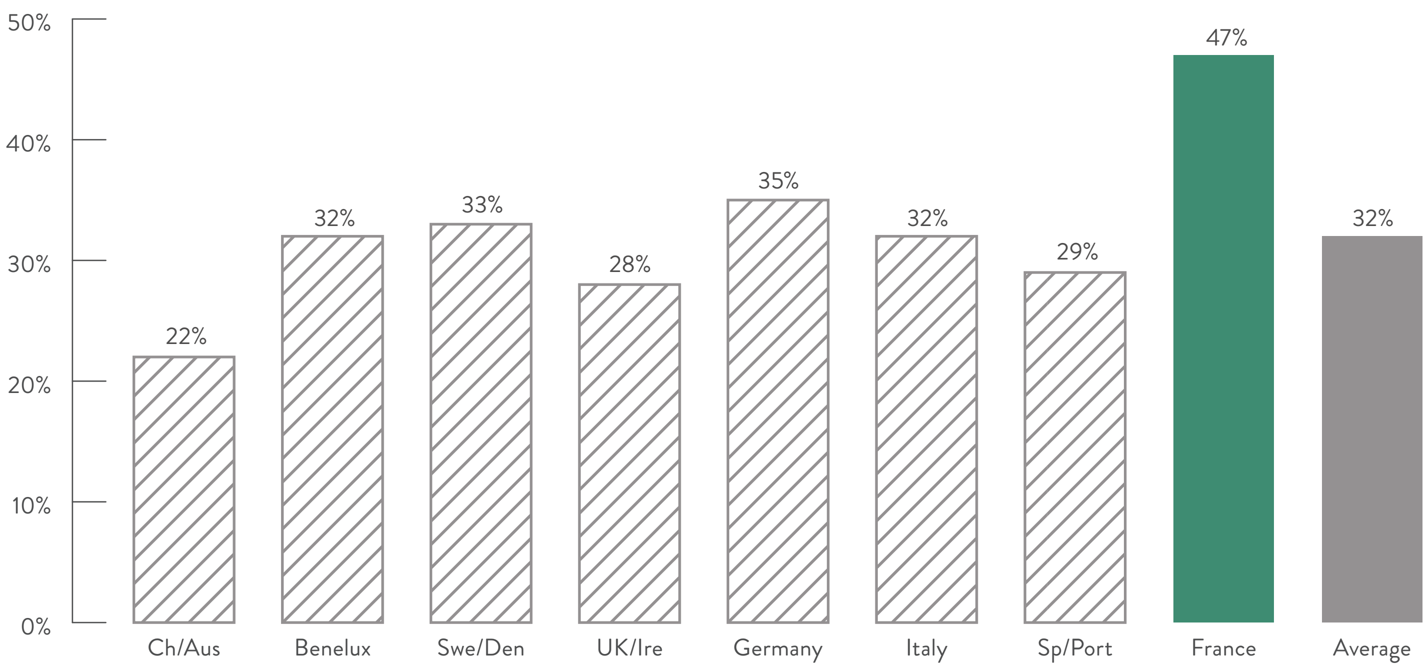
Only 6% of French respondents had ever purchased CBD, the lowest of any regional group. Additionally, those having purchased CBD are the lowest spenders, with more than half (56%) spending under €50 per month, compared to 45% of all respondents. French CBD purchasers have relatively high rates of brand loyalty, with 44% always purchasing the same brand(s); that trend is probably more a result of limited options in the market than of settled preferences. Those that do switch brands are very price sensitive (64% switch brands for a better price), and driven by convenience, with more than nine in 10 selecting their purchases from whatever is available at the most convenient source. Still, those that have purchased CBD tend to be satisfied with their purchases (84%), and two-thirds said they were likely to purchase it again in the following six months.

Significantly Increased Adoption is Unlikely in the Near Future

While the behavior of those who currently consume CBD in France will continue to evolve as the market matures, it is unlikely that adoption will spread significantly in the broader population in the near future. Only one in 10 French respondents who had not already consumed or purchased CBD expressed a likeliness to do so in the following six months, and fewer than one-quarter (24%) expressed any curiosity in trying it.

Those who have not already consumed CBD expressed a broad lack of interest in it, and nearly half (47%) indicated that they would not consider consuming CBD.

I WOULD NOT CONSIDER TRYING CBD
AMONG THOSE WHO HAVE NOT CONSUMED CBD



Source: New Frontier Data 2019 European CBD Survey

OTHER EUROPEAN MARKETS

Hungary

Hungarian respondents were slightly less aware of and had less exposure to CBD than in Europe on average but were more likely to express an interest in learning more about it. They were also more likely than average to believe in the medical uses of CBD, including its applications in treating medical conditions and improving general wellness. The region has average rates of having consumed and purchased CBD, and those who have purchased it were extremely likely to purchase again in the following six months.

Those who had not yet consumed CBD reported that the reason was their not knowing enough about it, or (to a lesser extent) uncertainty about any long-term effects. Nevertheless, they indicated a high degree of interest about it. Potential consumers gave many reasons for considering use, with pain management being the most common. Potential consumers are largely still gathering information, as they indicated a high likeliness to try CBD in the following six months but expressed only average degrees of likelihood of purchasing it within the same period.

Greece

Respondents from Greece were slightly more likely than average to have seen CBD, and had a more positive impression of it than the average European. Greek respondents were generally neutral or unsure of matters like CBD's medical uses and the degree to which it should be regulated and controlled, but expressed interest in learning more about it. The country has average rates of CBD consumption and purchasing, though spending there is the lowest of any region due to its particular economic conditions.

Poland

Respondents from Poland were less likely to be aware of CBD than the regional average, but those who had heard of it reported hearing very positive attitudes, translating to very positive feelings about it, and a high level of interest in learning more. Polish respondents were also strong believers in the medical applications of CBD, and supported its availability to consumers without the recommendation of a doctor.

Rates of having consumed and purchased CBD in Poland were considerably higher than average, and those who had done so expressed high likelihood of purchasing again in the following six months. Polish respondents who had not yet tried or purchased CBD were the most likely among the regions surveyed to say they would consume or purchase it in the following six months, but many still expressed a need for more information and concerns regarding safety of the products.

KEY TAKEAWAYS

Europe's CBD market is very immature, but the growing consumer base has strongly positive views of the cannabinoid, creating a solid foundation for future growth.

Only 16% of European adults have used CBD, and a majority (58%) reportedly first did so in the previous six months. The recency of adoption highlights the immaturity of the CBD market. However, despite low overall use, nearly three-quarters (74%) of consumers reported CBD having positively impacted their lives. The strong positive feedback from CBD consumers will give CBD brands a strong basis to drive new adoption and to transition consumers from novelty or occasional use to more regular and routinized use. The lifestyle integration of CBD will require a combination of well-aligned products that are appropriately priced for the target audience. As the market reaches equilibrium on such dimensions, New Frontier Data expects a significant number of Europeans to become regular consumers of CBD.

Consumers do not fully understand where CBD fits within the broader cannabis market, and the confusion may be impacting consumer adoption.

While the majority (55%) believe CBD has valid medical uses, roughly as many survey respondents (53%) either believed that CBD consumption gets the user high (25%) or were uncertain whether it did (28%). Further, 56% were unsure of the difference between CBD and hemp oil, and nearly a third (31%) did not know whether CBD was legal in their market. The lack of clarity on such issues may be negatively impacting consumers' interest in trying CBD, especially among those who may be concerned that CBD is intoxicating. Consumer education campaigns will therefore be critical to affirm the legality of CBD in the markets where permitted, to suggest when and how to use CBD, and which effects to expect.

Monthly spending on CBD is high and rising, confirming a strong growth potential for the market.

Nearly one-third of European consumers indicated their spending more than €100 per month on CBD products. Notably, 41% said that their spending had increased over the preceding six months, and 44% said they expected their spending to rise further in the following six months. The rising spending on CBD products demonstrates consumers' willingness to increase spending on CBD once they find products well-aligned with their needs. With growing product diversity and use cases, the market opportunity for CBD will not only be fueled by new consumers initiating use, but by increases in spending among existing intermittent consumers who are finding more ways to integrate CBD into their lives.

Price is a driving consideration when purchasing CBD products, but will become less important as the market matures.

More than four in five (81%) respondents reported price as being important/very important to their

CBD purchase decision. It was perceived as having greater importance than other considerations, including the product's dosing (75%), the total amount of CBD in the product (74%), the product's lab test results (64%), or the other ingredients making up the product (64%). Furthermore, 70% reported buying whatever products are most convenient, indicating that ease of access is also an important purchase influencer.

While the immaturity of the market at present suggests that consumers are insufficiently educated to effectively distinguish between high- and low-quality CBD products, it is anticipated that as the sector grows, companies will increasingly diversify their offerings, creating opportunities across the continuum from high-priced premium products to low-cost value products. As such, while price will be an important consideration in the initial stages of the market, it may become less of a factor as more companies build unique and differentiated brand identities.

Convenience is currently more influential than brand loyalty in shaping CBD purchases.

Seventy percent of CBD consumers reported selecting from whatever CBD products were most convenient, compared to 54% with a preferred CBD brand. Furthermore, nearly half (48%) reported switching brands based on price. Given the still-malleable brand preferences, it will be important for CBD companies to closely monitor their comparative pricing in the market and deploy creative approaches to incentivize repeat purchases with the goal of building and cementing brand loyalty.

With many CBD consumers still in the exploratory phase of their CBD experience, it will be important that factors other than price are used to attract consumers and differentiate positioning in the market.

The CBD market is highly fragmented, and brands will need to be strategic in distinguishing themselves from the crowded field.

No single company had brand familiarity above 10% among European respondents – reflecting the immaturity and fragmentation of the market. As more Europeans embrace CBD, significant opportunity will exist to build a continent-wide brand. However, doing so effectively will require a nuanced understanding of the differences between the continent's regions, and creating products (and messaging strategies) to meet the needs of each market's fastest-growing consumer groups.

As the online market gets crowded, CBD brands will need to develop effective differentiation strategies.

CBD's main presence is online, with most respondents who had been exposed to it seeing the products sold either on the web or through social media. With low barriers to entry and limited regulatory oversight, online sales of CBD have taken off faster than in any other retail channel. For brands seeking to establish themselves in this increasingly competitive retail channel, it will be important to differentiate both offerings and messaging to stand apart.

Differentiating strategies can include:

- **Outcome-focused messaging:** Focusing marketing on a specific or subset of therapeutic applications, instead of positioning as a general wellness product.
- **Targeted consumer base:** Selecting and targeting discretely defined consumer groups, rather than being a one-size-fits-all solution.
- **Quality and testing:** With concerns about quality and product safety being at the forefront for some consumers, messaging on quality and testing can resonate, especially with quality scores affirmed by third-party testing or regulatory bodies.
- **Education:** With the wide knowledge gap that still exists about CBD, those brands that are most effective at delivering engaging (and accurate) education on CBD are most likely to be viewed as trusted providers as consumers are becoming more aware of brands, better at appraising their offerings, and more wary of bad operators.

News media (e.g., TV, radio, or newspapers) and the web (internet searches and social media) are the primary means by which consumers are learning about CBD, but brands should not underestimate the influence of word of mouth from family and friends.

Approximately one-fifth of respondents (18%) indicated that friends and family were a source of information about CBD, on par with social media (21%) and newspapers or internet searches (19% each).

While the reliance on mainstream channels indicates a strong opportunity for a conventional advertising strategy, the relatively high importance of friends as an information source (coupled with the influence which friends and family play in driving new adoption) should lead CBD brands to include word-of-mouth marketing strategies as a key part of their brand building. Indeed, nearly one quarter of consumers (22%) have already had someone recommend CBD to them, and of those, most of the recommendations came from friends (63%).

Referral programs – where customers get discounts or rewards for bringing in new customers – or brand ambassador programs can be effective in driving organic buzz, even as more conventional CPG marketing strategies are used to build brand visibility across the market.

Friends and family members are the primary source of CBD for more than a quarter of European consumers.

Furthering the importance of personal relationships in driving CBD use, a quarter of CBD consumers reported that they primarily obtained their CBD from friends (21%) or a family member (6%). What's more, over a third (35%) of consumers have ever sourced CBD from a friend. While online and brick-and-mortar sources were also prominently featured, the role of personal connections in both learning about and acquiring CBD products presents an important channel for building brand awareness and engaging new consumers by tapping into the enthusiasm and passion of the most evangelical CBD consumers.

Considering that the likelihood of using CBD among nonconsumers doubled from 18% to 37% if offered by someone they trust, the importance of leveraging consumers' social networks in any brand-building strategy cannot be overestimated.

Despite limited consumer orientation, most consumers have positive views of CBD, creating a strong foundation for positive market education and demand growth.

More than half of respondents having heard of CBD believe that it has valid medical uses (55%), is effective in treating serious medical conditions (51%), and can improve general health and wellness (44%). While many consumers remain broadly uninformed about CBD, positive views about medical and therapeutic benefits of CBD provide a solid basis on which CBD brands can build through messaging.

Neurodegenerative conditions rank first among illnesses patients reported managing with CBD.

Among survey respondents, patients suffering from Alzheimer's (60%) and ALS (58%) were significantly more likely to be using CBD to manage their conditions than were patients suffering from other conditions often treated with CBD, including epilepsy (39%), chemotherapy (35%), or chronic pain (25%).

The elevated use among patients experiencing neurodegenerative conditions may be driven by those patients' willingness to try new and novel ways to slow the progression of such diseases, perpetuated by the perceived benefit gained from their CBD use.

The strong medical orientation to CBD in Europe, coupled with its use against intractable health conditions, suggest that as the CBD market matures there will be an increasingly sharp bifurcation between medical and lifestyle/wellness sectors of the market (the latter of which has grown at a slightly slower pace on the continent).

CBD is displacing over-the-counter medications, but not pharmaceutical drugs (yet).

Most patients believe CBD works – 84% reported that their illness improved with CBD use, while 83% reported improvement in common ailments like body aches and joint pain. However, CBD is having an uneven impact on commercial drugs. While 11% of patients reported replacing some or all of their prescription pharmaceuticals with CBD, 42% said they replaced some of their over-the- counter medications with CBD.

The displacement impact of CBD on commercial medicines will likely become more pronounced as consumers become more familiar with the products, and as the science of efficacy is better understood. What remains to be seen is whether and to what degree consumers will treat CBD as an outright replacement for their medications, or as a complement to other drugs as part of a holistic treatment regime.

Pain management is the main reason consumers are recommending CBD to others.

Approximately one in seven (14%) respondents had recommended CBD to someone they know, with the vast majority advocating its use for pain management (58%). CBD's being recommended for pain at twice the rate as other wellness reasons – including stress (33%), relaxation (32%), and anxiety (29%) – suggests that CBD is currently viewed more as a medicinal product than a nutritional supplement.

While CBD's general wellness applications are well documented, a focus on its therapeutically targeted uses may be more resonant with an audience that views CBD more as a medicine than as a wellness supplement.

Decoupling CBD from the high-inducing THC cannabis is key to consumer education.

Despite generally positive views about CBD, approximately half the respondents reported some stigma attached because of its association with marijuana, with 25% believing that CBD gets consumers "high". Among consumers who do not use marijuana (or high-THC products), fear of intoxication can be a significant barrier to CBD use. Therefore, both European regulators and CBD brands stand to benefit by distinguishing between high- and low-THC products in their consumer-education campaigns.

Importantly, with Europe slowly marching toward broader cannabis liberalization, it is critical that CBD companies not incorrectly frame CBD as "better than" THC, but rather acknowledge that each compound offers medicinal value with different points of efficacy.

While other cannabinoids show strong potential, familiarity is largely limited to CBD and THC.

Underscoring the wide knowledge gap about cannabis, 10% or fewer European consumers were familiar with any cannabinoids other than CBD and THC. As such, even as compounds like CBN show strong potential for use in pain, anxiety, and sleep, there is need for significant education to explain what other effective cannabinoids are, and how they differ.

Companies pursuing opportunities with minor cannabinoids can expect a long and steep learning curve. Leading with CBD, with the highest visibility in the market, may help lower barriers to adoption of other cannabinoids.

Europe is not a monolith – consumers across the continent have widely different levels of familiarity with and exposure to CBD.

Familiarity with CBD ranged from 78% in UK/Ire to only 36% in France. Further, while one-third of respondents in Ch/Aus had used it, only 7% of those in France done so. There was similar variance in views on CBD's medical properties, and the impact of CBD on the consumer's life. The wide differences in attitudes across the region indicates that a one-size-fits-all approach may be less effective than a strategy that accounts for the intermarket differences.

CBD brands must build locally but think globally.

At this nascent stage, nearly half of CBD consumers (42%) reported purchasing at least some of their CBD from international sources, including nearly one-quarter (24%) getting half or more of their CBD from sources overseas.

Limited regulatory enforcement on the import and export of CBD, coupled with the web as a primary purchase channel, means that European consumers can as readily buy CBD from their own country as they can from other countries. CBD brands should therefore understand that they are competing with a global marketplace to serve a hyperlocal consumer. Further, with wide variability in the quality of CBD in the global marketplace, CBD brands must invest in understanding their strategic positioning in the market, and how they differentiate themselves from other players.

Additionally, even for the brands that may be focused on only one or a limited number of European markets, it is important to make it easy for consumers in the nontargeted markets to find and purchase their products by word of mouth or over social media.

APPENDIX: RESPONDENT PROFILES

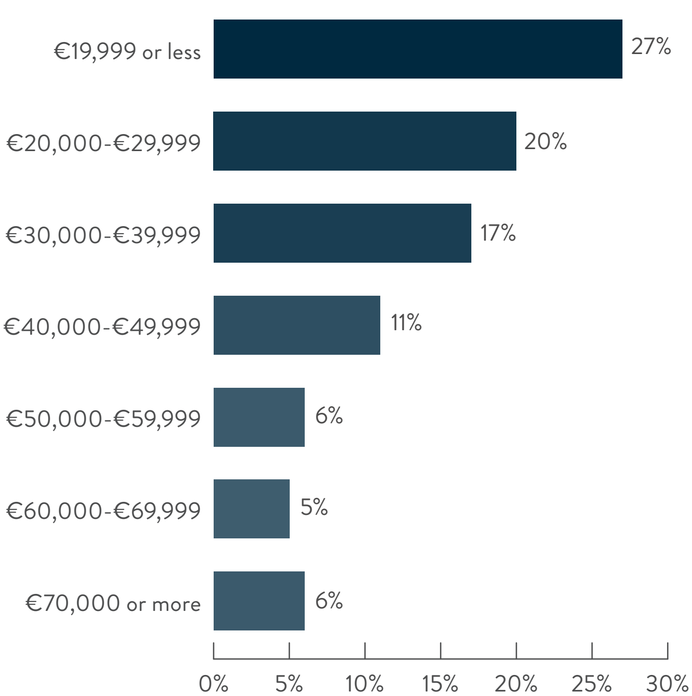
Nearly half of survey respondents reported being married or in a domestic partnership (48%); an additional 14% otherwise described being in a relationship, while more than one-quarter described being single (26%). Additionally, 71% indicated having no children in their household, while roughly one-third of respondents (29%) had children in the home.

Survey participants have generally high levels of educational attainment; 39% hold a bachelor's degree or higher, while an additional 28% have a vocational or technical education. Nearly a quarter of respondents hold a secondary school diploma (23%).

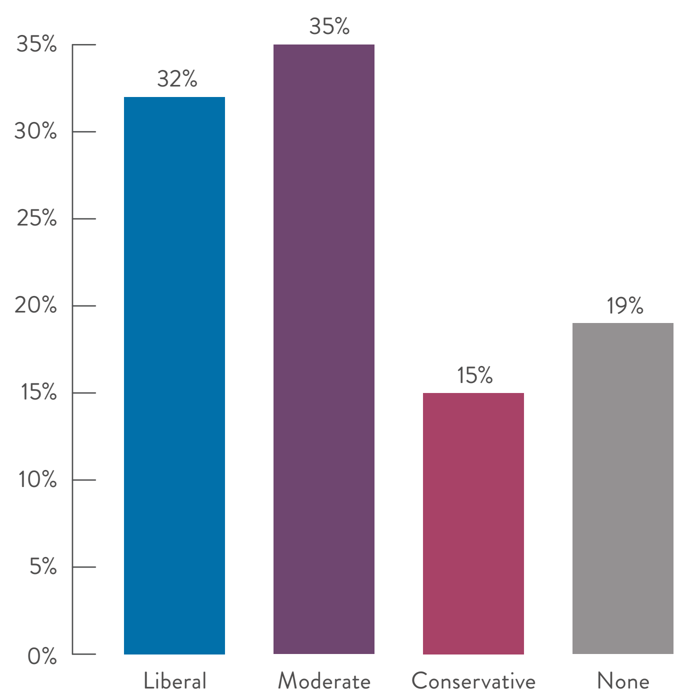
The majority of respondents reported net annual household incomes under €39,999 (64%), with the largest portion of the sample earning €19,999 or less (27%). The remaining 28% earn in excess of €40,000 annually; 7% declined to respond.

Politically, respondents were evenly divided between identifying as liberal (32%) and moderate (35%), while a minority identify as conservative (15%). Interestingly, nearly one-fifth of European respondents (19%) indicated that they have no political orientation.

ANNUAL HOUSEHOLD INCOME



POLITICAL ORIENTATION



Source: New Frontier Data 2019 European CBD Survey

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