

# Future of health 5 / A long and healthy life

### Future of health 5 /

## A long and healthy life

Longevity is an age-old human aspiration that is recently enjoying renewed attention. A wave of health-related innovations, such as GLP-1 agonists for weight loss, is transforming the market for products and therapies promoting a long and healthy life. The power of healthy behaviors to improve lifespan is well known, but are health consumers actually more interested in novel products and therapies? How much are they willing to sacrifice to improve their health in old age? And who do they trust when it comes to their future health?

Our fifth annual *Future of health* study provides answers to these questions and more. As part of our research, we surveyed more than 2,300 people in 17 different countries,<sup>1</sup> asking them about their views and underlying motivations. Our **key takeaways** are as follows:

- **Quality preferred over quantity:** Our survey shows that although people want to live longer, their preference is for quality of life over quantity of years. The true goal is to live not just a long, but a long and healthy life.
- **Natural approaches are favored:** People show a strong preference for natural approaches to ensuring a long and healthy life. Rather than taking drugs, 70 percent of respondents say they prefer preventive actions such as regular exercise and cutting calories.
- **Trust in technology is growing:** As evidence improves for new technologies and approaches, so interest in them will increase. Trust will grow in technology-supported approaches alongside traditional methods. This interplay between tradition and innovation will shape the future of health and longevity.
- **A thriving market for a long and healthy life exists:** The market is experiencing growing demand and will become one of the largest markets in the future, as aging affects everyone. The rapid development of innovative technologies and approaches will transform current health models and fundamentally alter markets as we know them today. This transformation affects everyone in the health industry.
- **Players need to position themselves now:** We recommend that players adopt a customer-centric approach, building networks and focusing on benefits and evidence. At the same time, achieving sustainable market growth relies on a number of key factors; for example, allocating aging an ICD code would lead to a major increase in budgets. Suppliers and providers also need to win over budget-holders, convincing them that treating aging will have a positive impact on the health conditions in aging societies.

<sup>1</sup> Representative population sample with respect to age, gender and income structure in the following regions: Europe (Austria, Denmark, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, United Kingdom), North America (USA, Canada), Middle East (Qatar, Saudi Arabia, United Arab Emirates) and Asia (China, Japan)

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# The future of health

Live long – and live well



**E**ach year, Roland Berger's *Future of health* study focuses on a topic of special relevance for the healthcare sector. For this year's study, the fifth in our series, we surveyed more than 2,300 people from 17 countries around the world. Our focus this time was on living a long and healthy life – in particular, how people think about extending their healthy lifespan and what they are willing to do for it.<sup>2</sup>

The desire to live a long and healthy life is nothing new, of course. The ancient Greeks knew that the value of life lay not only in its length, but also in remaining healthy into old age. This is reflected in the figure of Tithonus in Greek mythology, who was granted eternal life but not eternal youth, and so grew old and withered.

What can we do to extend our healthy life expectancy? Apart from **access to good healthcare**, the scientific consensus is that we need to engage in healthy practices throughout our lives. **Regular exercise** promotes cardiovascular health, muscle strength and overall well-being, reducing the risk of chronic diseases. **A healthy diet** provides us with essential nutrients, supports our immune system and reduces the risk of obesity and chronic illnesses. **Stress management** through meditation, yoga or relaxation methods contributes to better mental health and lowers the likelihood of stress-related ailments. **Social connections** and a **sense of purpose** are equally important, according to researchers. There is much that we can do to ensure that we do not follow in the mythical Tithonus's footsteps.

2 The estimated number of years a person can expect to live is their life expectancy. In this study we focus on what generally healthy individuals can do to increase the number of years they enjoy a healthy life, or their healthy life expectancy; the related industry is known as the longevity industry. Although not the focus of our study, it should be noted that the most effective way to improve the life expectancy of any group of people is to improve the lives of the poorest subgroup.

3 "By hand" refers to hobbies carried out manually rather than using gadgets, which keeps the muscles and brain active.

Recent research has identified a number of "**blue zones**" – places around the world where life expectancy is significantly higher than average and people stay healthy into old age. Researchers found that specific lifestyles, healthy habits and even the social and cultural environment lead to a longer, healthier life in these areas. The four characteristic features shared by all blue zones have been formulated as follows: move naturally (by hand,<sup>3</sup> garden, walk); outlook (faith, purpose, unwind); eat wisely (moderate wine); and connect (family first, partnership, right tribe). Educator and author Dan Buettner further suggests that the social and cultural conditions found in blue zones can be recreated anywhere; already, communities exist that are trying to replicate them in the United States, for example.

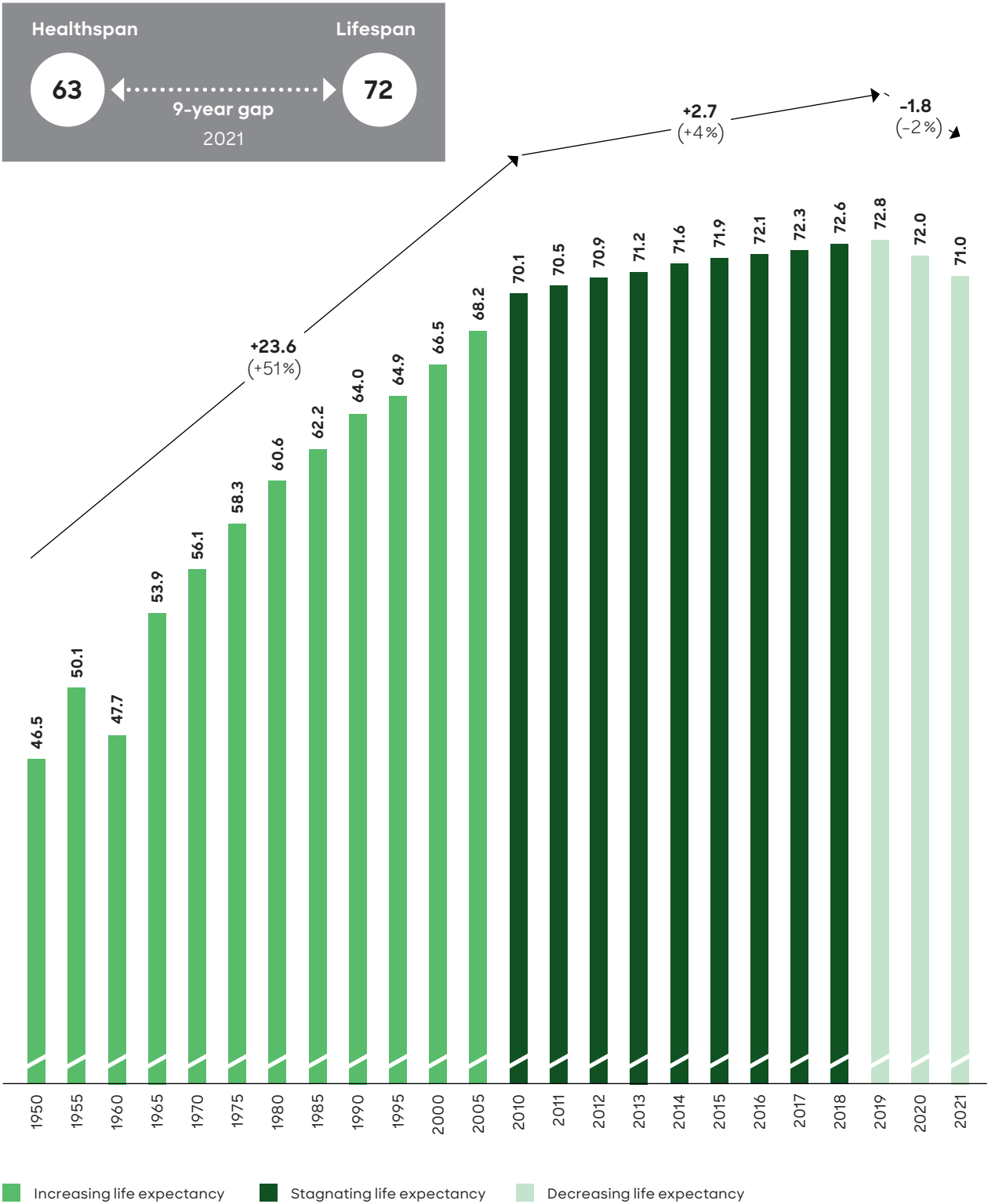
Another study that looked at more than 700,000 veterans in the United States found that individuals who adopt eight healthy lifestyle habits at the age of 40 – including not smoking, not using opioids, having a healthy diet and engaging in the healthy activities mentioned above – can enjoy a lifespan up to 24 years longer than those who do not. Not only that, these lifestyle changes brought significant benefits even if adopted at an older age.

Other studies have identified smoking as the factor with the biggest impact on life expectancy that individuals can influence. Even stopping smoking between the ages of 50 and 60 can add six years to your life. Education is also strongly correlated with life expectancy. In Germany, for example, the difference in life expectancy between individuals with the lowest and the highest levels of education can be more than six years.

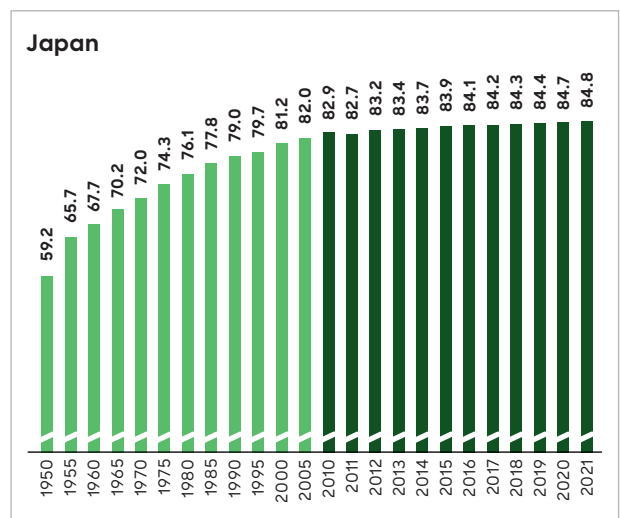
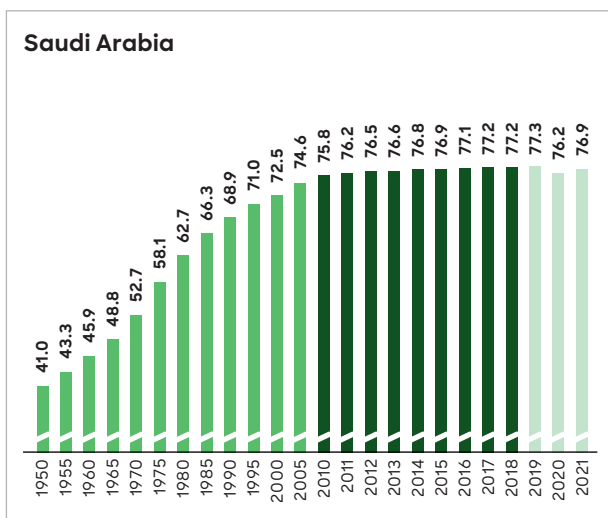
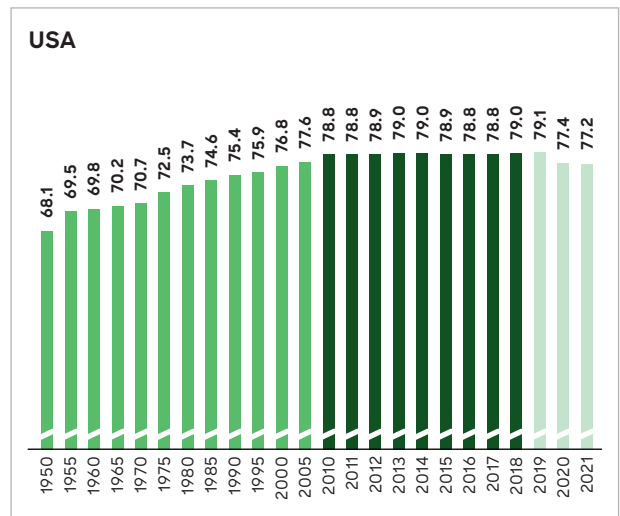
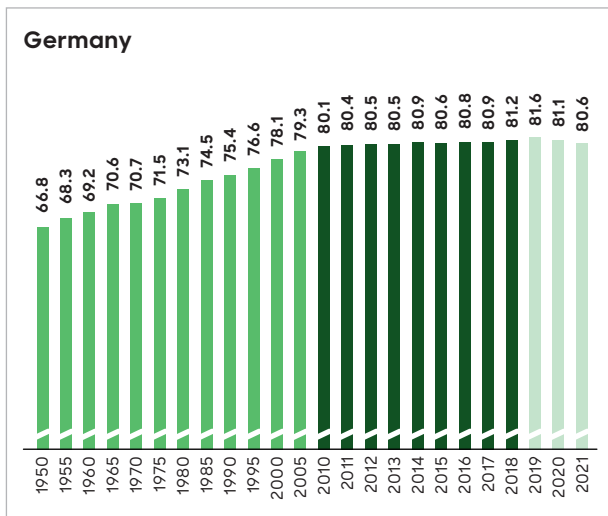
**Life expectancy** has risen significantly over the past 200 years, except in periods of war, famine and infectious diseases, and is very likely to continue to do so. This is largely due to advances in medical science, public health measures, new technology and changes in lifestyle. While the maximum potential life expectancy of human beings

A Life expectancy has been steadily increasing

Global average, sample countries (1950-2021)



Source: OECD, WHO, Our World in Data



has hardly changed for around 120 years, an increasing number of people are reaching a higher age, a phenomenon known as the "rectangularization" of the life expectancy curve. The gap in life expectancy between industrialized and non-industrialized countries has also narrowed over the last 70 years, partly due to the huge progress achieved in infant and child health. In recent decades, however, the pace of increase has slowed, impacted by diseases such as COVID-19, health disparities, the rise in obesity, cancer and chronic diseases, sedentary lifestyles, mental health challenges and environmental factors.

**Healthy life expectancy** – the number of years an individual spends in good health – has also risen over recent decades. Yet it remains around nine years behind life expectancy. In other words, roughly 1/7 (15%) of an individual's life is lived in morbidity, that is, suffering from a medical condition or disease. While some studies conclude that people are now living longer but not necessarily healthier lives, newer research reveals clear improvements in fitness for individuals compared to those at the same age a generation ago, at least among better educated groups. There may be some truth in the claim that 70 is the new 60. ►A

## NEW TECHNOLOGIES AND THERAPIES

New technology can play a crucial role in increasing healthy life expectancy still further. A wide range of innovative technological devices are appearing on the market, from non-wearable to wearable devices such as fitness trackers, smart watches, biosensors and wearable ECG monitors for detecting, preventing and managing disease or protecting health, to implanted devices. As highlighted in our 2021 study *Future of health 3*, a company's "reversal treatment" can prevent progression to type 2 diabetes in 97 percent of prediabetic patients. Digital coaching, training and tracking apps offer additional support for positive lifestyle changes that can have a life-enhancing effect.

Other emerging technologies are set to revolutionize the healthcare sector, from diagnostics assisted by artificial intelligence (AI) and personalized treatment plans to robotic limbs. Advances in pharmaceuticals and other therapies are not far behind and include gene therapies and stem cell therapy. New pathways to health include personalized medicine, in which healthcare and treatments are tailored to the individual's unique genetic makeup, lifestyle and health status. Another promising avenue is regenerative medicine and tissue engineering, which could lead to the development of new organs and tissues for transplantation, thereby addressing age-related deterioration.

People currently in good health can also benefit from innovations that aim to counter the effects of aging, from NAD<sup>+</sup> boosters to senolytics.<sup>5</sup> Other innovations in the field of anti-aging and longevity include hyperbaric oxygen therapy (HBOT), which is showing promising results in targeting aging hallmarks at a cellular level such as telomere shortening, and metformin, a drug used to treat type 2 diabetes but which studies show reduces all-cause mortality.<sup>6</sup> Furthermore, recent research shows that obesity drugs such as semaglutide (GLP-1 agonist), as well as newer triple-G agonists (GLP-1, GIP and glucagon agonists), which are currently undergoing clinical trials, have shown

remarkable results in weight loss, with individuals losing up to 15 kilograms over the course of 60 weeks, besides enjoying other cardiovascular benefits. Clearly, demand for such drugs will be high.

It is crucial to distinguish between novel therapies and conventional medicine, even where the latter employs cutting-edge, innovative approaches. Conventional medicine fundamentally aims to diagnose and treat symptoms and conditions, while the market that we are interested in here offers treatments and technologies addressing aging and its underlying causes, improving individuals' quality of life in absence of underlying medical conditions.

That said, the biggest impact on healthy life expectancy remains behavior-based change. According to Australian-American biologist Dr. David Sinclair, just 20 percent of aging is determined by a person's genes; the rest is due to lifestyle. Sinclair believes that intermittent fasting, a plant-based diet, reducing stress, and regular exercise are the most effective methods for slowing down aging. Caloric restriction, defined as lessening caloric intake without sacrificing essential nutrients, has also consistently shown the potential to extend healthy lifespan across various species in numerous studies.

Of course, some questions remain when it comes to the specific lifestyle changes that contribute to healthier aging. Is high-intensity or low-intensity exercise more

4 NAD<sup>+</sup> (nicotinamide adenine dinucleotide) is a co-factor in cell energy transfer and is involved in protecting against aging factors, as well as promoting longevity by facilitating DNA repair and providing other cellular benefits. Its levels decline significantly with age.

5 Molecules thought to be able to selectively target senescent cells.

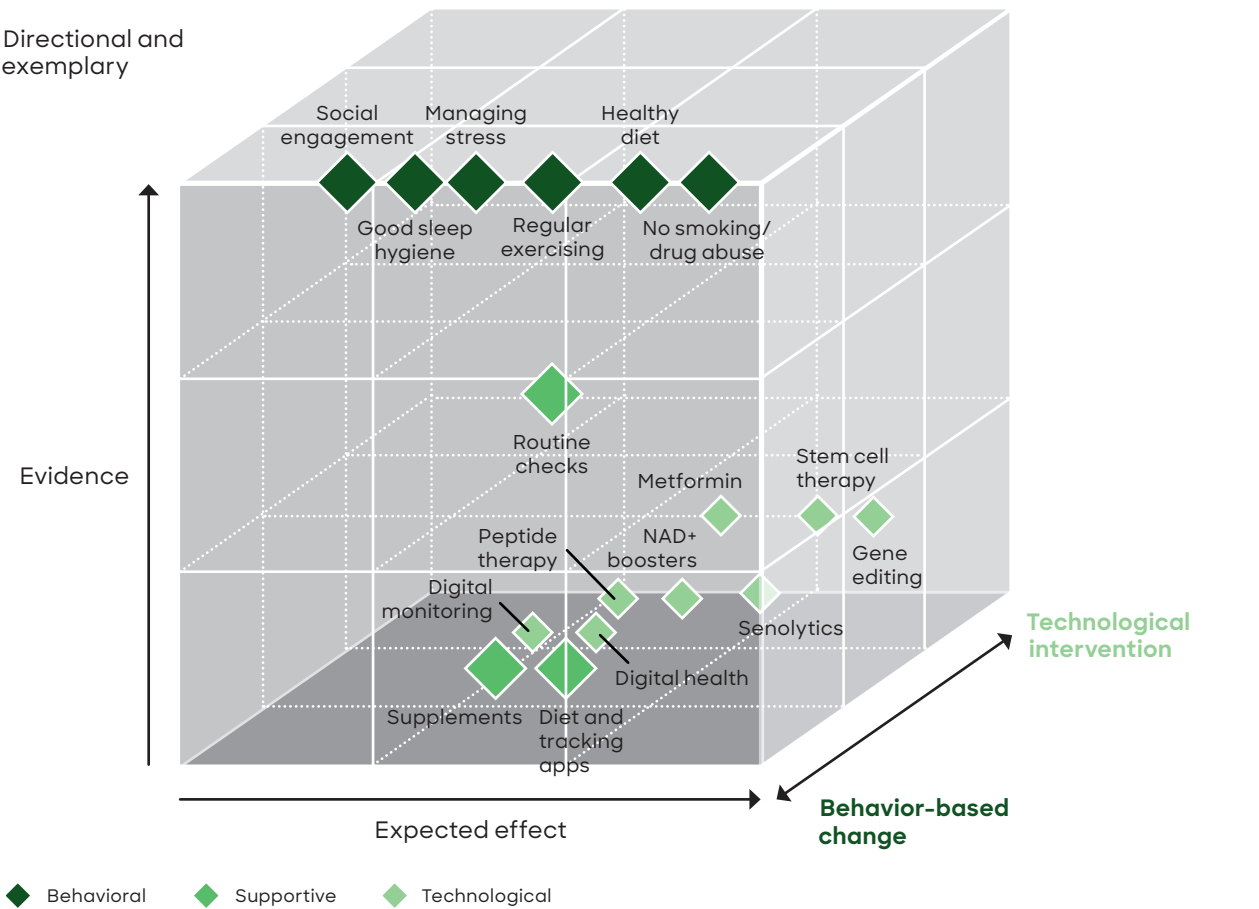
6 Metformin has also generated considerable buzz as a potential "magic" weight-loss pill in recent times.

beneficial? Is a body mass index (BMI) below or above 25 conducive to health in older age? Does red wine help or harm longevity? But whatever the answers to these specific questions turn out to be, one thing is clear: Combining

behavior-based changes with new and existing technology and treatments makes it possible for people today not only to stay healthy, but actually to reverse the aging process to some extent. ►B

**B Staying healthy with tech and behavioral change**

Action-effect-evidence matrix



Source: Roland Berger

# A booming market

Rapid growth and vast potential

2/

**T**he longevity market refers to sectors that are involved in the research, development and application of therapeutic solutions and products aimed at extending typical healthy life expectancy – such as semaglutide, metformin and recent advances in HBOT.<sup>7</sup> This sets it apart from the broader health and wellness market, which primarily focuses on treating existing health issues. The longevity market, by contrast, takes a proactive approach by targeting the underlying causes of aging and by striving to prevent its onset using new products and technology.

In practice, however, several sectors within the health and wellness industry also aim to promote a long and healthy life. In a broader sense, the overall market for products promoting a long and healthy life therefore consists of the following three sectors:

- 1. Traditional healthcare:** This refers to established healthcare services, including a wide range of treatments, methods and medications, all of which are reimbursable. Traditional healthcare has always aimed to treat diseases and promote health, thereby making a significant contribution to longevity and facilitating healthy aging.
- 2. Secondary healthcare:** The secondary healthcare sector encompasses privately funded products and services, including wearables, supplements and areas such as fitness, wellness and nutrition. This sector makes a significant contribution to overall health and well-being, thereby promoting a longer, healthier life.
- 3. Longevity:** The longevity market is a rapidly evolving sector that proactively seeks to prevent aging and its causes, with a primary focus on extending healthy lifespan rather than solely improving health or treating of existing ailments. This includes preventive measures such as caloric restriction, supplements such as NMN or resveratrol, and cutting-edge treatments and therapies such as senolytics and gene therapy.

These sectors are interconnected and often overlap, reflecting the multidimensional nature of the market for products, services and treatments promoting a long and healthy life. As the global population continues to age, all three sectors are likely to see growth, and further innovations are favored through the evolving needs of older individuals.

The market for products promoting a long and healthy life can also be analyzed from a different perspective, namely that of the entities that pay for the services provided by healthcare payors. From this perspective, the broad market for drugs, therapies and services that promote a long and healthy life can be divided into two main segments: the reimbursable market and the out-of-pocket market. The **reimbursable market** encompasses drugs and treatments, including those within the traditional healthcare market, that meet the criteria of having indications for specific diseases and a proven therapeutic benefit. If those criteria are not met – for example, if a drug's effectiveness has not been definitively demonstrated even if there is a presumption of therapeutic benefit – then the drug will not obtain market authorization. If the ingredients are classified as non-drugs – for example as supplements – individuals need to pay **out of pocket**. The World Health Organization does not classify aging as a disease,<sup>8</sup> which is why the longevity market, in a narrower sense, primarily falls into the out-of-pocket segment. Consequently, the longevity market mostly overlaps with the secondary healthcare market.

7 Definitions of the longevity market vary. Our definition of the longevity market specifically excludes services relating to care for the elderly, which is included in some other definitions.

8 Although the World Health Organization has developed a global strategy for healthy aging and its notion of "ageing associated decline in intrinsic capacity" is in line with its definition of diseases, it does not classify old age per se as a disease. Notably, in 2022 "ageing associated decline in intrinsic capacity" was included for the first time in the ICD-11 under general symptoms, highlighting the ongoing debate. See: "Is ageing a disease?" in The Lancet Healthy Longevity.

MARKET SIZE AND GROWTH

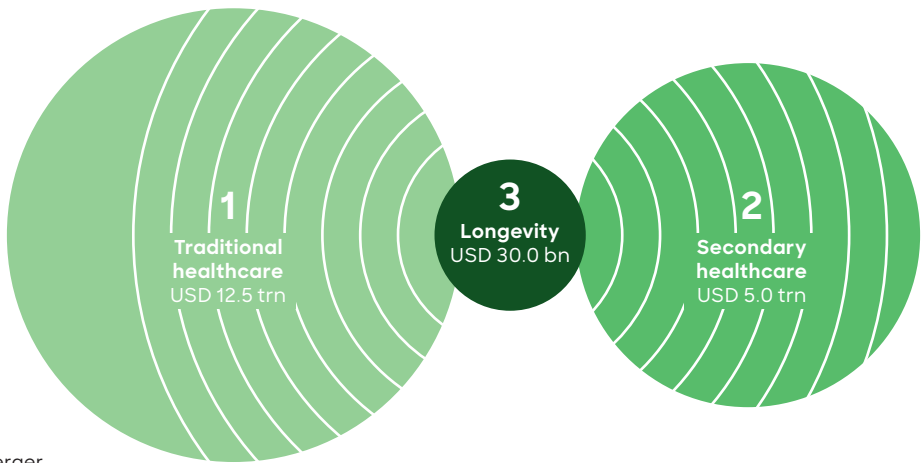
To determine the size of the market for products promoting a long and healthy life in its broadest sense, we looked at the size of the various market segments identified above. We included traditional healthcare as it has always been dedicated to achieving a longer and healthier life and can therefore legitimately be considered part of the market. This segment of the market is largely reimbursable. We also included products and services whose purpose is to extend and improve life, including wearables, supplements, fitness and related items – also referred to as the secondary healthcare market. These items are generally well established but funded out of pocket.

Finally, we added the market for longevity in a narrower sense, including pharmaceutical and genetic treatments aimed at preventing aging in healthy people or increasing healthy lifespan. This part of the market shows the strongest growth dynamics due to the frequent introduction of

innovative products and therapies, the value of which is in many cases still to be determined. Demand for such products will always be high regardless of whether their effectiveness has been proven or not. To take just one example, a recent study shows that public interest (as indicated by relative search volume) in GLP-1 agonists such as Ozempic grew exponentially between 2018 and 2023, following its popularization as a weight-loss drug by social media and influencers. As a result of its weight-loss properties, the drug offers a range of other positive health benefits that contribute to the promotion of a longer and healthy life.

Considering all three sectors discussed above, we calculate that the total market for products and services promoting a long and healthy life in 2023 is worth USD 17.5 trillion. The traditional healthcare sector dominates, worth USD 12.5 trillion, while the secondary healthcare market contributes USD 5 trillion. The longevity market in a narrow sense is worth around USD 30 billion but is

C The market for longevity: A third health market on the rise  
Market segments and size, 2023



Source: Roland Berger

distinguished by growth rates above traditional health markets of at least five to ten percent a year. Taking the robust market dynamics into account, the total market for products and services promoting a long and healthy life is likely to grow at around five percent a year. This trajectory suggests that the market could surpass USD 28 trillion by 2033 – an enormous figure but one that we believe is not unrealistic, given the increasing emphasis on health and well-being in today's society. Moreover, the development of a thriving longevity market could further contribute to this growth as the demand for new technologies that prevent and counteract aging steadily increases. ►C

The longevity sector has seen a major expansion in investments over the past decade, peaking at USD 6.2 billion in 2021. The biggest investments in the last five

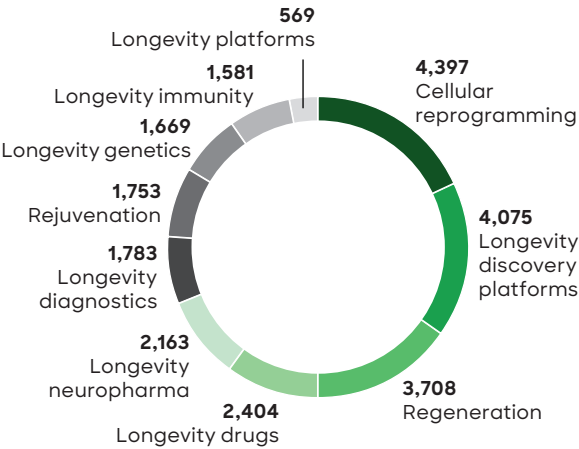
years have been in the areas of cellular reprogramming and longevity discovery platforms. In 2021, the largest number of companies raising funds in the sector was in the treatment category, followed by rejuvenation, diagnostics, and finally prevention.

Overall, the out-of-pocket segment of the broad market for products and services promoting a longer, healthier life is expected to grow faster than the reimbursable market, driven by the growing interest in longevity medicine. Driving the narrower longevity market in particular are factors such as the aging global population, rising awareness of age-related health issues, increasing consumer demand for anti-aging products and services, and a general paradigm shift within medicine and related fields from treatment to prevention. ►D

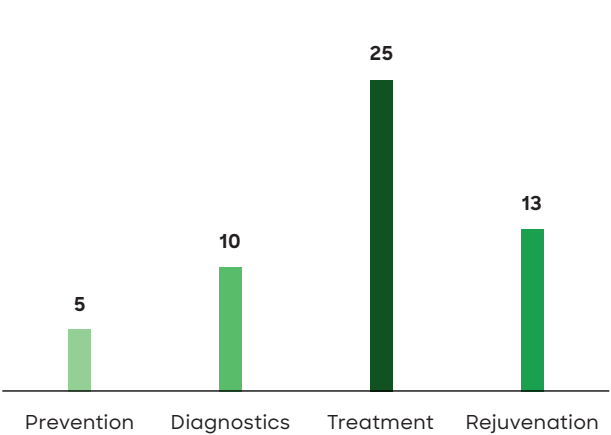
D Emerging trends in longevity investments

Top investments by sector, 2017-22; investments by category, 2021

Total investment by sector (top-10), 2017-2022 [USD m]



Investment by category, 2021 [# of companies raising funds]



Source: Longevity Technology Investment Report, lifespan.io

# Consumer preferences

Focus on health and openness to innovation



To find out more about how consumers feel about emerging technologies, their willingness to use innovative products and their attitude towards changing their own behavior, we carried out a comprehensive survey. More than 2,300 people participated from 17 countries around the world, including the United States, China, Japan, Germany, France, Italy and the Middle East. Respondents had a wide range of demographic profiles. Their average age was 38.3 and they were split almost equally by gender: 51 percent male, 49 percent female. Eight out of ten were employed and just under three-quarters said they were currently in good health, with just seven percent saying their health was bad. This self-assessed health status was in line with their BMI (body mass index): The largest share of participants who said they were in good health also had a healthy BMI. Most participants in the survey said that they did not visit their physician very often. ►E

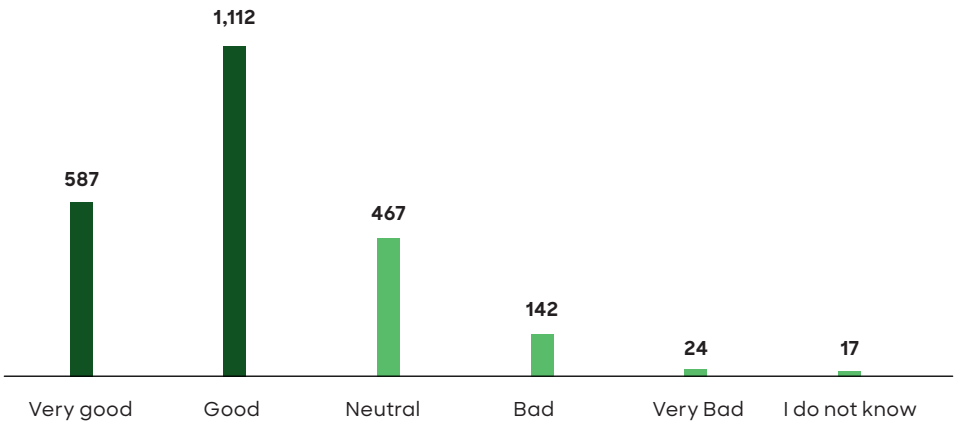
CONSUMER PERSPECTIVES ON LONGEVITY AND LIFESTYLE

Interestingly, not all participants share a strong desire for an extended lifespan: Just 38 percent consider living beyond 85 to be "very important" and a further 32 percent consider it "somewhat important". Participants in very good health have a different take on this, 63 percent thinking that living beyond their 85th birthday is "very important" and a further 25 percent saying it is "somewhat important". Among participants in very bad health, 21 percent think it is "rather unimportant" and 13 percent "very unimportant". By contrast, a substantial (74 percent) of respondents consider a life without severe physical illnesses and maintaining cognitive abilities "very important". This confirms that people prioritize quality of life over simply living as long as possible.

Similarly, more respondents (39 percent) would prefer

E Most respondents assess their health status as good

How would you assess your current state of health in general?



Source: Roland Berger FoH survey 2023

a healthy life over a longer life than would prefer a longer life over a healthy life (21 percent), with some 40 percent saying both are equally important. Unsurprisingly, those in very good health are more interested in a longer life, while all others prefer a healthy life – indeed, for those in "bad" to "very bad" health the preference for a healthy life is strong.

Age also plays a role in how respondents feel. Participants in the survey aged over 51 have a strong preference for a shorter lifespan but very good health (79 percent) over growing significantly older but in worsening health (21 percent). Older respondents say they are more motivated to stay physically active and healthy than younger participants; younger respondents aspire more strongly to have a longer, fulfilling life.

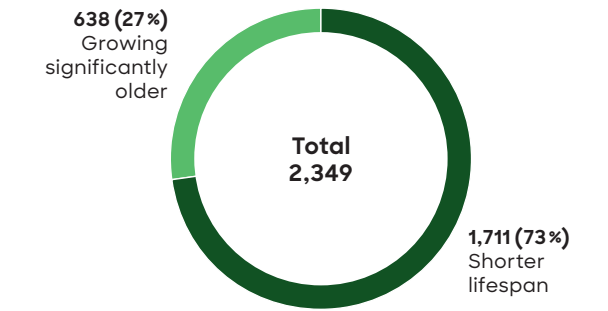
We also asked respondents what was more important to them, enjoying their life to the fullest right now or being healthy later in life? Overall, they said that they preferred enjoying their life right now rather than later. This feeling was particularly strong for those who are very healthy at the moment; those in very poor health prefer to be healthy later in life. Again, age played a role here, with respondents aged 18-35 preferring to enjoy themselves now, those aged 36-46 giving mixed responses and those over 51 preferring good health later in life. ►F

Nearly all respondents – around 96 percent – are motivated to achieve a healthier lifestyle. However, a little more than half of the respondents said that it was more important for them to lead a good life now than to extend their life expectancy.

Some 71 percent of respondents are confident about their future health – but, of course, this depends on their current health: 92 percent of respondents who currently enjoy very good health are confident about the future, while 83 percent of those in very bad health are insecure or scared about how their health will develop. Awareness of the importance of behavioral factors is high, with more than two-thirds of respondents saying that the choices they make about their life can increase their life expectancy. ►G

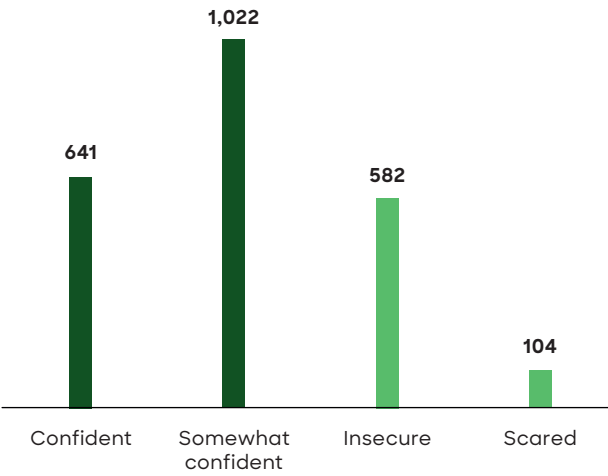
**F Shorter and healthier: Lifespan and health**

Which option do you prefer: a shorter lifespan with very good health (e.g., living to 80 years old) vs. growing significantly older but with deteriorated health?



**G High confidence about future health**

How do you currently feel about the potential changes in your health as you age?



Source: Roland Berger FoH survey 2023

ATTITUDES TO DIFFERENT APPROACHES

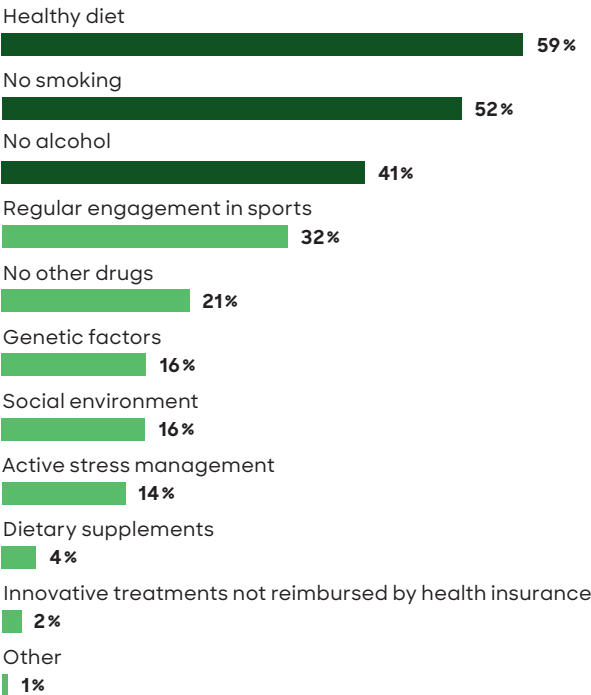
Respondents consider the most important factors in increasing life expectancy to be a healthy diet (59 percent), not smoking (52 percent) and not drinking alcohol (41 percent). They view active stress management and innovative treatments that are not reimbursed by their health insurance as much less important. But they were

also inconsistent: Despite knowing what they ought to do, when we asked them what they actually do to improve their overall health status, only 48 percent said they had a healthy diet, 49 percent said they didn't smoke and 38 percent said they didn't drink alcohol. Encouragingly, 53 percent said they engaged in sport regularly. ►H

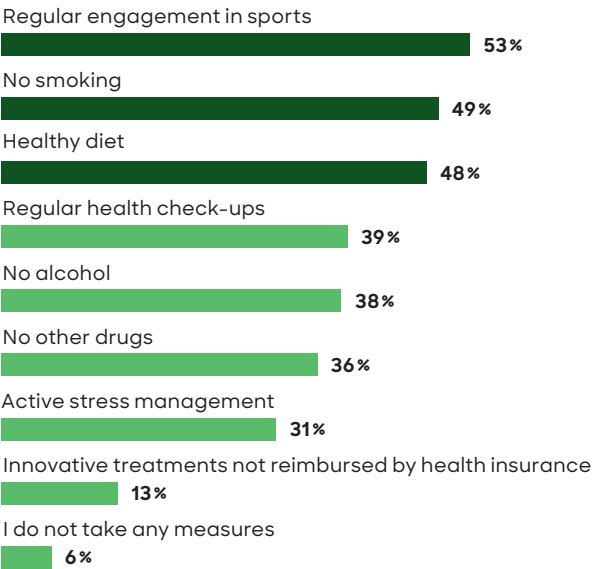
H Perceptions vs. actions: Measures influencing life expectancy

Important factors and personal actions to prolong life

What do you think contributes the most to a longer life expectancy? Please select at least one of the following options:



What measures do you take to improve your overall health status? Please select at least one of the following options:



Source: Roland Berger FoH survey 2023

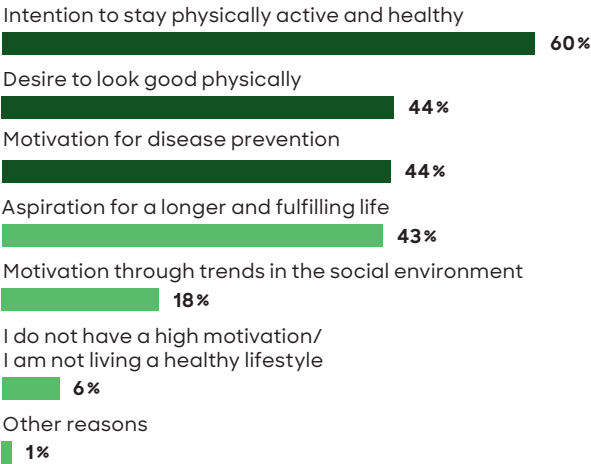
What motivates people to maintain a healthy lifestyle? The strongest motivating factors according to respondents were the desire to stay physically active and healthy (chosen by 60 percent of respondents), followed by preventing disease (44 percent), the desire to look good physically (44 percent) and the aspiration of living a longer and fulfilling life (43 percent). Social reasons did not play a critical factor (18 percent) for our respondents. ►I

When it comes to innovative approaches to increasing healthy lifespan, respondents are rather skeptical. However, there is growing anticipation that this skepticism will diminish as innovative technologies become more established. Currently, respondents see natural methods

**I The wish to stay physically active motivates people to pursue a healthy lifestyle**

What drives your motivation to maintain a healthy lifestyle?

Please select at least one of the following options:



Source: Roland Berger FoH survey 2023

●● Motivation comes not only from long-term well-being but also immediate gratification – experiencing the direct benefits reinforces our commitment and makes it a more sustainable journey.

and lifestyle changes as more important than using their cellphones to monitor their health status or access digital coaching apps, for example. This confirms our finding from last year's *Future of health* study, where respondents ranked "digital actions" bottom in terms of importance. At the same time, this year only 14 percent of respondents actually ruled out interacting with their health insurance on a digital platform and just 15 percent rejected the idea of using digital apps to stay healthy or to improve chronic diseases. We can conclude that some general interest in "digital actions" does exist, but it is limited in its scope. This year's respondents also had reservations about the use of 3D-printed organs and reprogramming stem cells. ►J

Rather than taking medication to increase their lifespan, our respondents said they would prefer to use preventive methods such as regular physical training, caloric restriction and abstaining from certain substances. For example, 70 percent said they would prefer to train regularly and restrict their calorie intake rather than taking weight-loss pills or medications. Dietary supplements are preferred over anti-aging methods, and abstaining from substances such as alcohol are favored over cellular reprogramming. In other areas, such as the use of personalized nutrition, anti-aging medication and nanotechnology, respondents showed no clear preference compared to more traditional approaches. ►K

## J Own behavior is seen as having the biggest impact on longevity

Please indicate the extent to which each statement applies to you personally on a scale of 1 to 5

(1 = Strongly agree, 2 = Agree, 3 = Neutral, 4 = Disagree, and 5 = Strongly disagree)

I believe my own actions and behavior have an impact on the length of my life

1.98

I prefer natural means to improve my lifetime rather than relying solely on medication

2.11

I would be open to changing my lifestyle to increase my lifespan

2.19

If available, I would consider using medical innovations to treat diseases that were previously incurable

2.26

I actively change my diet and eating habits to maintain a healthy lifestyle

2.28

I would consider performing diagnostic self-tests at home for various diseases (e.g., allergies, intolerances or diabetes)

2.34

Staying informed about new health trends is important to me as it helps me stay fit

2.37

I would be interested in using my smartphone to monitor and improve my health status

2.38

I would be willing to utilize digital coaching apps for health-related purposes

2.49

Source: Roland Berger FoH survey 2023

## K Tradition vs. innovation: Options for staying healthy

Which option do you prefer for each of the following scenarios?

Regular training

74%

Weight-loss pill

26%

Caloric restriction

70%

Taking medication

30%

Dietary supplements

69%

Anti-aging method

31%

Abstinence from certain substances

62%

Cellular reprogramming

38%

Avoiding an unhealthy diet

53%

Personalized nutrition

47%

Conventional health check

50%

Advanced diagnostic technologies

50%

Abstinence from anti-aging procedures

52%

Nanotechnology

48%

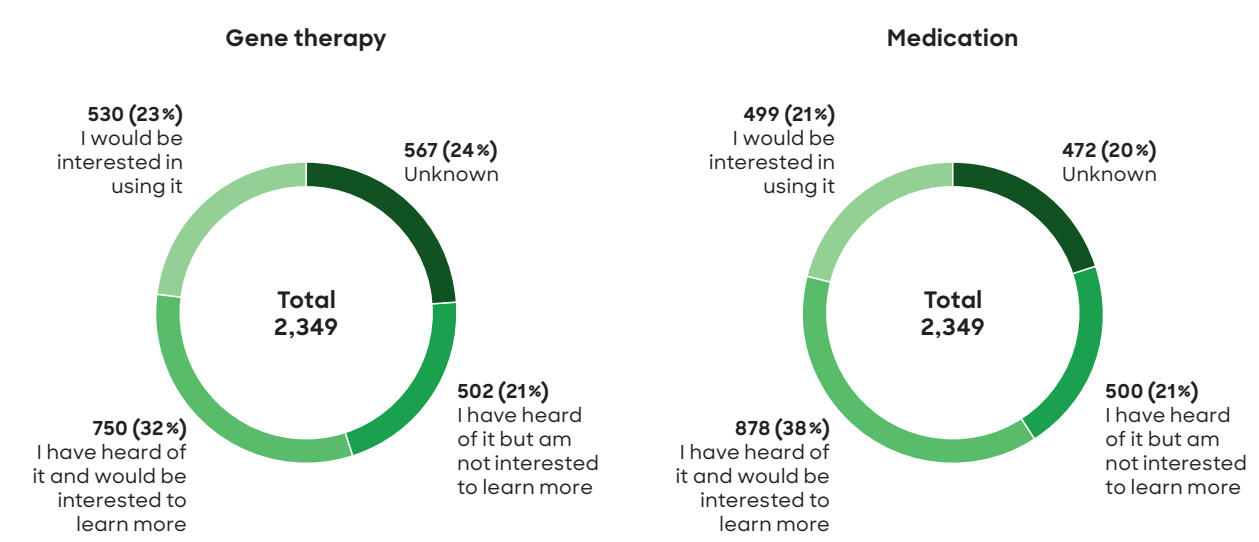
Source: Roland Berger FoH survey 2023

Health consumers prefer lifestyle changes to artificial means of combating aging. Thus, only 23 percent of our survey participants were interested in gene therapy, 20 percent in tissue and organ regeneration to appear physically younger, and just 18 percent in prime editing of genetic mutations to prevent diseases. ►L

Some health consumers are willing to try out novel treatments even without conclusive scientific evidence to show that they work. For example, more than half of our respondents said that they would use hormone therapy

and stem cell therapy if there were scientific proof that they work, but one in six would use them even in the absence of such proof. Two-thirds would use weight-loss medications as long as there were no side effects, but just over half would use them even with side effects. Similarly, the majority of health consumers would use weight-loss medication with side effects if it also had additional benefits, such as slowing down the aging process, lowering the risk of heart disease or cutting the chance of cancer. ►M

**L The majority are interested in gene therapy and medication to slow down biological aging**  
Please indicate your level of familiarity with and interest in the following

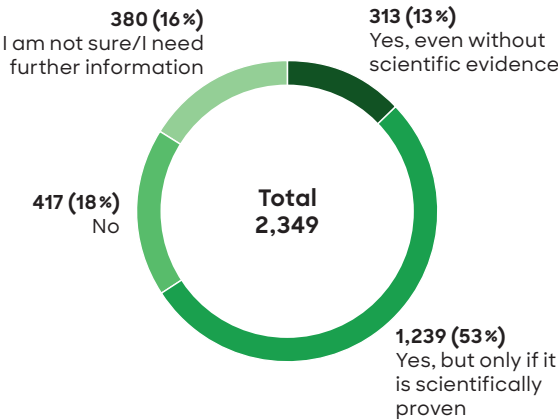


Source: Roland Berger FoH survey 2023

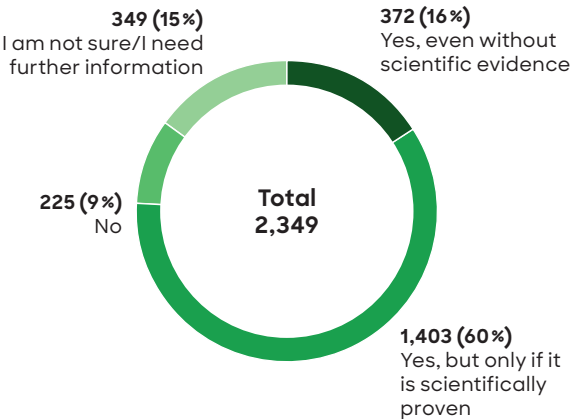
**M Opting for innovation: The majority of respondents are open to new treatments**

Agreement with statements about treatments and tools

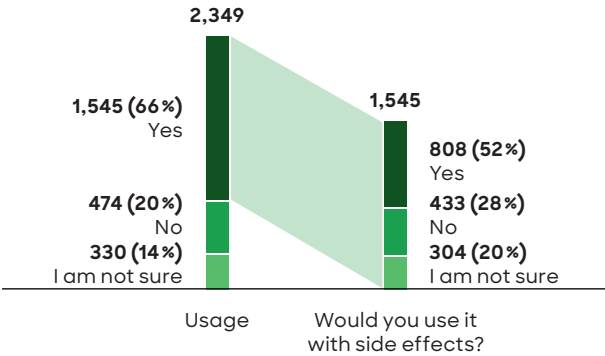
Hormone therapy in the form of taking supplements can help rejuvenate the human body. Would you be willing to take it?



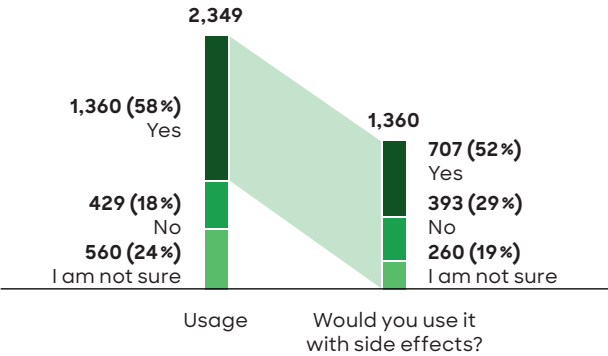
Stem cell therapy helps rebuild the blood forming system and restore the immune system of the human body. Would you be willing to take it?



There are medications that were originally developed for diabetics, but they can also help non-diabetics lose up to 15% of their weight. Would you use them?



If a drug was found to help slow the aging process and reduce the risk of heart disease and cancer, would you take this drug permanently?



TRUST

Whom do people trust when it comes to their health? All respondents in the survey place the most trust in physicians and hospitals and the least in social media influencers. But the level of trust varies by age group, with those over 51 considerably more trusting of physicians and hospitals than 18-35 year olds, and rather less trusting of social media influencers.<sup>9</sup>

IMPACT ON SOCIETY

We also asked respondents about the potential negative economic and social impact of more and more people living longer. Among the potential negative economic impacts, we included increased healthcare costs, challenges

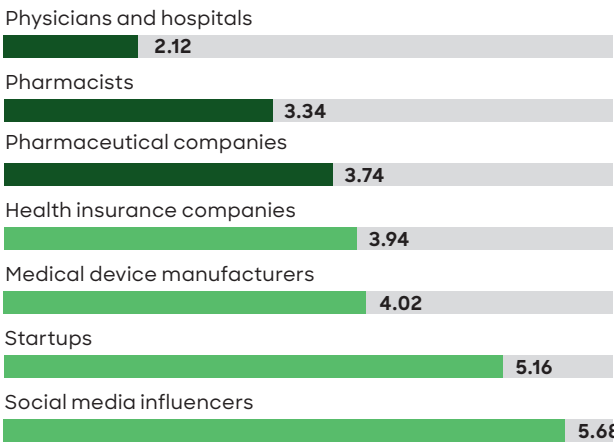
for the pension and social security systems, labor market problems and generational inequalities. In the negative social impacts we included longer waiting times in hospitals and doctors' practices, environmental issues and the need for more caregivers. Interestingly, a majority of respondents said that significantly worse economic and social conditions were ethically justifiable, if that was the cost of more and more people living longer. ► N

9 "Which stakeholders within the healthcare system would you trust with regard to recommendations for new ways to contribute to longevity? Please rank the following: physicians and hospitals, pharmacists, pharmaceutical companies, health insurance companies, medical device manufacturers, startups, social media influencers."

N A matter of trust: Respondents trust physicians and hospitals most, while the ethical implications of longevity bother a third

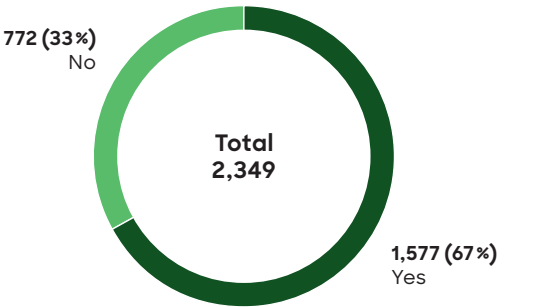
Which stakeholders within the healthcare system would you trust with regard to recommendations for new ways to contribute to longevity?

(Ranking from 1 = Best to 6 = Worst)



Source: Roland Berger FoH survey 2023

Is it ethically justifiable for more and more people to live longer, even if this led to significant negative economic and social impacts?



WILLINGNESS TO PAY

To enjoy a longer, healthier life respondents would be willing to pay for some things currently not covered by their health insurance. Notably, established treatments such as health check-ups and medications stand out as the services registering the highest willingness to pay among respondents. Surprisingly, innovative treatments and personalized nutrition also garnered considerable interest, highlighting a strong enthusiasm for cutting-edge medical solutions. However, we found a stark contrast between the willingness to pay for established treatments and for aesthetic interventions, with around 60 percent of respondents showing no interest in paying for the latter. ►○

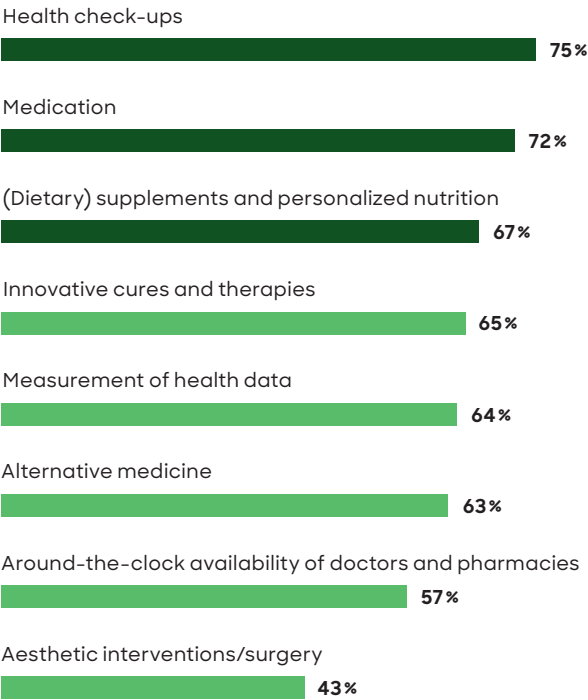
GEOGRAPHICAL DIFFERENCES

Our survey covered a wide geographical area: Europe's German-speaking countries (Germany, Austria, Switzerland), Denmark, France, Italy, Netherlands, Spain, Sweden, United Kingdom; North America (United States and Canada); the Middle East (Qatar, Saudi Arabia, United Arab Emirates); and Asia (China, Japan). The results provide us with the data we need to analyze certain specific questions – in particular, those where we suspected that people in different geographies might show variation in their responses.

Some of the most salient differences were as follows: Respondents in the Middle East assess their current state of health the best, with around 92 percent considering it "good" or "very good". The next highest number (72 percent) is found in North America, while Asian respondents are the least positive about their current state of health. A similar pattern was found with regard to how important it is to live a long life: 50 percent of respondents in the Middle East and 49 percent of North Americans consider it "very important" to live beyond the age of 85, compared to just 31 percent in Europe's German-speaking countries and 24 percent in China and Japan, for example. When given the choice, North Americans prefer a longer life (31 percent)

○ Willingness to pay

Would you be willing to pay for the following ways to obtain a longer/healthier life, even if your health insurance company did not fully cover them?



Source: Roland Berger FoH survey 2023

to a healthy life (26 percent), while other regions prefer a healthy life, especially Asia (around 55 percent). Overall, a life without severe physical illness and with cognitive abilities intact is important for all participants regardless of their country of origin.

With regard to technical advancements and innovations in drug and other therapies, respondents in the Middle East are more open to ideas such as interacting with their health insurance company via a digital platform, using apps from digital providers and receiving gene therapy, say. Participants from Asia are rather more skeptical here. Around half of respondents in North America and the Middle East would be willing to use weight-loss medications and put up with possible side effects, while one-quarter of Canadians and Americans would be willing to take hormone supplements to help rejuvenate the human body even without scientific evidence – more than double the number in Europe's German-speaking countries. Generally, more than two-thirds of Europeans prefer natural means to extend their healthy life, such as regular exercise, caloric restriction and abstaining from alcohol, over medications, weight-loss pills and cellular reprogramming. This contrasts with North Americans, who are more inclined towards the latter.

## CONSUMER CLUSTERS

Using a complex clustering methodology, we grouped respondents into four different types. Each of these clusters shows distinct characteristics in terms of age, BMI, income and gender distribution.

Most people are health-conscious, so our first cluster – **Unmotivated laid-backs** – is small. Their average age is 38.99 and their BMI 24.23. Average monthly income is EUR 5,080 pre-tax. Members of this group do not appear to care much about their health and are not willing to change their behavior to improve it. Indeed, 59 percent of members of this group do not even know how to describe their current health status. The group includes North American, European and Asian respondents in equal proportions, while just two percent of the group's members come from the Middle East.

The second cluster we call **Progressive longevity supporters**. Like the first group they are few in number,

accounting for just 13 percent of all respondents in the survey. They are also the youngest cluster (average age: 36.6) and have the lowest BMI (23.93), combined with the highest incomes. They consider themselves to be in good health and are the most interested of all four clusters in innovative methods – and also the most willing to pay for them. North American and Middle Eastern respondents are well represented in this group.

The third and fourth clusters, by contrast, are very large. **Health-conscious middle-agers** are the oldest group (average age: 41.43) and have high BMIs (25.28) and moderate incomes. This cluster is female-dominated and has the worst self-assessed health status. Respondents in the Middle East are well represented among members of the cluster, with other members fairly evenly distributed across the remaining geographical regions.

Finally, **Healthy innovation skeptics** assess their own health as good or very good. Their average age is 37.41, their BMI 24.14 and they enjoy high incomes. They show little interest in innovative treatments and little willingness to pay for them. The largest proportion of this group come from German-speaking countries (44 percent) and the rest of Europe (32 percent), with just three percent coming from the Middle East.

# Recommendations

An eye to the future



**L**iving longer and healthier lives is possible, but it comes at a cost. The risk of social division, with the poor disproportionately suffering ill health, and high costs for social security systems as more and more people draw a pension, are undeniable – although the survey results seem to suggest that these are costs that many people are willing to accept. The risks for individuals are also significant. After all, what is to stop people who take anti-aging pills from falling into the trap of taking less care of their health in other ways?

Be that as it may, in 20 years' time it is highly likely that we will be living longer than today and enjoying better health into old age. Many factors point in this direction. Increasingly, work environments are being designed to foster healthy behavior and social interaction. We are gaining transparency over individual genetic predispositions to disease, allowing early detection and action, and it is not impossible that we will see effective genetic repair programs emerging within the next two decades. People are interacting more and more closely with technology that is able to monitor our diets, exercise regime and sleep patterns and so help us optimize our behavior. Health coaches are providing additional support. Scientific advances at the cellular level are leading to the discovery of new drugs that can potentially halt or stop the aging process.

The massive expansion of the market for products promoting a long and healthy life will have a major impact on the business models employed by players in the healthcare market. It remains to be seen exactly which trends will establish themselves but we can already make some general recommendations that will apply to all those involved in the market:

- **Ensure a strict customer orientation:** Customer focus is still not a given in the healthcare system, although it is becoming more and more common. Innovations are often paid for by customers themselves,

so customers must be convinced that the products and services they are buying are effective, practical and sustainable.

- **Think in terms of networks and platforms:** The trend towards platforms is reshaping many industries. Healthcare is no exception. Consumers' renewed interest in healthy aging can easily be integrated into a platform model.

- **Focus on benefits and evidence:** Often, innovations have not yet been subject to long-term studies, so there is little hard evidence for their benefits. Players should only rely on mature solutions, while at the same time creating space for testing and piloting innovations.

Beyond this, our recommendations differ depending on what type of healthcare player you are, as detailed below.

## IT PROVIDERS

IT and tech companies should focus on further integrating technology into the healthcare sector. That includes developing and supporting a wide range of technological devices such as wearable devices, remote monitoring solutions, digital coaching apps and telemedicine platforms – technology that can play a crucial role in extending healthy life expectancy. To ensure consumers accept these innovations, we advise companies to place a strong focus on customer centricity. They should also invest in artificial intelligence (AI) and data analytics to support diagnostics and personalized treatment plans.

In addition, collaborating with companies in the biotechnology or life sciences sector has huge potential, with IT companies supporting the development of innovative therapies, drugs and interventions aimed at addressing age-related conditions and diseases. We recommend exploring opportunities in regenerative medicine and tissue engineering, too, where progress could lead to new

organs and tissues for transplantation being developed, with IT companies contributing the necessary technology. Finally, IT can play a role in promoting behavioral changes, for example through platforms and applications that encourage individuals to adopt and maintain healthy lifestyles such as regular exercise and proper nutrition.

### GOVERNMENTS AND POLICYMAKERS

Healthcare policies are needed that address an aging population's unique healthcare needs. This includes not only treating age-related diseases but also promoting preventive measures and healthy lifestyles. In the area of medical research and innovation, policymakers may need to allocate resources to support areas such as geroscience, biomedicine and regenerative medicine. This can include both funding for research institutions and collaborations with private sector companies to advance medical technologies. Ensuring equal access to healthcare and innovative therapies is also a political challenge: Policymakers will likely need to address issues related to the affordability and availability of new treatments, especially if they are not covered by traditional health insurance models.

Longer lives and new therapies can put additional pressure on healthcare systems, and governments will need to use all possible savings potential to keep the systems stable, for example, exploiting digitalization. As the longevity market grows, it will also need to be carefully regulated to ensure the safety and efficacy of anti-aging products and therapies, including oversight of biotechnology, medical devices and pharmaceuticals. And, of course, governments can play a role in educating and informing the public about healthy aging practices and the potential benefits of leading a healthier lifestyle. They can achieve this through initiatives like public awareness campaigns and health literacy programs, recognizing that education plays a pivotal role in influencing behavior, lifespan and overall health at different stages of life.

● ● Longer lives and new therapies can put additional pressure on healthcare systems, and governments will need to use all possible savings potentials to keep the systems stable, for example, exploiting digitalization.

### HEALTH INSURERS

Some health consumers will inevitably prefer to take anti-aging pills rather than changing their behavior. With time, this will become more normal and these individuals may expect such treatments to be covered by their health insurance. We advise health insurance companies to deal with these topics and have answers to respond to their clients' needs and interests in living a longer, healthier life. Clearly the focus should be on natural choices. Companies will need to expand their offering in the area of behavioral change and inform their clients about how they can monitor and change their behavior, while also motivating them to do so. New opportunities exist in the area of digital self-monitoring and coaching, for example. Health insurers should also provide their clients with information about longevity therapies, once these are backed up by scientific evidence, and offer additional insurance packages that cover the new treatments where necessary. At the same time, we advise them to work closely with government to find ways to stabilize the financial situation of healthcare systems and also to create healthier environments for consumers to work and live in.

## HEALTHCARE PROVIDERS

For their part, healthcare providers are likely to see their traditional value chains and business models disrupted. They will need to rebuild them, focusing on their stronghold in inpatient care, while adding new outpatient and digital models. Existing players will also need to fight off new competitors. As we found in last year's *Future of health study*, healthy people choose providers differently from those who are unwell. That makes true customer orientation and customer centricity crucial, including a B2C (business-to-customer) business model rather than the B2B2C (business-to-business-to-customer) model traditionally used by providers.

Our specific recommendations differ for existing healthcare providers and new players entering the broad longevity market. **Existing healthcare providers** – hospitals, clinics, physicians, nursing care providers, home care providers and digital healthcare providers – must rethink their strategies. We recommend that they begin by developing a vision, asking themselves whether their aim is primarily to cure patients, in which case they should retain their patient-centered episodic business model, or to become a permanent companion of people interested in longer, healthier lives. If they choose the latter they should start continually tracking patients' vital data digitally or by analogue means. They should also investigate platform and partnering approaches, potentially joining forces with other partners in healthcare.

For **new players entering the market** for the first time, customer focus must be the starting point. In many cases new players have a branding advantage over traditional providers as they can more easily create a brand that embodies healthiness. We recommended starting with a B2C model and offering compelling products and services. New players should also consider cooperating with partners right from the outset, be they employers, payors or other providers.

## PHARMACEUTICAL COMPANIES

Pharmaceutical companies can capitalize on the huge pharmacological market opportunity for aging, particularly in given that aging is the origin of multiple health conditions, both chronic and acute. Many biotechnology companies (or biotechs) are currently investigating this area, and pharmaceutical players should scan the landscape for promising innovations and make targeted investments, funded initially by corporate venture funds. We advise focusing on technology platforms rather than single assets in order to derive the maximum benefit from their investments and avoid distraction on a technology level. Choosing the right partners for their value chain is critical.

Influencing health policy is key for pharmaceutical companies. We recommend trying to establish aging as a diagnosis in the International Statistical Classification of Diseases and Related Health Problems (ICD) and other catalogues, which would give companies access to grants and funding, and mean that treatments for patients were covered by health insurance. It will be important that they engage in the public discussion on the ethical and social-economic implications of more people living longer, to ensure that the major public stakeholders buy into new developments. They may also want to shift the focus of their research and development (R&D) towards aging, building up research areas, product pipelines and biotech solutions.

## MEDTECH COMPANIES

Medical technology companies have a number of opportunities going forward. Specifically in the area of aging, the determination of "biological age" will serve as a baseline for any improvements by therapeutics and preventive measures. This will play a critical role in the further development of a longer healthy lifespan. Also, within the therapeutics segment we see the rise in personalized medicines and hence the use of companion diagnostics

becoming more and more important. In the past, we have witnessed above-average growth rates in diagnostics, partly driven by the COVID-19 crisis but also by increasing demand for measuring health conditions. This demand has not dried up with the end of the pandemic.

We recommend that medtech companies adjust their portfolios so they can capture significant parts of the growth related to longevity research. In the [Roland Berger](#)

[Medtech winners study 2022](#) we showed that financially successful companies invest significantly more in R&D than their underperforming peers. However, it is also important for company leaders to read the trends and make good investment and portfolio decisions. At the same time, engaging more with consumers will be important so that the medical devices that these companies develop and sell truly meet customer needs.

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## FURTHER READING



### **Future of health 4 – The patients of tomorrow**

Understanding tomorrow's  
health consumers: behaviors,  
expectations and attitudes



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