Vitality

HEALTHY FUTURES

The algorithm for more years lived in good health

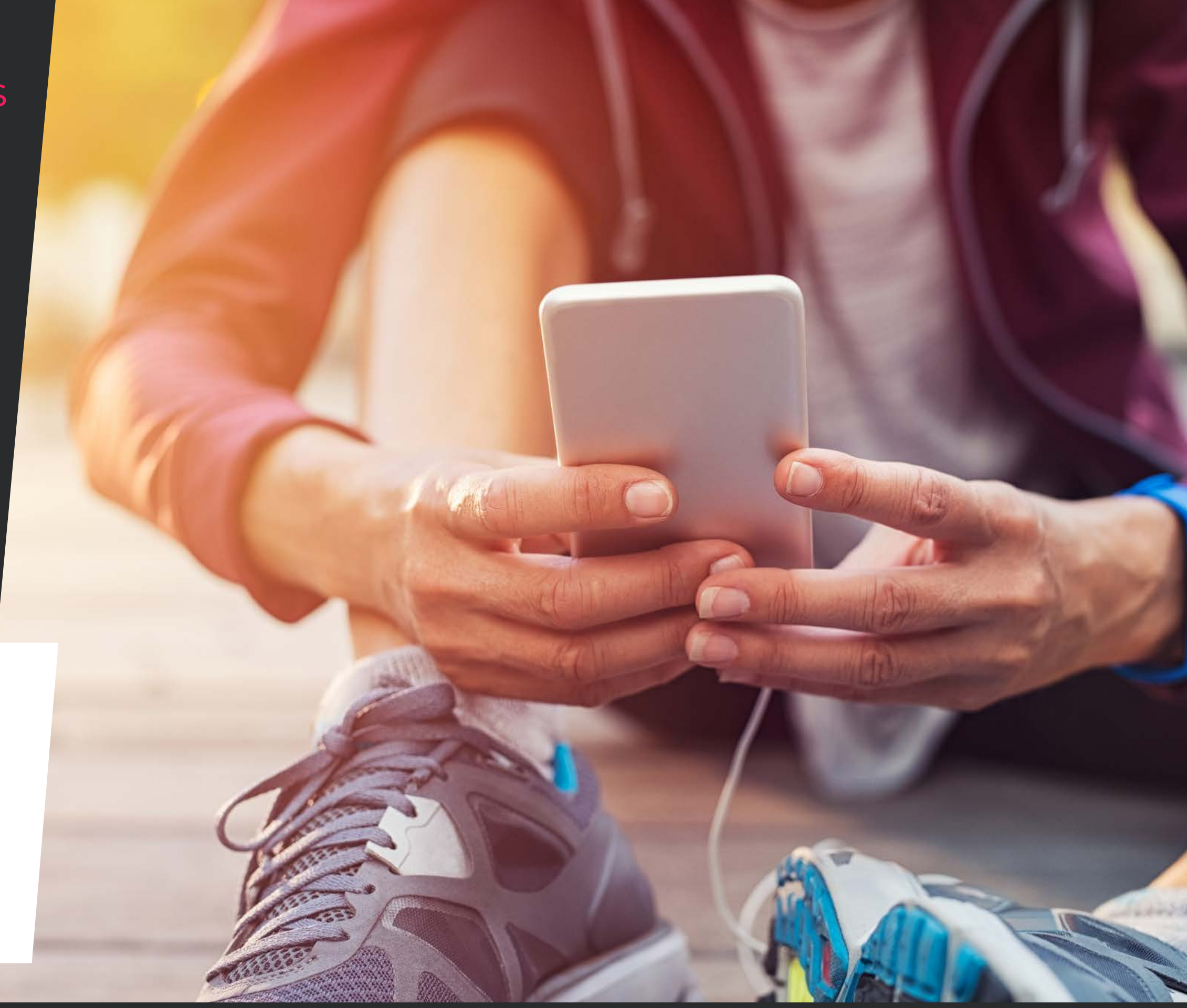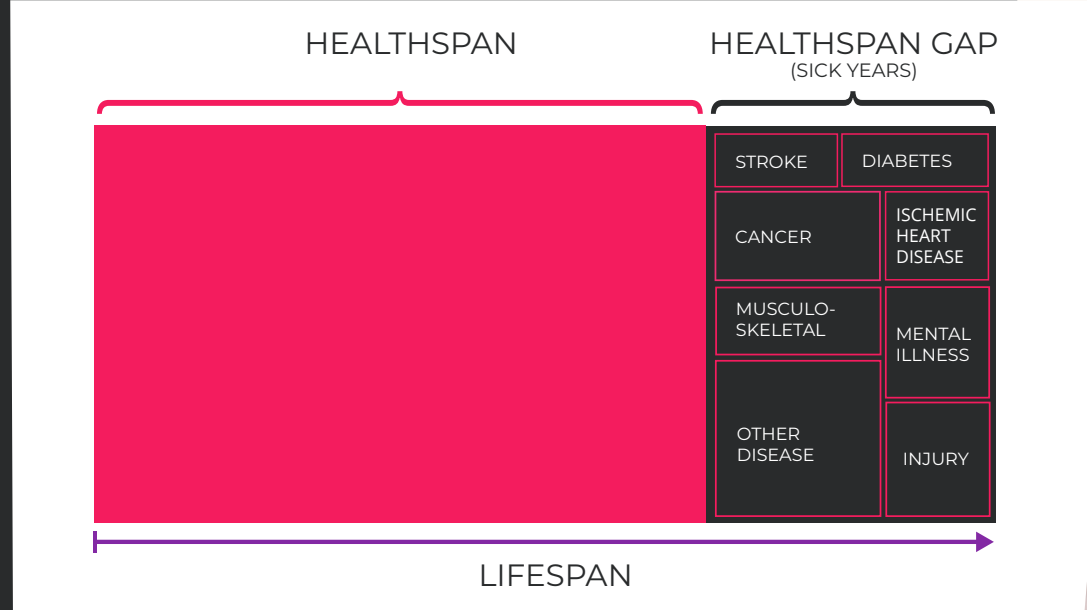*Branding updated in 2023.*

Contents

What is the Healthy Futures algorithm?

Vitality, through its work with RAND Europe, has developed a new algorithm that shows people how long they will live, how many of these years will be in good health, and the number one action they can take to improve the quality of their life.
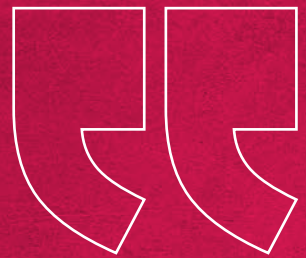
Through its Shared-Value Insurance model and partnerships with the world's largest insurers, Vitality has accumulated considerable behavioral data and developed significant expertise in health risk prediction, communication and behavior change.

The research and algorithm come as the world faces a widening gap between lifespan (life expectancy) and healthspan (the number of years lived in good health), resulting in people living longer in poorer health.

This booklet outlines key highlights of the research and the new algorithm, Healthy Futures.

HEALTHSPAN   HEALTHSPAN GAP
                         (SICK YEARS)

STROKE   DIABETES

CANCER   ISCHEMIC HEART DISEASE

MUSCULO-SKELETAL   MENTAL ILLNESS

OTHER DISEASE   INJURY

LIFESPAN

A note from Adrian Gore

> *While people are living longer than ever before, they are doing so in poorer health...*
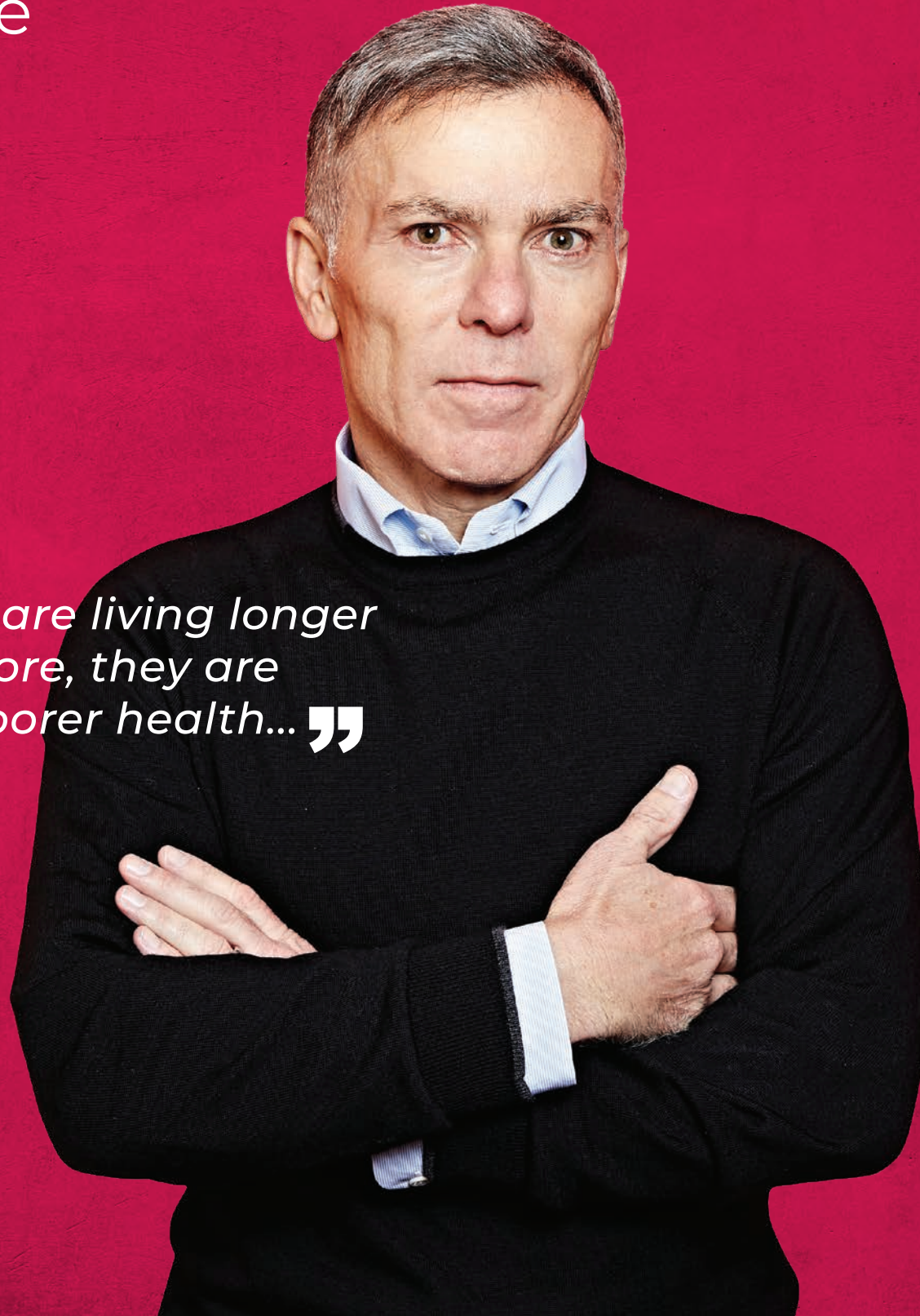
The pandemic has brought into stark relief the importance of safeguarding our individual and collective health.

The role of health and life insurers is being amplified as COVID-19 accelerates the link between health, wellness, resilience and mortality – underpinned by behavioral drivers of risk. As this awareness coalesces with the rising trends of technology adoption, and business's imperative to do good for society, our role – along with our global insurer partners – in employing the Shared-Value Insurance model, has never been more pressing.

Over nearly three decades, Vitality has built up a significant and sophisticated data asset – over 50 million life years of behavioral-linked insurance data – which has given us deep insights into the links between behavior change, development of disease and the overall state of health. We have also learned how to incentivize healthier behaviors, and how to encourage and reward people for taking tangible steps to improve their long-term health and wellbeing.

The great challenge facing us currently is that people are spending a greater proportion of their lives in poor health, primarily due to the rising prevalence of chronic diseases. To be resilient against both infectious and chronic disease, we need to remain healthy at all stages of life. However, the opposite is happening: while people are living longer than ever before, they are doing so in poorer health.

This has profound implications for governments dealing with growing healthcare burdens, for employers dealing with an increasingly unhealthy workforce, and for individuals themselves, who suffer reduced quality of life and the financial strain of making provision for longer years spent in poorer health.

The Healthy Futures research addresses these issues, and the pioneering health risk algorithm provides bespoke insights into people's lifespan and healthspan – and the actions they can take to ensure more years are spent in good health. It also incorporates insights from studies being conducted with Professor Hal Hershfield at the University of California, Los Angeles, to ensure these insights are not simply informational, but bridge the divide between the current and future self to motivate behavioral changes that will have the greatest impact on people's health throughout their lifetimes.

We believe there is no need for a trade-off between people's quantity and quality of life. Both can and should be possible.

Adrian Gore
Group Chief Executive,
Discovery

Living longer,
but with more illness

People are now living longer than ever before, thanks to scientific advances that extend lifespan. However, these extra years of life are not always spent in good health.
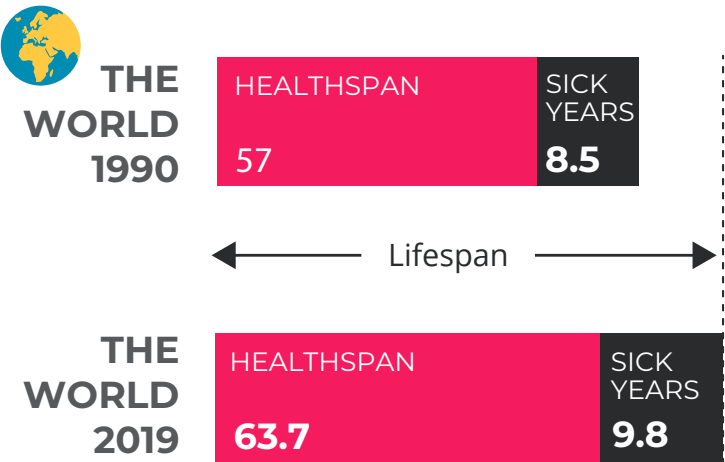
Lifespan:

An estimate of the average number of years of life a person has remaining at a given age.

Healthspan:

An estimate of the average number of years that an individual can expect to live in good health, at a given age.

Today, **18%** of the average lifespan is spent in ill health
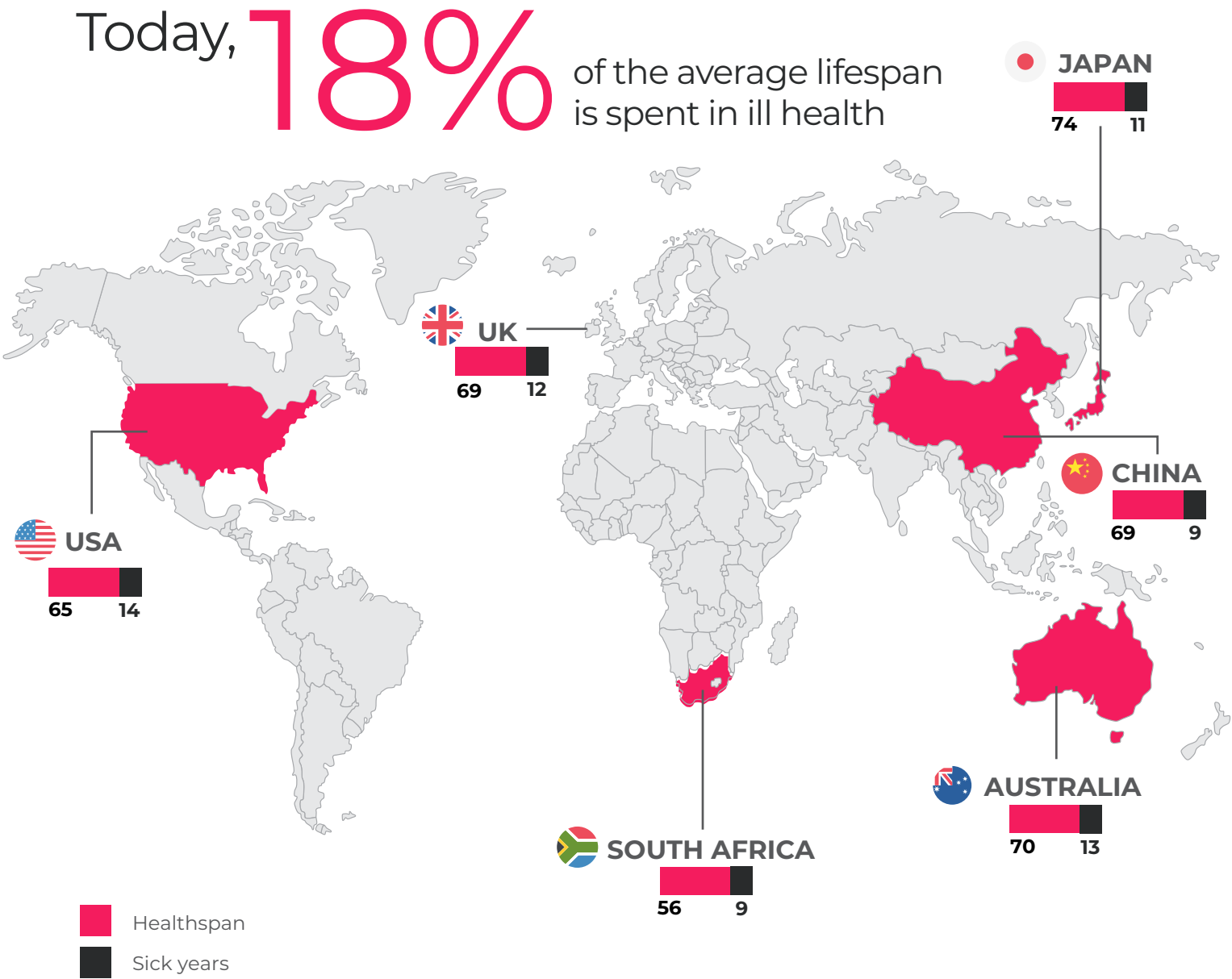
Increases in life expectancy or lifespan are outpacing increases in healthy life expectancy or , meaning that people are spending a greater proportion of their lives in poor health.

JAPAN
74   11

UK
69   12

CHINA
69   9

USA
65   14

AUSTRALIA
70   13

SOUTH AFRICA
56   9

■ Healthspan
■ Sick years

THE WORLD 1990
HEALTHSPAN 57 | SICK YEARS 8.5

← Lifespan →

THE WORLD 2019
HEALTHSPAN 63.7 | SICK YEARS 9.8

The rise of diseases of lifestyle

The increase in the number of years people spend in ill health is primarily due to the rising prevalence of non-communicable diseases (NCDs), which have a negative impact on resilience to infectious and chronic disease.

Between 1990 and 2017, the world has seen a **41% decrease in communicable or infectious diseases and neonatal disorders, and a 40% increase in the prevalence of non-communicable diseases. NCDs cause 60% of all deaths = 41 million people every year.**

4 lifestyle choices

Physical inactivity

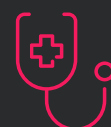Unhealthy diet

Smoking

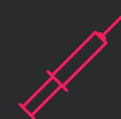Excessive alcohol intake

» 4 chronic conditions

Cardiovascular disease

Cancer

Respiratory disease

Diabetes

» responsible for 60% of preventable deaths worldwide

Why people struggle to change their behavior

1 **People struggle to make decisions that have uncertain outcomes,** particularly related to their longer-term futures, including quality of life indicators such as health and finances.

2 **Disparate health assessments cause confusion around health risks.** Information is often generic and static, limiting the appropriateness and motivation to act. People need personalized health metrics and communication to generate meaningful behavior change.

3 **People have cognitive and behavioral biases that affect their views of health.** For example, we prefer present gains over future ones (hyperbolic discounting), and think our state of health is better than it actually is (over-optimism).

4 **A greater focus on life expectancy than on healthy life expectancy or healthspan.** As a result, people are naïve about the risks of living longer.

5 **People need more than information.** Incentives have shown to be one of the best drivers of sustainable behavior change.

We are underinvesting in behavior change and prevention

Each year, **healthcare delivery costs around $8.5 trillion globally.** Less than 5% goes towards preventive healthcare services, which includes population health information, readiness for a pandemic or vaccinations.

The COVID-19 pandemic has sharpened our focus on health – both how to improve it, and how to build resilience against infectious and chronic diseases.

If we could reduce the disease burden by just 10% through more preventive policies and individual-level behavior change, we could prevent up to 93 million healthy years of life being lost globally each year.

5% spent on prevention

$8.5 trillion spent on healthcare delivery globally

The implications of living longer in poor health

Retirement provision

With most of retirement risk transferred to the individual, people are in danger of not only living longer than planned for in retirement, but exhausting retirement savings prematurely due to increased healthcare expenditure.

National social benefits are severely impacted by the rising gap between healthspan and lifespan.

Healthcare systems

The likelihood of illness in any given year increases as people age. Hence, as lifespans continue to increase, so will the disease burden and the impact on both public and private healthcare provision.

To counter this, years spent in ill health need to be reduced.

Productivity

Both productivity and absenteeism are directly related to the health of the population or workforce.

Furthermore, as people live longer, retiring at a later age is consequential and hence productivity is likely to be negatively affected.

Quality of life

Quality of life is measured by healthspan, not lifespan.

Since 1990, quality of life has not increased at the same pace as the quantiy of life (lifespan) – and a greater portion of total life is spent in ill health.

Vitality Shared-Value Insurance and changing behavior

Insurers have a unique opportunity to monetize better health and, given global trends, have a responsibility to act.

Nature of risk: The nature of risk is as much behavioral as it is socio-economic. Insurers can measure behavior that lowers risk to offer better value in the form of rewards, lower and more accurate premiums and incentives to clients that manage their risks well.

Technology: Technology is changing the way people interact with businesses and has evolved towards digital and online solutions. This reduces the barriers of entry to information and adequate knowledge to access care for improved future health.

Social responsibility: High rates of disease are contributing to uncontrolled healthcare costs. Businesses need to be more resilient in crises, and clients are demanding that businesses focus on societal issues as much as they do on profits.

Members
Better health, incentives and a lower cost of insurance

Member incentives

Healthy behaviour

Insurer
Fewer deaths
Fewer illnesses
Lower claims

Insurer savings

Society
Healthier society
Improved productivity
Reduced healthcare burden

Vitality Shared-Value Insurance: creating value and making people healthier through incentivizing positive behavior that lowers a variety of risks.

The global network of insurers that uses the Vitality platform and applies the Shared-Value Insurance model can create value and make clients healthier. **By isolating behavioral, controllable risks in insurance and pricing them correctly, insurers benefit from an improved actuarial experience and surplus.**

This surplus or additional economic value is shared with clients in the form of incentives that create and motivate the ongoing behavior change – resulting in a cycle that makes people healthier and is good for individuals, the insurer and for society.
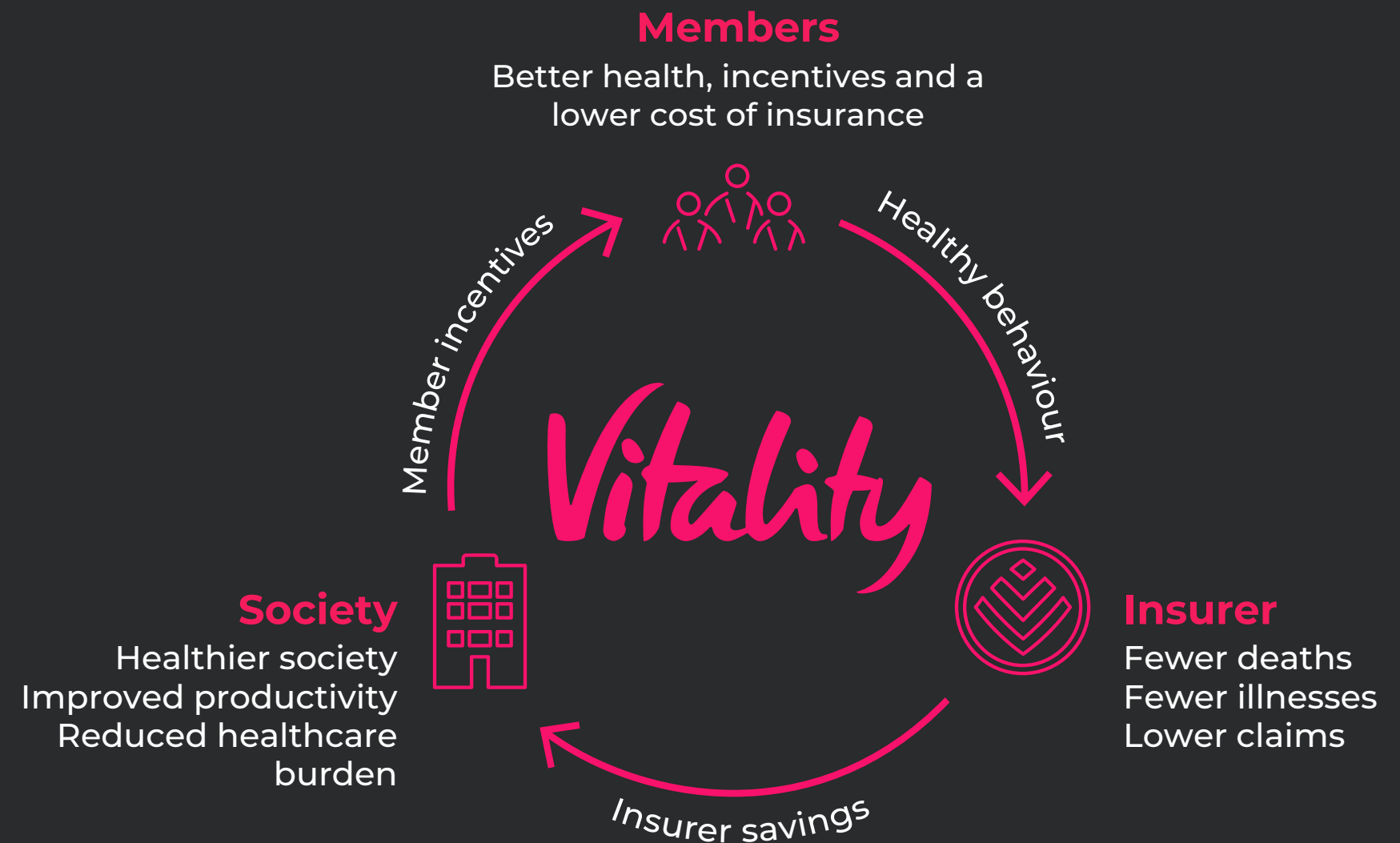
The Shared-Value Insurance chain has resulted in an immense understanding of risk and behavior

With over 50 million life years of behavioral linked insurance data and with the platform now in over 31 countries around the world, Vitality has a unique understanding of how simple behaviors impact health and mortality.
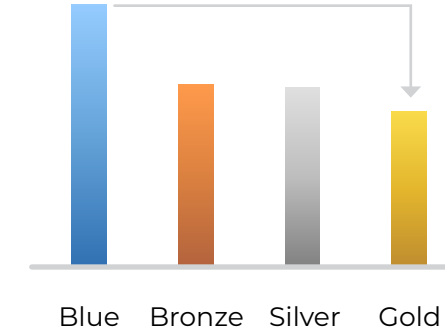
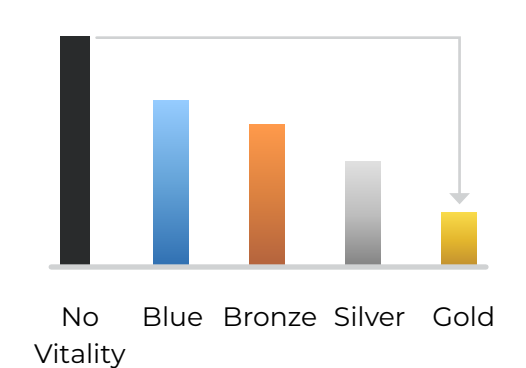## Healthcare costs by engagement

-13%

Blue Bronze Silver Gold
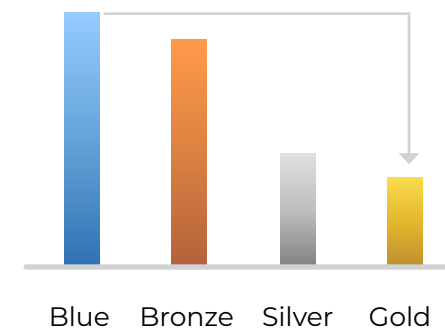
Mortality by engagement

-40%

Blue Bronze Silver Gold

Covid-19 mortality by engagement

-75%

No Vitality Blue Bronze Silver Gold

Behavior can be changed

Vitality has changed behavior through its Shared-Value model for over 25 years across a number of behaviors from biometric awareness, exercise, nutrition, weight and more. In 2018, Vitality in collaboration with RAND Europe released a study on its Vitality Active Rewards with Apple Watch program. The research showed that the right information, incentives and technology can form new habits for exercise – with a 34% increase in the levels of exercise amongst participants.

Combining breakthrough risk prediction with the best behavioral science

Healthy Futures is a world-leading risk assessment tool that prioritises healthspan and lifespan.

Risk prediction is central to the Shared-Value Insurance model. It enables insurers to translate modifiable behavior into actuarial currency and capture the value of health and health improvement in products.

Continual research and development of risk assessment tools, such as the Healthy Futures calculator, create greater awareness and accountability at an individual level and provide a personalized view of lifespan and healthspan, as well as bespoke recommendations for improving these measures.

The tool brings together leading global expertise in two areas – understanding of health risk and behavioral science.

Healthy Futures builds on research done by Vitality in collaboration with RAND Europe on the relationship between lifestyle choices, pre-existing conditions and mortality. This data base, the Global Burden of Disease, used under licence from IHME, comprises of 264 causes of death, 328 diseases and injuries and 84 behavioral, environmental, and occupational, and metabolic risks or clusters of risks.

In addition, the data has been further augmented with Discovery data comprising millions of life years to allow for a new and clinically accurate set of questions. Users will now be required to input new health measures relating to their cardiorespiratory fitness, medication adherence, salt intake, sleep and pre-diagnosed conditions. With a key focus on physical activity, Healthy Futures uses new actuarial modelling to project future changes in metabolic risks over the user's lifetime.

Risk prediction

Behavioral science
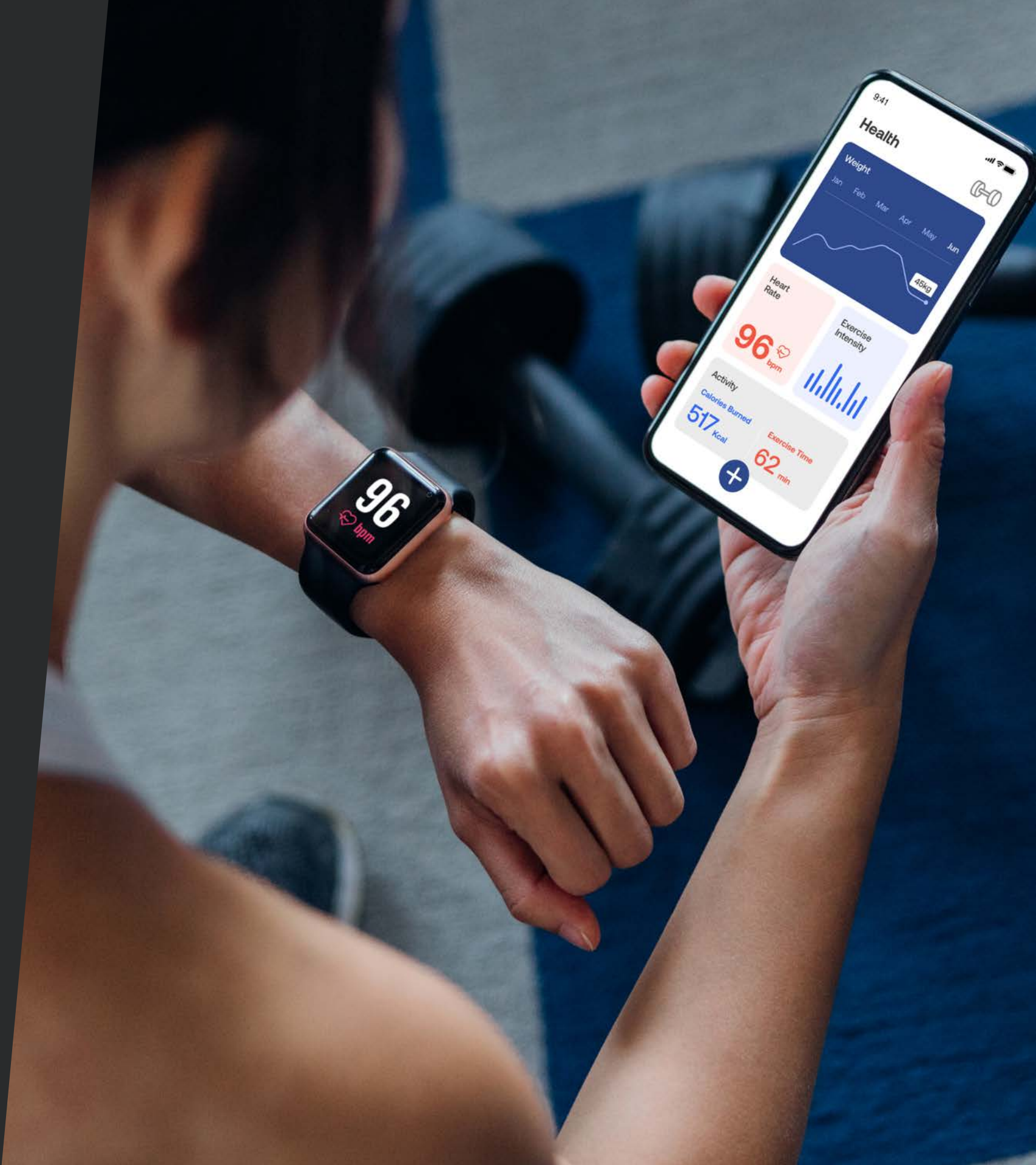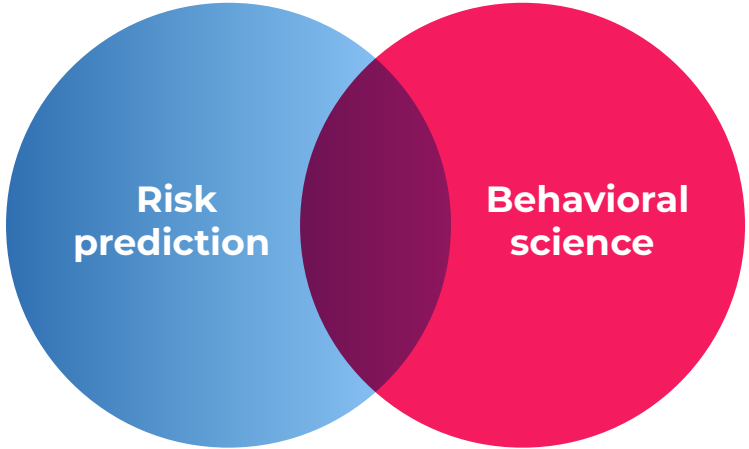
Supporting the academic grounding of metrics included in the Healthy Futures calculator, further research identified the nuanced drivers of sustained behavior change.

To help overcome the cognitive and behavioral biases that prevent people from taking healthy actions today in support of their long-term health, Vitality partnered with Professor Hal Hershfield at the University of California, Los Angeles, Anderson School of Management to understand how to effectively communicate, frame and personalize risk measures in the Healthy Futures calculator.

This ground-breaking research explores how to build intrinsic motivation by speaking to people about their risks in a way they understand and that resonates with them.

Outcomes of the research the intrinsic motivations of people when it comes to health behavior change and how this varies by demographics, psychographics and the person's current state of health:

What is the one lifestyle change I can make that will most improve my future health?

What is the one lifestyle change I can make that will most increase my life expectancy?

What diseases am I most likely to get in future?

How many more years of good health will I have?

What portion of my life will I not be healthy?

What am I most likely to die from?

The three things you should know

01 **LIFESPAN**

An estimate of the average number of years of life a person has remaining at a given age.
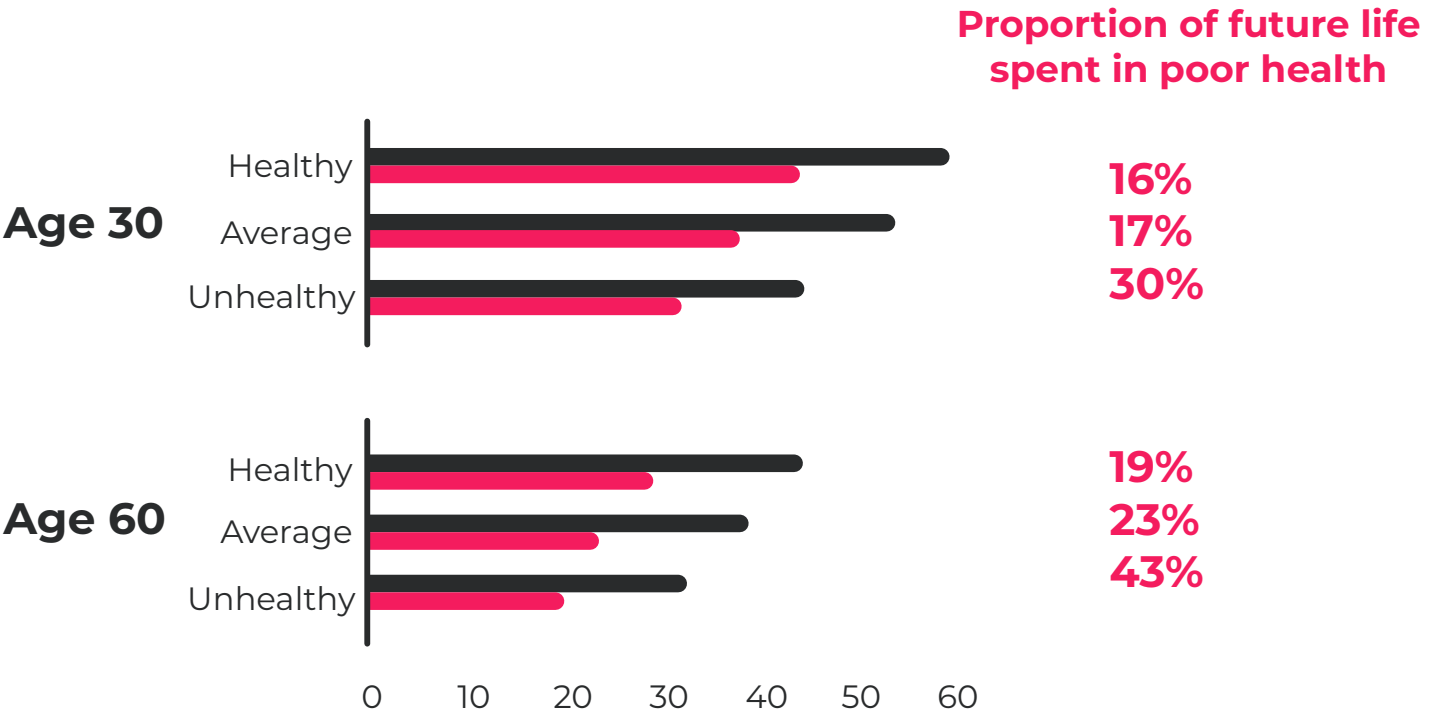
02 **HEALTHSPAN**

An estimate of the average number of years that an individual can expect to live in good health, at a given age.

03 **NEXT BEST ACTION**

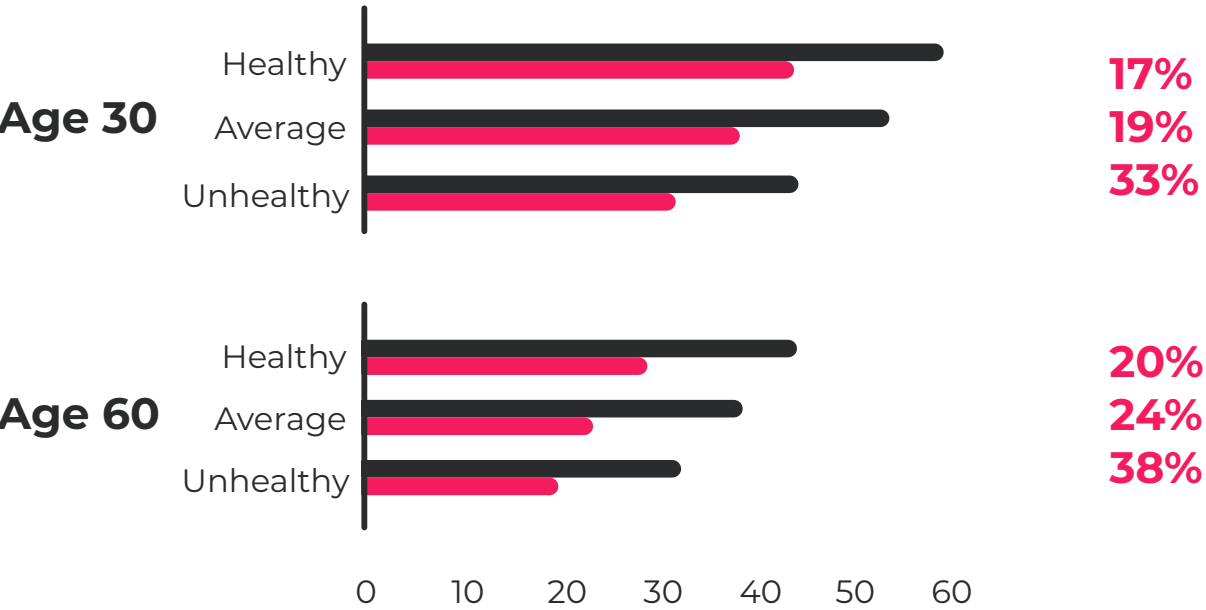What is the one thing you can do to add healthy years to your life?

■ Healthspan
□ Lifespan

Behavior has a profound impact

Proportion of future life spent in poor health

Male

Age 30
Healthy — 16%
Average — 17%
Unhealthy — 30%

Age 60
Healthy — 19%
Average — 23%
Unhealthy — 43%

0 10 20 30 40 50 60

Female

Age 30
Healthy — 17%
Average — 19%
Unhealthy — 33%

Age 60
Healthy — 20%
Average — 24%
Unhealthy — 38%

0 10 20 30 40 50 60

Personalized recommendations for improving your quality of life

The Healthy Futures calculator includes a detailed report in addition to the three measures for those interested in understanding their health profile more.
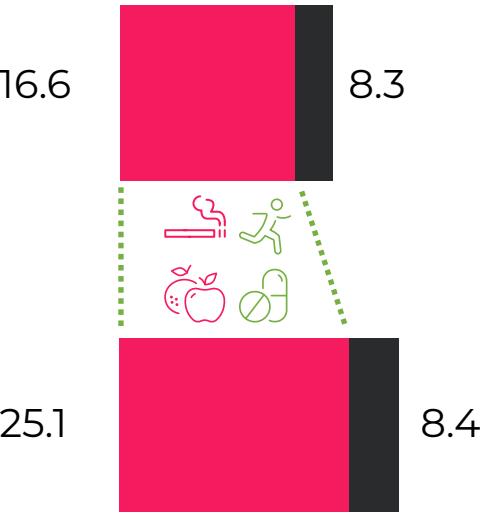
30-year-old male

- Non-smoker
- 40 minutes of moderate physical activity per day
- Average cardiorespiratory fitness
- Moderate consumption of alcohol, red meat, processed meat and sugar-sweetened beverages

43.5 ▮ 10.2

46.7 ▮ 10
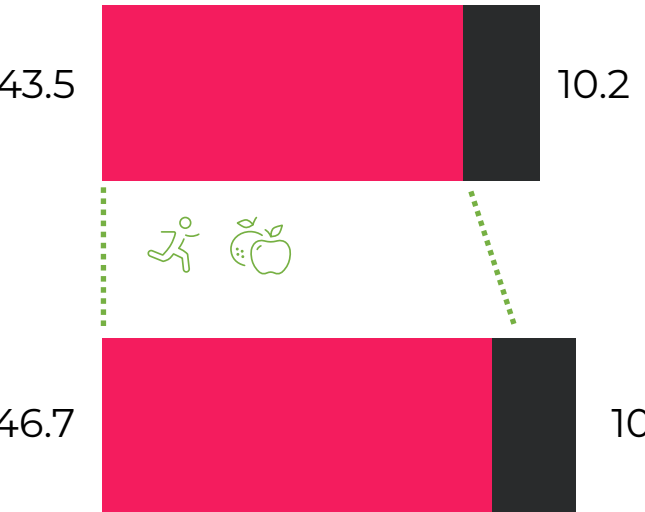
50-year-old female

- Current smoker
- 30 minutes of moderate physical activity per day
- Poor cardiorespiratory fitness
- High consumption of alcohol, red meat, processed meat and sugar-sweetened beverages
- Hypertensive and not adhering to medication
- Diagnosed diabetes

16.6 ▮ 8.3

25.1 ▮ 8.4

70-year-old male

- Ex-smoker
- Diagnosed diabetes
- 30 minutes of moderate physical activity per day
- Poor cardiorespiratory fitness
- High consumption of alcohol, red meat, processed meat and sugar-sweetened beverages
- Hypertensive and not adhering to medication

6.1 ▮ 4

11.6 ▮ 3.34
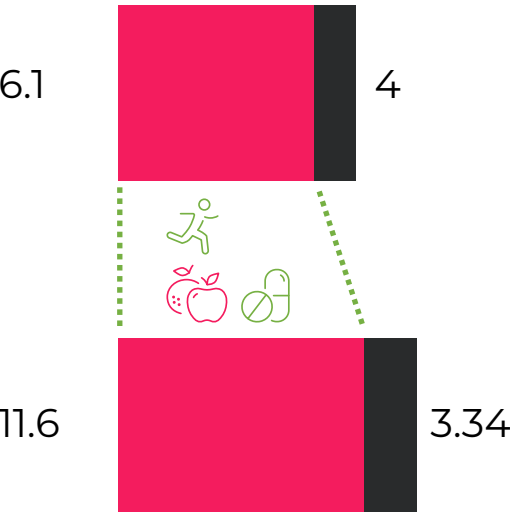
Improving your healthspan
has never been easier!

Now that you know that your healthspan
is the proportion of your expected lifetime
lived in good health.

The new Vitality Healthy Futures calculator
can – for the first time ever – predict your
healthspan and equip you with insights to
help you live a longer, healthier life.

What is the
number one thing
you can do to add healthy years to your life?

Answer a simple survey about your health and habits to
receive science-based, personal recommendations and
insights that can lead to living a healthier, longer life.

Get started