

## Executive summary

This research by Vitality and London School of Economics (LSE) looks at the individual and societal benefits of forming and maintaining healthier habits. The report contains important findings, collected from over one million Vitality members in South Africa and the United Kingdom, which show that good, strong physical activity and nutrition habits can have significant implications for health outcomes and healthcare systems.

### The global need for intervention and good, strong habit formation

Unhealthy lifestyle behaviours are causing a decline in health and leading to strain on our healthcare systems. Four lifestyle behaviours, namely physical inactivity, poor diet, excessive alcohol use and smoking, lead to four chronic health conditions – cardiovascular disease, respiratory disease, certain cancers, and diabetes – which account for more than 70% of deaths worldwide<sup>1</sup>.

Globally, insufficient physical activity is associated with up to five million premature deaths every year<sup>2</sup>; and estimates suggest that one in five deaths are now associated with poor diet, with 1.5 billion people predicted to be obese by 2035.

The impact of insufficient physical activity and poor nutrition extends beyond individual wellbeing. Each year, healthcare delivery costs around \$8.5 trillion globally. Currently, less than 5% of spending goes towards preventive healthcare services<sup>3</sup>. Despite evidence that preventive care can reduce overall costs, non-communicable diseases like cancer and diabetes also come at a significant economic cost, estimated at \$47 trillion globally by 2030<sup>4</sup>.

One potential solution is to encourage people to turn entrenched unhealthy behaviours into entrenched healthy behaviours, using insights into habit formation. Vitality's rich and comprehensive dataset allows for a sophisticated understanding of behaviour and the impact on mortality. This enabled the development of the Vitality Habit Index with a purpose **to understand how to break and make habits to help people live longer, healthier lives.**

### How to build practical, persistent, and powerful habits for health benefits

The study revealed six key findings:

- 1. Healthy habits change lives:** Forming new and better physical activity and nutrition habits have a significant impact on mortality and morbidity. A good physical activity habit is associated with a mortality reduction of 27% and up to a 36% reduction in the risk of severe cancers.
- 2. It is never too late to start:** The impact of positive habit formation increases with age and the effects of making changes are even more powerful later in life. Evidence from this study shows that moderate levels of physical activity can be beneficial for individuals older than 65 years with mortality reductions of up to 52%.
- 3. The paradox of 10,000 daily steps:** Positive health effects are observed at significantly lower levels of activity. By walking 5,000 steps, three times in a week, Vitality members who started off unengaged and achieved and sustained this activity, reduced their risk of mortality by 22% and can add up to three years to life expectancy. A case study showed, a 55-year-old Vitality member with

type 2 diabetes who moved from little to no physical activity and sustains a habit of 5,000 steps three times a week reduces mortality risk by 40%. At 7,500 average daily steps, the maximum mortality improvements are already incurred at all ages.

4. **It takes between seven and 15 weeks to form a new habit:** The study observed data over a period of six weeks to reliably determine the strength and quality of a habit. Good habits are created through gradual, sustained efforts. From the study, consistently integrating manageable, low to moderate intensity physical activity over a period of seven to 15 weeks will help establish a new habit that lasts – habits usually set in around nine weeks.
5. **Habit laddering is the key to healthy habits:** This analysis identified habit laddering as the most effective pattern to form and sustain good, strong habits. The aim is to establish a habit at the most practical level before intensifying it or increasing its frequency. The three steps are:
  1. **Set the target from a baseline** – determine a baseline and start from there. For example, when inactive, starting with 2,500 steps three to five times a week is practical and serves as the first step on the ladder.
  2. **Start small** – choose an activity that is easy and practical. Findings reveal that individuals with minimal experience, should set small and achievable goals and focus on building frequency and consistency.
  3. **Repeat then intensify** – keep up the activity (focus on consistency) and only increase the intensity once the action has been repeated for six to eight weeks. The intensity should only increase after forming the habit at the lower intensity.
6. **Habits are expansive:** Strong good habits are resilient to change and have a knock-on effect. Maintaining a strong, good habit is associated with a 10% improvement in eating habits and one month extra sleep in a year. In a cohort of 4,000 Vitality members who had no physical activity habit or a strong bad habit in 2017, and changed to a strong good physical activity habit in 2018, 50% developed a strong good nutrition habit in 2019, and improved their sleep by two hours on average a night relative to those with no physical activity habit.

Overall, the study confirms that the benefits of forming new and stronger exercise and nutrition habits are significant for society. They protect our health and can lead to significant cost savings for healthcare systems. The study showed that if half of the United Kingdom's inactive adult population began consistently walking 5,000 steps once a week, the in-hospital cost saving that could be achieved is around £4 billion, and £15 billion if those who have poor exercise habits began consistently walking 5,000 steps three times a week.

The paper elaborates further on these findings and the methodology of the Habit Index. It offers comprehensive insights into habit formation, and highlights the protective benefits for individuals against cancer, diabetes and psychiatric care, and shows the societal cost impact of sustaining good, strong habits. It also provides [case studies](#) and [guidelines for policymakers](#), aiming to facilitate scale-effective changes that contribute to the overall improvement of societal health and wellbeing.

<sup>1</sup> WHO, 2023.

<sup>2</sup> Lee et al. 2012; WHO 2018.

<sup>3</sup> Vitality Healthy Futures Report 2021.

<sup>4</sup> Santos, A.C. et al., 2022