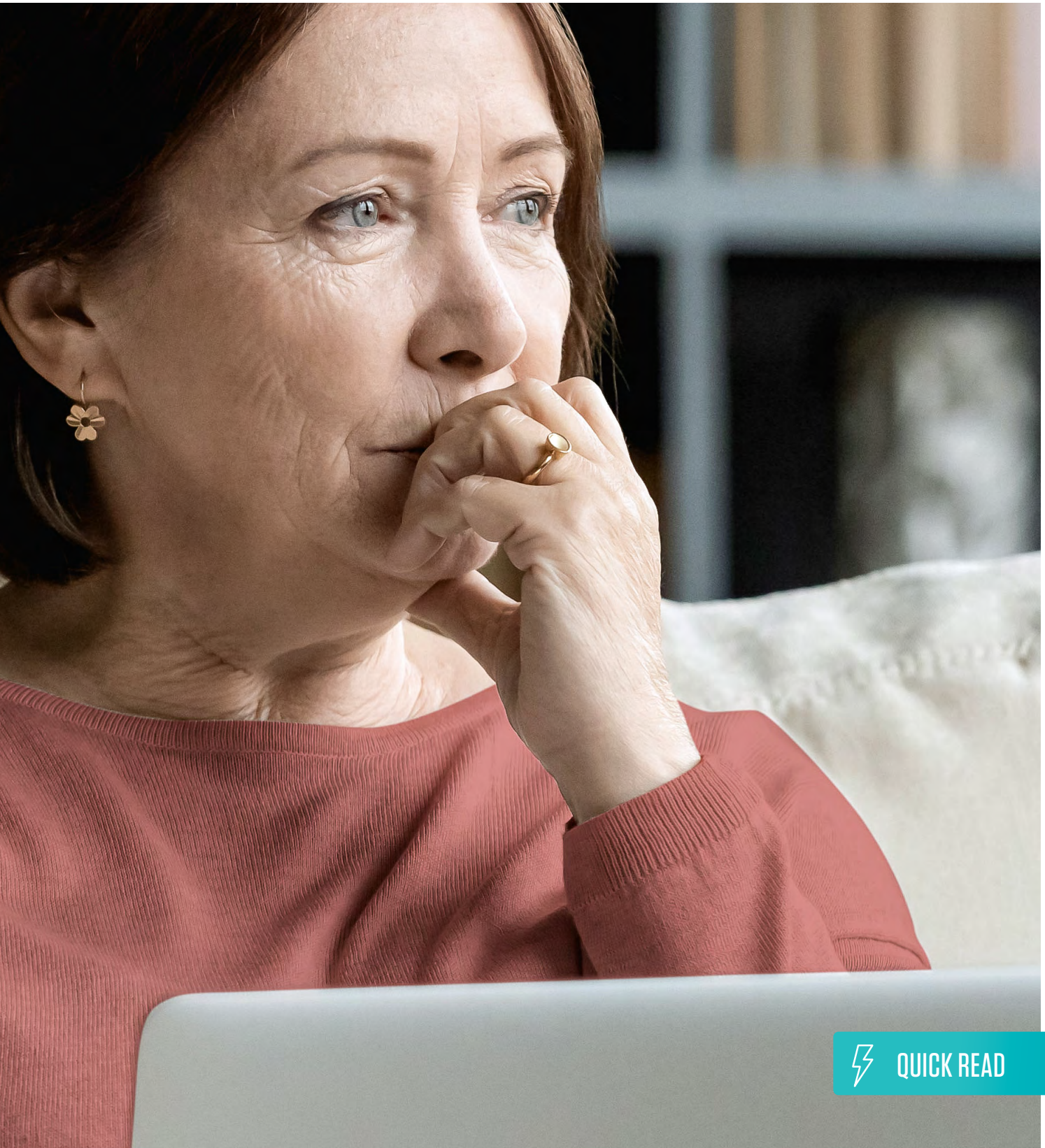
COVID-19 Health Impacts: Isolation, Lifestyle Health, and Prevention

With Dr. David Batman

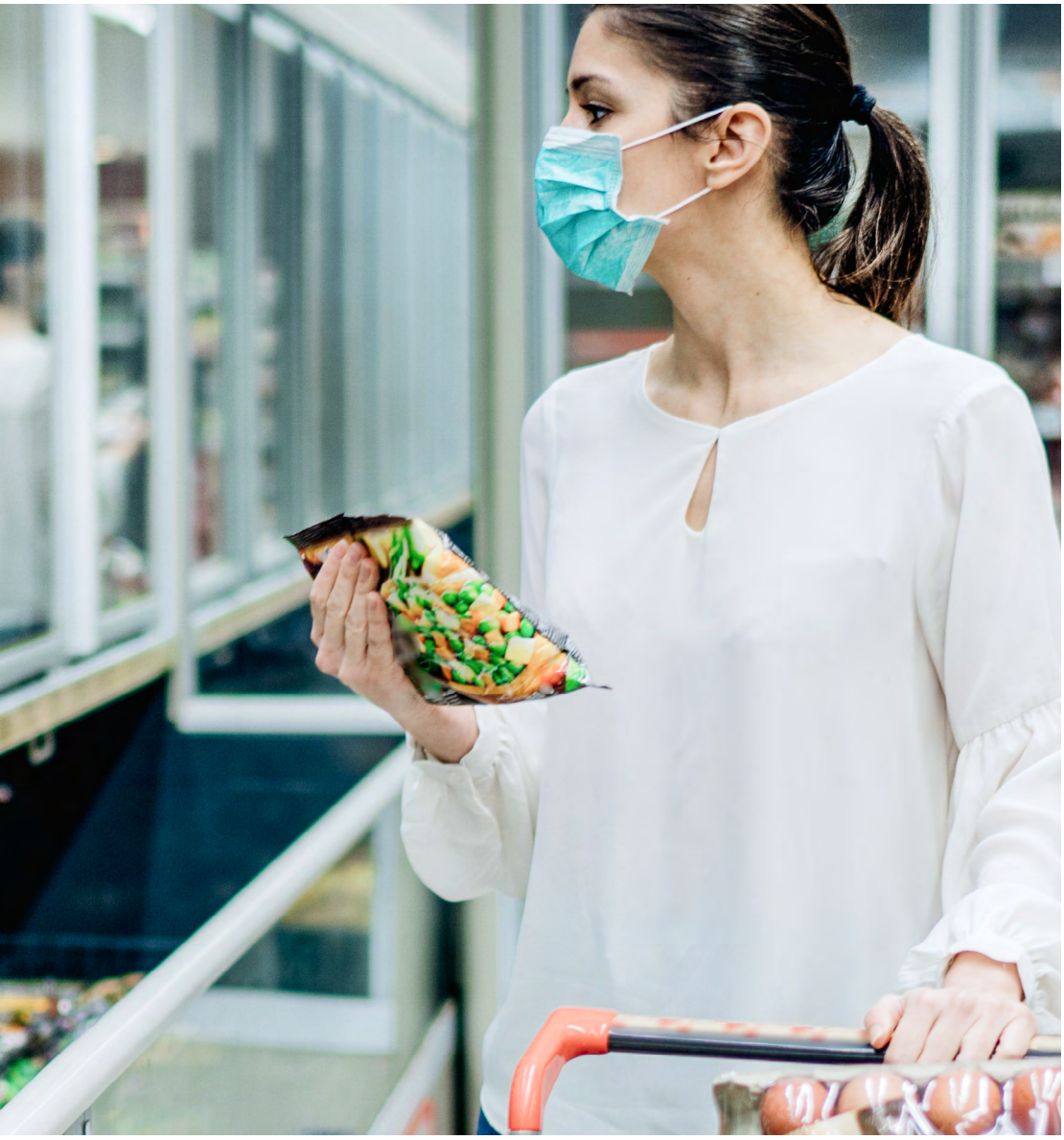


QUICK READ

COVID-19 has changed the way we live and will continue to impact our day-to-day living until a successful treatment or vaccine is established.

Globally, we are seeing large gatherings restricted, businesses temporarily or permanently closing their doors, and stay-at-home orders in an effort to reduce the spread of the novel coronavirus.

A return to "normal" will be gradual, and we may be living with some degree of social distance for quite some time. In the intervening time, both physical and mental health will decline - not just as a result of catching COVID-19, but from the long periods of physical and social isolation we are all experiencing to combat the viral spread.



Isolation is coming from many sources:

- Home working
- Inability to see family and friends
- Saying goodbye to loved ones taken into hospital and not knowing when or if they will be reunited
- Doctors, nurses, and support staff leaving for work and not knowing when they will return to their families
- Patients isolated in hospitals surrounded by healthcare workers in protective clothing and no contact with the outside world
- And worst of all – isolated in our own thoughts, bombarded by news and media outlets and without access to our support systems.

> “There is robust evidence that social isolation and loneliness significantly increase risk for premature mortality, and the magnitude of the risk exceeds that of many leading health indicators,”
>
> **Dr. Julianne Holt-Lunstad**
> Professor of Psychology and Neuroscience
> Brigham Young University

The state of fluctuating stress that social isolation causes can have extreme detrimental effects on a person’s mental, emotional and even physical health. Dr. Julianne Holt-Lunstad, a professor of psychology and neuroscience at Brigham Young University, has co-authored a meta-analysis of recent studies and found that a lack of robust social connections can raise one’s health risks as much as smoking 15 cigarettes a day or misusing/abusing alcohol. That’s twice as much as obesity’s impact would be.

A 2019 study by the American Cancer Society, working with data from more than 580,000 Americans, discovered that social isolation increases the risk of mortality from every cause across every race. The research demonstrated that the magnitude of risk presented by social isolation is very similar in magnitude to that of obesity, smoking, lack of access to care and physical inactivity.

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Loneliness is not just a societal issue, but an economic issue. Remote workers are less likely to work at their company long-term when they lack the opportunity to bond with their coworkers. When employees are physically apart, organisations will also struggle to build and engage their workforce in a positive, health-centric company culture. And without that sense of community, depression and anxiety rise while employee engagement, focus, and productivity all suffer.

While these issues are exacerbated by COVID-19, they existed before. Prior to the coronavirus pandemic, three in five Americans classified as lonely, according to the results of a research study conducted by Cigna. There's no doubt that number has risen over the last several months, with those who previously reported feeling alone likely now experiencing it on a more intense level. We must also acknowledge the connection between our mental wellbeing and our physical wellbeing. Loneliness can raise levels of stress hormones and inflammation, which in turn can increase the risk of high blood pressure, obesity and other chronic conditions. The presence of such conditions may increase a person's risk of complications due to COVID-19 or other ailments.

So how do we address the loneliness epidemic in the wake of COVID-19, and how do we address it in a way that can help our physical and mental wellbeing far into the future?

A Path Forward: Prevention Through Lifestyle Health and Personalised Healthcare

It is my opinion that the current impact of COVID-19 will last for some time for significant groups in our societies and will potentially reoccur with either a resurgence of this virus or other such viruses in subsequent years.

The science behind the virus is rapidly expanding but we do not yet know the full story behind COVID-19. Beyond a doubt, COVID-19 is having a greater impact on men more than women (which signifies genetic implications), individuals ages 65 plus, smokers, and those with pre-existing (often lifestyle-related) conditions such as obesity, diabetes, heart and lung diseases and high blood pressure.

There are a lot of exciting things happening in healthcare right now. Wearable and mobile technology have created a brand-new way for healthcare professionals to measure and deliver much-needed services, employers are prioritising and investing in the health of their employees and people are living longer lives. Digital therapeutics are also changing the way we're treating patients and managing conditions, helping to reduce insurance costs and increase access to care.

But the reality is that healthcare services across the world were already struggling to meet demands. A lack of resources, lack of financing and an increasingly unhealthy population with greater health needs are all impacting the ability to deliver quality healthcare to those who need it. It's true that people are living longer lives, but statistics show that the average amount of time spent in poor health is increasing alongside life expectancy. In the United States, the average adult will spend almost 12 years in poor health, or about 15% of their life,[1] for example.

Out of necessity, many healthcare professionals approach care with a short-term, one-size-fits-all attitude — focusing on the management of the health risk or condition rather than its root causes. In other words, most healthcare practises focus on resolving sickness, not on preventing it in the first place. In my opinion, this is unsustainable.

The Link Between Lifestyle and Health Outcomes Is Clear

Recently, researchers and healthcare professionals who understand and promote a preventive approach to medicine have started to focus on the way lifestyle impacts health outcomes — and for good reason.

According to the World Health Organisation, one's overall health correlates directly with one's lifestyle.[2] When people follow an unhealthy lifestyle, they're more likely to experience illness, disability and even death. A person's risk of developing conditions like Type 2 diabetes, joint and skeletal problems, cardiovascular diseases, heart attacks, hypertension, obesity, strokes, dementia and so on, can increase dramatically due to an unhealthy lifestyle.

Healthcare professionals should focus on the relationship between their patients' lifestyle and their health

1. https://www.washingtonpost.com/news/worldviews/wp/2015/09/19/these-charts-show-how-much-of-your-life-you-will-spend-being-sick/
2. https://www.who.int/gho/ncd/en/

Personalised Healthcare Will Create a Path to Prevention

The way that healthcare professionals understand and deliver personalised medicine will have to change. The concept of personalised medicine is not new.

Clinicians have been working to tailor treatments to individual health needs since the early days of modern medicine. Currently, the introduction of personalised medicine is seen as an era of personalised drug treatments. But, apart from a limited number of conditions, this approach may not be practical or economically viable when applied on a larger scale.

Rather, personalised medicine should be applied to lifestyle management and the prevention of non-communicable diseases to have the most impact.

I think we are well poised for this paradigm shift

Doctors and researchers know more about how the human body works than ever before thanks to breakthroughs like:

- **The sequencing of the human genome**
- **Epigenetics (the study of the mechanisms that turn genes on or off)**
- **Advancements in understanding of the microbiome**
- **Discovery of how medications function at a molecular level**
- **Improved modelling of how lifestyle interventions can affect genetic risk**

Personalisation Can Now Go Deeper Than Ever Before

For example, a doctor could look at a patient's unique genomic makeup to design specific methods of prevention, diagnosis and lifestyle intervention treatment.

The cost of analysing an individual's genome is dropping fast and, likely, will reach affordable levels for every individual in the next three to five years. Combine that with individualised drug therapies, and this could radically transform the treatment of persistent conditions such as chronic pain or inherited diseases.

Never has it been possible to predict how each of our bodies will respond to specific interventions or identify which of us is at risk of developing an illness. New possibilities are now emerging as we bring together novel approaches, such as AI, wearable technology and the use of modern health solutions such as digital therapeutics. The interconnection between these innovations will likely make it possible to move to truly personalised care.

But, make no mistakes, this will not be an easy path to tread. The brave new world of prevention and lifestyle management will require a new set of norms for everyone — doctors, healthcare professionals and patients. Imagine a consultation where a significant cancer risk is diagnosed and the patient is advised to eat more broccoli and beetroot, exercise more, change their sleep habits and come back in two months to have their biomarkers reassessed!

In my opinion, personalised preventive medicine is the only viable way forward. We now have the technology and understanding to evaluate risk and prevent illness before it starts. Once we educate both healthcare professionals and patients, shift attitudes and behaviours and put this approach into practise, we will take a huge step forward toward better population health.

For now, we must continue to work towards developing healthy lifestyle habits, both for the prevention of physical health conditions which increases our risk of contracting and experiencing complications from COVID-19, and to improve our mental health as we battle the isolation we are currently experiencing.

Glossary Of Terms

Genome

A genome is an organism's complete set of DNA, including all of its genes. Each genome contains all the information needed to build and maintain that organism. In humans, a copy of the entire genome—more than 3 billion DNA base pairs—is contained in all cells that have a nucleus.

Epigenetics

Epigenetics, as a simplified definition, is the study of biological mechanisms that will switch genes on and off. It has always been thought that once you are born with a genetic sequence and codes then there is no control as to how they are expressed in terms of health etc. Hence your risks can be identified modified or potentially even eliminated.

What you eat, where you live, who you interact with, when you sleep, how you exercise, even ageing — all of these can eventually cause chemical modifications around the genes that will turn those genes on or off over time. Additionally, in certain diseases such as cancer or Alzheimer's, various genes will be switched into the opposite state, away from the normal/healthy state.

With 20,000+ genes, what will be the result of the different combinations of genes being turned on or off? The possible arrangements are enormous! But if we could map every single cause and effect of the different combinations, and if we could reverse the gene's state to keep the good while eliminating the bad ... then we could hypothetically cure cancer, slow ageing, stop obesity, and so much more.

Microbiome

The human microbiome is the aggregate of all microbes that reside on or within human tissues and biofluids along with the corresponding anatomical sites in which they reside. Primarily the gastrointestinal tract but also, including the skin, mammary glands, placenta, seminal fluid, uterus, ovarian follicles, lung, saliva, oral mucosa, conjunctiva and biliary tract. Evidence clearly shows the biochemical links with the genome and health risks.

About **Dr. David C. Batman**

Dr. David C. Batman, MSC, MB.CHB. FFOM
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A registered medical practitioner in the UK for over 45 years, Dr. David C. Batman is a member of the Virgin Pulse Science Advisory Board as a Specialist Consultant in Occupational Medicine.

Dr. Batman has always recognised the importance of patient lifestyle affecting health risks. He started work as a General Practitioner and retrained as a Specialist Consultant in Occupational Medicine, with a special interests in mental health at work, risk assessments, rehabilitation and resettlement of employees.

After 20 years as Head of Occupational Health, Safety and Employee Wellbeing for Nestlé in the UK and Ireland, having been part of a number of UK Government employee health committees, advising for numerous major businesses and serving as the Chief Medical Officer of the Global Corporate Challenge, Dr. Batman is now a part of Virgin Pulse while running his own consultancy and advises a multitude of small organisations on helping employees at work with health problems.

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