

90 YEARS

CLINIQUE  
LA PRAIRIE

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SWITZERLAND

A LOOK INTO THE FUTURE  
OF HEALTH AND WELLNESS

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Celebrating 90 years of  
innovation at Clinique La Prairie



## Introduction

*by Simone Gibertoni, CEO, Clinique La Prairie*

The pandemic has made us well and truly prioritise health. Our research has shown that 79%\* of people feel that their own health has been affected in some way by Covid-19. Perhaps unsurprisingly, 92%\* of people as a result are now consciously taking better care of their health.

With health front and centre, there is a laser focus on the industry to continue to innovate. There is also a consumer demand for more personalised, more meaningful all-encompassing preventive healthcare, placing the link between the body's health' and the mind's wellbeing into sharp relief. As a result, we are seeing the boundaries of medicine and science being pushed this year more than ever before.

2021 also marks the **90th anniversary of Clinique La Prairie**. Since our inception we have been committed to leading the way in scientific research and innovation to benefit our clients' health and help them to live longer and fuller lives. We believe a holistic approach – spanning medicine, nutrition, movement, and wellbeing – is the key to health and longevity.

With 90 years of expertise and innovation behind us, and with potentially the biggest developments in medicine and wellness still to come, we have spoken to our experts and to a group of affluent consumers to understand how the pandemic is going to change and shape the luxury wellness industry for the future, as we **continue to push the boundaries in the pursuit of global wellbeing**.



# 01

## The epigenetic revolution, and the advent of truly personalised medicine



While we are all born with an immutable genetic code, external or 'epigenetic' factors such as lifestyle and environment affect how our genes express themselves. **Health programmes based on epigenetics – which are designed to positively influence genetic expression – are set to be a key innovation over the next decade.**

Tremendous innovation in genomic science is increasingly enabling clinics to detect how epigenetic factors (such as diet, exercise, sleep quality or smoking) may be affecting an individual's health.

New generation **DNA reading can measure biological age and give data on how the homeostasis of cells and tissues is impacted by an individual's daily lifestyle choices.** This is to say: does fasting work for you, or is it to your detriment? Should you be doing HIIT training, or is it negatively affecting your natural genetic expression?

**DNA reading can measure biological age and give data on how the homeostasis of cells and tissues is impacted by an individual's daily lifestyle choices**

By looking at how epigenetic test results change over time, a physician can accurately measure the impact of specific interventions on an individual's wellbeing. This will give clear evidence of how health-wellness programmes are effective at restoring appropriate genetic expressions, and hence catalysing improvement across all our bodily systems.

What's more, insights into a person's genetically determined risk factors, when combined with analysis of their epigenetics, provides a route to avoiding potential ill health. In the future, experts will most likely be able to **modify and adjust genetic profiles to prevent the manifestation of diseases borne from a genetic predisposition.**



**Sébastien Nusslé, Scientist and founder at GenKnowMe and member of the Clinique La Prairie Scientific Committee**

*"Aging is a combination of time, inherited genes, environment, and lifestyle, all factors directly impacting on our epigenetic landscape. Recent research has demonstrated that biological age [essentially how youthfully our cells are behaving, as oppose to our chronological age – the number of years since we were born] is a promising predictor of longevity and deleterious effects of aging such as chronic diseases and cognitive decline. Most importantly, it has been shown that when triggering the right levers, biological age can be reduced, and impaired epigenetics can be reversed."*



**Guenaël Boucher, Transcendental Meditation Coach**

*"Natural diets and healthy living habits must become a main trend in the future as this will enable us to restore the full capacity of our immune systems."*

According to Epigenetics In Human Disease, diseases that could be treated in this manner include various cancers, autoimmune disorders, and cardiovascular disease, thus making this the gold standard for preventive medicine.

A recent New York Times article discussing the kind of innovations that might in time enable us to double life expectancy posited the management of epigenetics as a key approach (ref Trend 5).

Genetic testing and the newly implemented epigenetics assessment enable Clinique La Prairie's programmes to be truly customised. Regular health check-ups and biometric screening topped the list of supplementary treatments those surveyed by Clinique La Prairie wanted to try; their goals being to increase the likelihood of living a longer, healthier life.

# 02

## Training the brain to push the limits of cognitive potential



Building a deep connection between mind and body is vital – and thanks to advances in scientific research, we are now able to measure the true physical impact of training our brains effectively to manage the stresses of daily life.

Neuroplasticity and cognitive reserve are both fundamental aspects of healthy aging and functional decline. Each emotion, feeling, memory, experience and skill is encoded in synapses, the number of which will define the neural microarchitecture refinement of our brain. Therefore, **brain training will promote stronger synapses and can open new opportunities for improving cognitive potential.**

Moreover, with 152 million people expected to live with Alzheimer's by 2050, there is an increasing emphasis on any cognitive evaluations which can predict – and help an individual to steer away from dementia.

It is difficult comprehensively to evaluate or quantify brain health through one metric, owing to the multidimensional aspects of brain health.

**The future of health neuroscience consists in providing cognitive assessment tools and advanced neurofeedback technology allowing a profound understanding of our neurobiology.** Recent progress in brain simulation and artificial intelligence provides a glimpse of how vital is understanding the complexity of the brain and driving personalised preventive solutions.

A burgeoning field is exploring such solutions – with interventions previously used in elite sports filtering down to leading businesspeople and health-conscious consumers. For example:



**Brain mapping (analysing brain waves across different parts of the brain, and bringing them into balance)**



**Neurofeedback-based exercises**



**Nootropics supplements targeting neuromodulation and improvement of cognitive function (memory, creativity, focus...)**



**Neuro-priming headsets (for example Muse 2 – an EEG headset which delivers transcranial current directly to the head/brain, said to promote neuroplasticity and hence faster or 'hyper learning'; used by the Olympic Ski team as well as NBA players)**

Cognition more generally is a key target for the world of biohackers and more specifically 'neuro-hackers' looking to optimise brain health. More and more research and philosophies look at interventions including diet, supplements, stress-management techniques, wellness hot and cold therapies such as ice baths, etc.

**Decoding and promoting the health of the brain, the most mysterious organ in the human body, will have a dramatic impact on science, medicine, and human health.**



**Olga Donica, Nutrition and Lifescience expert**

*"Defining and promoting optimal brain health require the consistent evaluation of executive brain functions. Brain training will promote stronger synapses and can open new opportunities for improving cognitive potential. Our lifestyle (diet, sleep routine, stress exposure, sport, alcohol consumption, etc) and social interaction are among the most important factors conditioning the health and performance of our brain."*



**Prof. Bogdan Draganski, Neuroscientist at the Clinical Neurosciences of University Hospital of Lausanne, and member of Clinique La Prairie Scientific Committee**

*"The ability of the brain to change in a good way, to learn and shape many aspects of what is called brain plasticity and it is linked to neurogenesis. Indeed studies show that we generate brain cells until the end of our lives, explaining why the brain keeps its ability to change over our life span, to maintain its health, to recover some lost functions or to improve in one or another domain. Research also shows that they are factors enhancing this neurogenesis. Physical activity is number one. And overall the lifestyle – what we eat, what we drink, how we interact with our peers – should be considered as a baseline on which to build up personalised preventive medicine."*



**Dr Olivier Staneczek, Specialist in longevity medicine**

*"The biggest dream in the medical world is the development of molecular knowledge and research for tissue repairs in brain cells."*

# 03

## The rise of technology that empowers human connection



While technology has always played an important part in fitness, lifestyle and medicine, recent events mean the spotlight is on industry investors to meet the demand of increasingly health-conscious consumers.

The health and wellbeing sector is continuously being revolutionised by technological advances. For example, AI can be a useful diagnostic tool to compare thousands of test results to detect abnormalities – more than any one doctor could do themselves without the assistance of this technology.

**Tech in nutrition is also predicted to evolve**, with the creation of high-tech wearables which can monitor and assess the body's nutritional needs and lead to the provision of treatments such as nutraceuticals or time release capsules.

**76% of people surveyed even said they would be open to the idea of technology being implanted into their bodies for vital health data to be shared with doctors remotely for ongoing evaluation**

The sorts of devices already being used to feed information remotely back to clinics and performance coaches include:

- Wearables such as DREEM and Oura looking at HRV, stages of sleep, etc.
- SmartCardia: a novel non-invasive device that facilitates cardiac monitoring.
- Lumen, a device which measures carbon dioxide in an individual's exhalations to determine how one's body, specifically one's metabolism, responds to different foodstuffs
- FreeStyle Libre 2, a small glucose monitor which sits on your arm for two weeks, giving a 24 hour reading of glucose levels (which foods spike, are they too low at night etc).

It is this **increasing production of personal data that will lead to the most significant advancements**. To have access to analytics instantly, enabling experts to offer immediate sharpened life-changing guidance and medical feedback. This is clearly also raising serious questions of privacy and data ownership.

There is no doubt that the medical industry will become increasingly automated. However, it is not expected that robotics or artificial intelligence will ever replace doctors entirely. What the tech offers in efficiencies, it lacks in human touch and contact.



**Dr Magali Flot, Specialist in nutrition and eating disorders**

*"We have huge expectations for AI to offer expert biomarkers for longevity and anti-aging. The use of AI and robotics is really promising in aiding the future medical world, for example a future with tiny robots delivering medication to the right areas of the body is vital in saving time."*



**Simone Gibertoni, CEO**

*"At Clinique La Prairie we remain convinced that a human and hyper-personalised approach to preventive medicine is the key to offering services that are truly capable of helping people to live better and longer lives."*



**Dr Adrian Heini, Medical Director**

*"In the next 90 years, it is likely that electronic and digital monitoring will accelerate, to enable devices to be implanted into our bodies to track illnesses, providing immediate medical diagnosis and treatment."*

# 04

## Taking the nutri-revolution one step further



The role of nutrition in wellbeing and longevity cannot be overstated, with the gut considered to be our second brain, which **enable bidirectional communication with the brain, referred to as the gut-brain axis**. It is important to mention the fundamental role of the microbiota in the induction, education and function of the immune system. Therefore, **diet is thought to be one of the most influential factors on the microbiome, supporting optimal function of immune system**.

Bearing in mind the enormous complexity of contemporary food, it will provide substantial keys for preventive medicine based on **ultra-personalised nutrition that takes into account the individual genome – and could influence an individual’s epigenetics**. It will also enable us to engage in effective therapeutic action, combining nutrigenomics with drug-based medicine.

The study of the interaction between nutrients and dietary bioactives with the genome at the molecular level, to understand how specific nutrients or dietary strategies may affect gene expression and human health, is known as **nutrigenomics**. It is set to become a growing trend as more sophisticated diagnostic tools and treatments are developed.

The idea of ‘food as medicine’ or pharmaco-nutrition is taking hold in the popular imagination, with books such as Health Defence by medical pharmacologist and Fellow of the Oxford Institute of Food, Brain & Behaviour Paul Clayton, and New York Times bestseller Eat To Beat Disease by scientist and Harvard academic Dr William Li.



**Olga Donica, Nutrition and Lifescience expert**

*“The nutrient content of our meals and the way we eat has radically changed over time. Poor soils, lower nutritional density and presence of chemical contamination may undermine what appears a healthy meal. While choosing high-quality foods – minimally processed items such as vegetables and fruits, whole grains, healthy fats and healthy sources of protein – is an aspiration for health-conscious people, achieving such a diet remains a challenge.”*



**Simone Gibertoni, CEO**

*“Due to their biodiversity, nature and plants offer unique high-diversity natural compounds, that we won’t be able to find in our daily meals. Scientists think that less than 1% of this vast biodiversity has been exploited so far! Just to name a few of these rich sources of structurally diverse bioactive compounds: Ashwagandha, Curcuma, Astragalus, spirulina or Shiitake extracts.”*

More widely, the benefits of a plant-based diet are already proving popular with over half (51%) of those surveyed already eating a plant-based diet at least some of the time, while 38% are open to the idea of moving to a partially plant-based diet in the future.

Nutritional supplements will also play a growing crucial role for wellbeing and optimal health, requiring educating people about which supplements to take. As health-conscious individuals may be aware, many over-the-counter existing supplements are inadequately formulated and, according to Professor Tim Spector’s book Spoon Fed probably ‘a waste of money’. **The next generations of supplements must combine latest sciences and natural methods effectively to deliver nutrients, and build beneficial metabolic, cellular and mental environment that correspond to the nutritional challenges of modern lives.**

### Holistic Health supplements by Clinique La Prairie

Holistic Health is a pioneering collection of Swiss-made supplements to support the health of modern society.

The four health routines – Age-Defy, Balance, Energy, and Purity – have been created by the team of life-science experts at the clinic by connecting immunity, stress management, anti-inflammation, rejuvenation and cellular longevity, the five cornerstones of healthy living. The result is a unique core Holistic Complex released from the fusion of five proven compounds: Neuromics, Synerithin, Fixentin, Immucell and Niehanyl\*\*.

Each of the four vegan supplements pair the powerful Holistic Complex with carefully sourced and selected micronutrients and plant extracts to enable active solutions and conditions to achieve maximum benefits. Holistic Health’s supplements are developed with utmost respect for the body and environment (non-GMO, free from preservatives and from titanium dioxide).



# 05

## 'Reversed aging' is the new longevity



According to our research, more than two thirds (68%) of people believe that those born in the 2010s or earlier will regularly live to be over 100 years old. Meanwhile, experts at Clinique La Prairie believe that people born today will easily and routinely live to be over 100 years old.

The goal of longevity is evolving today towards an increased 'healthspan', a longer span of healthy life. This is perhaps best articulated through the work of Harvard Professor of Genetics David Sinclair, author of Lifespan: Why We Age and Why We Don't Have To.

In the distant future, experts predict that truly **preventive treatment to reverse aging will be possible for young people**. Central to these treatments will be detecting genetic predispositions to disease and senescence through DNA and epigenetic testing before symptoms manifest, and offering bespoke, personalised treatments to support good health and ultimately longevity from an early age.

Treatments which reverse the aging process are set to take centre stage. Often these will be discussed in terms of cellular optimisation, banishing senescent or zombie cells, cell metabolism and cellular rejuvenation, as well as looking to mitochondrial therapies; there is an industry wide move towards these terms (forefronted in use of treatments such as hyperbaric oxygen and light therapies).

**More than two thirds (68%) of people believe that those born in the 2010s or earlier will regularly live to be over 100 years old**

Diet is also a key factor. Within the next five years, Clinique La Prairie will continue to identify molecules that stimulate the expression of genes associated with the slowing down of senescence and chronic pathologies, to **ultimately inhibit genes involved with the molecular process of aging**.

Medics at Clinique La Prairie are exploring how they **can influence cells for regenerative purposes where genes' expression can be modified**, using plant-based nutrigenomics products for inducing cellular stimulation. **These supplements are designed to help** activate the production of stem cells and to contribute slowing cell senescence.



Simone Gibertoni, CEO

*"We work on treatments to activate cellular signalling pathways associated with longevity. These treatments aim to reduce tissue inflammation and the transformation of normal cells into senescent cells. Additionally, it will be possible to activate the immune system and reactivate pathways that are essential to cell regeneration processes."*

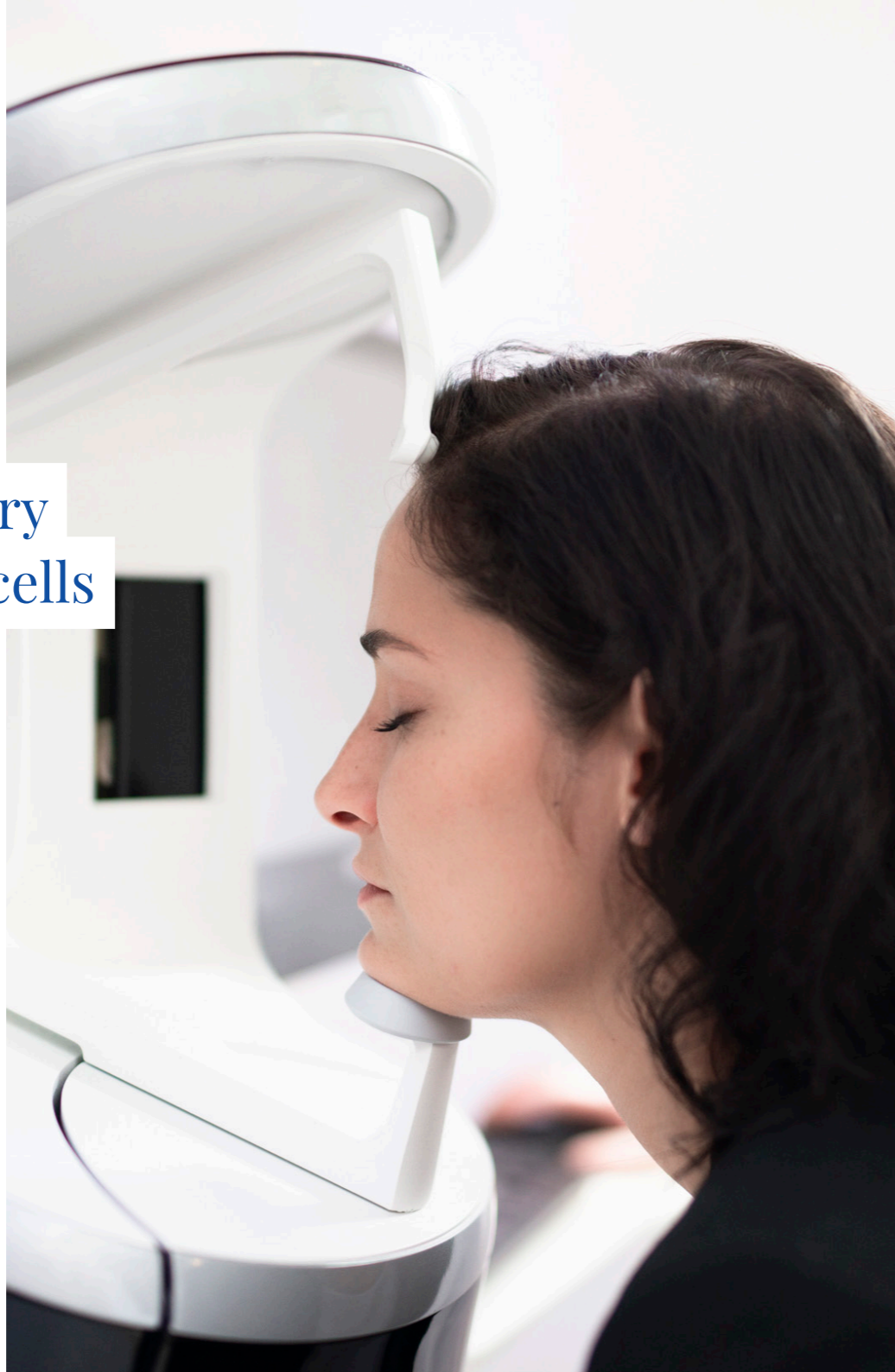


Professor Ernst Rietschel, Head of Clinique La Prairie Scientific Committee

*"In the future, everyone's DNA may be sequenced at early age. Genetic analysis could enable same-day epigenetic testing and diagnosis of otherwise undetectable diseases, allowing Clinique La Prairie to catch and treat disease before it ever becomes symptomatic and turning the clinic into a one-stop shop for young people to experience truly preventive medicine and prolong a healthy life."*

# 06

## Advantages in repairing surgery based on stem cells



**Stem cell surgery** has been used for some years for aesthetics and bone marrow. And it is moving steadily towards the forefront of medical science.

It is now possible to beautify, restore and protect the skin using adipose stem cells derived from our own fat. These stem cells have the power to repair and rejuvenate all tissues while renewing themselves at the cellular level. Clinique La Prairie recently introduced an exclusive face skin boosting programme, which uses the client's own stem cells to replace degenerating cells and reduce the signs of visible aging. In this Beauty Stem Cell program, the harvested cells are stored for 30 years.

This focus on regeneration and the possibility of stem cell banking are a key trend as people look for ways to reverse the effects of aging. Looking at the far future, it seems likely that stem cell science may be used to reproduce tissue – and even organs – with the ambition to create and replace vital organs such as kidneys, livers, and lungs.

**Clinique La Prairie introduced a face skin boosting programme in 2019 which uses the client's own stem cells to replace degenerating cells and reduce the visible signs of aging**



Dr Stéphane Smarrito, FMH Plastic Surgeon in charge of Stem Cell programs at Clinique La Prairie

*"Stem cells are revolutionising aesthetic surgery, and have the potential for much wider uses. The possibility to store stem cells for years allows the same anti-aging procedures on the skin, but also opens up perspectives of medical tissue engineering. Research is advancing on the possibility of reconstructing tissue with stem cells applied to a tissue matrix. This is a new medical revolution: restoring organs and body functions rather than repairing the consequences. The future of stem cell treatment is in regenerative rather than reparative surgery – in stem cell banking we trust."*



Dr Olivier Staneczek, Specialist in longevity medicine

*"Stem cell science will continue to evolve in the right direction where we will be able to repair nerve and muscle cells, allowing us to therefore repair damages which may incur internally."*





# 07

## Immunity, and harnessing the power of the circadian rhythm



The importance of our cycling through the appropriate stages of sleep is now well known, and people are already primed to do what they can to improve their sleep quality: McKinsey estimate the value of the global sleep industry at some \$300-50 billion. The hard fact is, we don't all sleep well: 18% of respondents want to reach towards therapies to restore their sleep disorders.

Here, science is laying ever more importance on our circadian rhythm – the sleep / wake pattern in our biology generated by the planet's rotation.

Our circadian rhythm regulates many aspects of health, including our digestion, our hormones – and also our immunity. Immune system rhythms are coordinated in concert with circadian rhythm; the Sleep Foundation points out that 'during nightly sleep, there is an increased production of cytokines associated with inflammation; [this] inflammatory response may help with recovery, fortifying innate and adaptive immunity'. It further suggests that sleep may strengthen immune memory (reinforcing the body's ability to recognise and react to threats).

There is also increasing awareness of the value of **living in harmony with one's chronotype** (the genetically determined internal clock that governs optimum sleep times) – larks like to get up early, owls to stay up late – and of the importance of daylight in the mornings and avoidance of blue light at night.

What is less understood is how **light is not the only orchestrator of the circadian rhythm** – it is also influenced by our liver (which is sensitive to food intake).

Disrupting patterns of light, or food, can induce pathological changes such as cancer and cardiovascular disease. It can also accelerate premature aging, by interrupting patterns of cell rejuvenation.

**18% of respondents want to reach towards therapies to restore their sleep disorders**

What's more, according to an article in the Financial Times, **living according to your chronobiology may unlock health and performance benefits** (Formula One drivers avoid strenuous exercise for four hours before bed over-stimulating the body) as well as encouraging hormonal balance (useful at all ages but markedly so at menopause and andropause) and a regulated appetite.

In the future we may:



Work towards being active during daylight hours



Consider more supplementation targeted to regulate circadian rhythms



Saliva tests to determine 'internal circadian time' and help manage anything from time of food and exercise to medication or surgery for optimal outcomes.



See novel drugs and treatments regimes that maximize therapeutic benefits based on when they are administrated



**Prof. Christoph Scheiermann, Researcher and Professor at the Department of Pathology and Immunology of Geneva University**

*"In the immune system, many factors show a circadian rhythm. For examples, more white blood cells are present in blood during sleep. And these same cells are more responsive to stimulation just before the active phase. Currently, research is being performed to develop novel drugs and treatments regimes that could maximize therapeutic benefits at specific phases while minimizing side effects. However, we may already prevent many inflammatory diseases, simply by paying more attention to and trying to align our behaviour with the naturally occurring, circadian environmental cycles."*

# 08

## A holistic approach to a more focused self



Amongst those surveyed, the toll wrought by the pandemic is clear: 79% of people reporting they have been affected either directly or indirectly by Covid-19, either from physical symptoms of the virus, to experiencing stress and emotional strain. This has led to **92%\* of people surveyed saying they are now taking their health more seriously as a result.**

One emergent holistic trend relates to stress, and holistic stress management. In her book *The Upside of Stress*, Kelly McGonigal researches how the mindset with which we approach challenging situations can transform whether or not they are bad for our health (literally stating to yourself 'I am excited' can change brain activity from a state of threat to one of abundance and possibility). The first ever human clinical trial is being undertaken at UCSF to explore whether the kind of hormetic stressors such as ice baths, fasting or Wim Hof breathing may help us **build long-lasting stress resilience.**

This trail will reveal whether these hormetic doses of stress could act as a kind of inoculation, training our body better to manage future challenges or even **rendering stress beneficial for our wellbeing.** Wellbeing – as in mental wellness – is still often and wrongly considered on a superficial need.

Yet it has been clinically proven that incorporating **practises such as meditation and self-hypnosis improve the physical markers of stress.** Known as telomeres, these protective casings at the end of a strand of DNA can be analysed. Stress causes telomeres to shorten, and it has been proven that training the brain to manage stress leads to lengthened telomeres and ultimately a longer, more holistic life.

**79% of people reporting they have been affected either directly or indirectly by Covid-19, either from physical symptoms of the virus, to experiencing stress and emotional strain**

It is worth noting that **cutting edge clinics are bringing together approaches traditionally thought of as Eastern and Western:** medical science such as genomics and genetics, meeting Ayurveda and other ancient traditional practices.

In general, key holistic approaches relating to wellbeing will incorporate medicine, nutrition, movement and wellbeing. The top three things people surveyed by Clinique La Prairie will be doing to take care of their health post-pandemic are eating a healthier diet (52%), doing more exercise (51%) and taking vitamins and supplements (41%).

In the future, mind-body transformative techniques and education will continue to grow to help people to manage stress in their lives.



**Fatima Santos, Psychologist**

*"The power of beliefs, the way we face life and look at things is really important and changes our biochemistry – which impacts the longevity in our lives. If people would take the time to look inside themselves and use their natural abilities to change, grow and think in a more appropriate way, life would maybe be much easier."*



**Guenael Boucher,  
Transcendental Meditation Coach**

*"Our very best doctor is the intelligence of our bodies. As we become more knowledgeable about the power of our bodies, holistic approaches that strengthen our immunity will become increasingly popular. We must be careful to communicate that these holistic approaches, such as Transcendental Meditation, do indeed pass the test of scientific research."*

# About Clinique La Prairie

Celebrating its 90th anniversary this year, Clinique La Prairie has established an international reputation as a world-renowned medical clinic and wellness destination since it was founded by Professor Niehans in 1931.

Thanks to its commitment to scientific research and innovation, Clinique La Prairie is regarded as a leading light in preventive medicine and offers a plethora of world leading treatments, combining pioneering medicine with bespoke lifestyle and nutrition plans.

A favourite with a worldwide clientele from 80 different countries, Clinique La Prairie offers treatments such as immunostimulant and restorative experiences, using the latest cutting-edge technology and concepts in highly customised and preventive therapies.

The flagship Revitalisation programme is designed to promote vitality, enhance the immune system, and slow down the aging process. Master Detox delivers the ultimate in bespoke cleansing programmes. Other programmes include Better Sleep, Rebalancing, Weight Loss System and Premium Check-up.

## Celebrating its 90th anniversary this year, Clinique La Prairie has established an international reputation as a world-renowned medical clinic and wellness destination

Clinique La Prairie's philosophy to health and wellness combines its expertise and its holistic approach based on the four pillars of medicine, wellness, nutrition, and movement.

A medical team of some 50 leading specialists assure exceptional diagnostic precision and support. Guests stay in one of 38 luxury rooms and suites with stunning views of the Alps.

### RESEARCH METHODOLOGY

Clinique La Prairie interviewed 10 expert practitioners from across the clinic's breadth of disciplines. The consumer research was commissioned by Clinique La Prairie and conducted by Censuswide from 2nd-9th March 2021 with a sample of 500 high net worth individuals from the UK.



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