

## Tech tok

The health highway to becoming superhuman is in reach and it's being supercharged by AI advances in wellness tech that's merging the spa as we know it with some serious science. Alice B-B investigates.

It's not science fiction ... we're on the cusp of seeing human beings become bionic. We're living in a world, where for some, medical wellness retreats are the new nightclubs, scientists are the rock stars and superhuman health is the recreational drug of choice.

There are very few things to thank the pandemic for. But the growing wellness movement has been fast-tracked because of covid. A combination of people desperately seeking answers, while wanting intel straight from the source, rather than misinformation channels, saw the velvet curtain yanked back on the previously mysterious world of science. The spotlight hit the health stage; scientists found their voice and revelled in the newfound appreciation of their research and hard work. And thanks to the global megaphone of modern communication, health awareness became almost as contagious as the virus itself.

Since then, the stone hasn't stopped rolling. While for some, the first post-pandemic trip was a one-way ticket to Ibiza, (a self-medicating retreat of sorts), for others it was a medical wellness retreat; to gain insight via cutting-edge diagnostics, adjust lifestyle for preventative health and employ wellness tech to access a personal matrix for everyday life. Not just to avoid the red flags of disease but become the supersonic version of themselves. To increase well-span as well as life span. And with the advent of AI fusing with wellness tech ... this is just the beginning.

### Brain optimisation

Professor Bruno Ribeiro's office at Spain's SHA Wellness is like being in a crazy version of the movie *Minority Report*. I'm surrounded by rows of expressionless dummy heads in whacky-looking head gear, while I'm sporting a NASA-developed neoprene cap with electrodes popped through specific holes. I'm having Transcranial Direct Current Stimulation; electric signalling specifically targeting my frontal cortex, the bit of my brain responsible for memory, problem solving and emotions. I'm in the hot seat because Professor Ribeiro, neuropsychology expert and head of SHA's Cognitive and Emotional Health Development department, has diagnosed me as being, "More depressed than you think you are." My diagnosis ascertained,



thanks to another bit of wearable tech (like a tennis sweatband), that translated my brainwaves onto a cinema screen (minus the popcorn). My gamma levels were low. So it's back to his office for psychological analysis and talking therapy, then Professor Ribeiro gets to work with the stimulation. It feels tingly. Then after just 10 minutes and – *WOW* – in rainbow colours. The world looks so sharp and colourful. My pupils are dilated, I'm talking super-fast, I feel focused and perky as hell. As well as depression, Professor Ribeiro works on a panoply of issues from smoking addiction to insomnia, migraines to Alzheimer's, using his stash of tech while also looking at the body-mind ecosystem holistically; diet, sleep, movement, exposure to light, therapy ... One guest Ribeiro works with is a retired gentleman who wanted to sharpen his focus for competing in classic car races. "He called me the other day," says Ribeiro, "and told me, 'Professor, it's working! I can see cars in the rear-view mirror. I'm making my way up the field!'" And, as for me, months later, the world still looks bright and beautiful.

### Peak sleep

With an estimated 10 to 15 per cent of the world's adults suffering with chronic insomnia (according to the Sleep Foundation) not a day goes by without a new panacea, potion or promise for the perfect kip. Usually, all they deliver is disappointment. However, I think I've found it; I believe the Sleep Program at the new Lanserhof medical wellness retreat in Sylt, Germany, could be the best in the world. Cardiologist and medical director, Dr Jan Stritzke, has gathered what he believes to be the top diagnostics, specialists and therapies under one

roof, from heart rate variability monitoring to cryotherapy, hypnosis to bed fittings, including the option of sleeping in a FreshBed that pumps filtered air through your mattress all night to maintain optimum temperature. "The most important thing is to detect why sleep is bad and then immediately start with the right therapy," explains Stritzke. It could be anything from pain to overheating, stress to sleep apnoea, poor lifestyle choices to bad diet. But one thing's for sure, in terms of longevity and disease prevention, sleep is not a luxury.

So I'm trialling the Sleep Laboratory. My face is plastered with electrodes to measure REM and deep sleep, a tiny microphone is up my nose to detect snoring or sleep apnoea and there are electrodes on my legs to check for restless leg syndrome. My temperature, heart rate, blood pressure and oxygen saturation are also being monitored. Ironically, it's probably the worst night's sleep of my life, but enough data has been gathered to reveal that, aside from a little light snoring, I have no major issues. However, if I was one of the 100 million people globally who suffer with sleep apnoea – a condition where you momentarily stop breathing, which can happen up to 30 times an hour and leaves you feeling exhausted on waking, tired throughout the day and raises risks of stroke or heart attack – Lanserhof Sylt has a cutting-edge alternative to the usual CPAP oxygen mask treatment. (Worn at night, the CPAP oxygen mask treatment works, but it's noisy, cumbersome, and dries out the eyes.) Instead, Lanserhof Sylt suggests a dental treatment. Dentist Bianca Maus, specialising in dental sleep medicine, takes laser images of the patient's mouth and just five days later has created a mandibular advancement device. Worn at night, this contraption pushes the lower jaw forward to keep the upper airways open to halt apnoea. "One patient told me I changed his life," says Maus, "while another lady told me that after 30 years of separate rooms, she can now sleep in the same bed as her husband."

### Molecular lab

The turreted castle perched on the edge of Lake Lucerne in Switzerland doesn't exactly yell "the future of health". But this is precisely what's happening in the 5,000-square-metre spa and medical facility behind the fairytale facade at the new Chenot Palace Weggis. The Chenot Method was first created by Henri Chenot in 1974 and is based on activating the body's ability to heal, strengthen defence mechanisms and prevent disease through lifestyle choices including diet, movement, rest and therapies. This is still the foundation of the seven-day minimum retreat, but is now being blasted into the future by Chenot's scientific director, Dr George Gaitanos. Alongside an impressive array of diagnostics and wellness tech, (cryotherapy, anti-gravity treadmills, whole body photobiomodulation to charge cellular mitochondria), Gaitanos has developed the Chenot Molecular Lab, a way of extracting mRNA via a blood test, to deliver each guest a unique and dynamic profile of their genetic masterhubs. This can define where current or potential issues may be hiding; silent inflammation, hormonal imbalance, oxidative stress, structural integrity of connective tissue and ageing. Armed with this data, a personal lifestyle plan is put in place to suppress any dominant bad signalling and build up resilience. "We are pioneers, creating an epigenetic profile, the most precise barometer of your future health," says Gaitanos. "We believe in health in terms of functionality and ability to adapt to life.

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### Proactive wellbeing

A pioneering example of the future of wellness is The Club by Bamford in the UK, set in 14,000 hectares of JCB owners Lord and Lady Bamford's farmland in the Cotswolds. Yes, the club has a vast Technogym-filled workout space overlooking the rolling hills, and there are spin classes, a 25-metre steel pool, an outdoor functional fitness rig, run clubs, padel courts and a healthy food restaurant. But what makes it supersonic is the individual diagnostics delivered via The Club by Bamford's medical partner, Effect Doctors. Each member is offered a Well Person assessment: blood analysis including haemoglobin, white cell count, cholesterol, kidney and liver function, mineral and vitamin deficiencies, alongside biometrics including body-fat composition, blood pressure and waist-to-hip circumference. With a fistful of data, Effect Doctors delivers a proactive assessment, identifying warning signals, referring to practitioners where necessary, including a nutritionist and lifestyle doctor. "As a team we look at preventative healthcare from a holistic perspective and may recommend a whole range of interventions," explains Dr William Buxton, founder of Effect Doctors. These interventions include the club's stellar wellness facilities – prescribing an infrared sauna and cryotherapy chamber for sleep issues, breathwork and ice bath sessions for focus and energy levels, personal training for both fitness and future-proofing the body, or when to use the photobiomodulation bed to power up the mitochondria. The death knell has tolled; the boring old gym is dead. Long live the super-charged wellness club.

### Optimal fitness

Empowering guests with data about their bodies to transform their health and wellbeing is the sweet spot at Oracle billionaire Larry Ellison's Sensei Retreat on the Hawaiian island of Lanai.

I arrived in Sensei's butterscotch leather-lined private jet, and I'm now in a vast treatment cabin with an infrared sauna, Japanese ofuro bath and double doors that slide open to a waterfall tinkling into an onsen garden beyond. I'm staring at a giant screen showing pictures of my body taken by thermographic technology specifically designed by Sensei, so that my massage therapist and I can see and discuss my exact tension, muscle tightness and asymmetry. Red marks the hotspots; it's safe to say there are a fair few. For guests on the Optimal Wellbeing Program, data is being gathered before you've even arrived. The minute you book, a Whoop 4.0 strap is delivered to your home to start gathering intel on your physiological and behavioural patterns. Once at Sensei, other data is harvested: heart rate variability to assess stress levels, blood biomarker tests for glucose and cholesterol levels to inform conversations with the nutritionist, and VO2 max to measure oxygen intake during exercise to define fitness levels. All data is plumbed into the Sensei portal, to inform your personalised fitness, nutrition and recovery program while on the retreat. Then to create an actionable, monitored program for your return home. "We believe that by interacting with our biomarkers, we become acquainted with our individual physiology. This is why we try to bring data to life," says co-president and chief medical officer Dr Vishal Patel.

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