

PRESS KIT

2022



THE BEST OF **APPLIED NEUROSCIENCE** IN  
A **REVOLUTIONARY** DEVICE DEDICATED  
TO **STRESS MANAGEMENT** AND TO THE  
IMPROVEMENT OF **SLEEP QUALITY**



For more than a decade now, a large body of research has shed light on the main drivers of the explosion in chronic illness, high blood pressure, type 2 diabetes, cancer, cognitive degeneration, Alzheimer's and Parkinson's diseases, cardiovascular diseases, and premature ageing. Among the research, the work of Nobel Prize winners\* has shown that chronic stress was, quite unexpectedly, **the main factor in accelerated ageing and increased neurodegenerative illness.**

Therefore, preventing and reducing stress has become **an individual goal, as well as a public health issue.**

The Covid-19 health crisis, and the subsequent economic and social struggles, have made individuals even more vulnerable. Initial research by national health agencies has shown **an increase in sleep disorders, stress, anxiety, and depression.**

31%

of French people report suffering from a depressed or anxious state

(Enquête CoviPrev, November 2021)

66%

of French people report having sleep troubles in the last 8 days

(Enquête CoviPrev, November 2021)

62%

of French people say they are negatively impacted by the effects of stress

(Ifop / Fitbit Study, June 2021)

**REBALANCE® Impulse** is a revolutionary machine that combines, for the first time in the world, within a single treatment program, the best of applied neuroscience, to **achieve the most effective experience ever observed in terms of reducing stress, improving sleep quality, and increasing vitality.**

Thanks to 30 years of experience and research in every scientific and therapeutic field included in the programs, **REBALANCE® Impulse** has been perfected as a comprehensive, extremely effective system for preventive healthcare.

After a few 30-minute sessions, each user discovers his or her ideal relaxation method and **unlocks the keys to controlling stress.** Stress diminishes, the level of vitality increases, these are the signs of balance being restored.



\*Elizabeth Blackburn, Carol Greider, and Jack Szostak 2009 Nobel Prize in Medicine for their work on telomeres.

# MULTIPLE HEALTH AND WELLBEING BENEFITS







# CLINICALLY PROVEN EFFICIENCY

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Various studies have been carried out to demonstrate the effectiveness of **REBALANCE<sup>®</sup> Impulse** in reducing chronic stress.

## 1 **REBALANCE<sup>®</sup> study: Impact on physiological variables and sleep quality**



**OBJECTIVE OF STUDY:** beScored Institute, under the leadership of the Professor Christophe Hausswirth, assessed the impact of the **REBALANCE<sup>®</sup> Impulse** sessions on physiological variables associated with stress and sleep quality. The results of **REBALANCE<sup>®</sup> Impulse**, in terms of reducing stress, were compared to other therapeutic tools that have been the subject of scientific publications.

Concerning **REBALANCE<sup>®</sup> Impulse**, the average variations observed are of **-19,4 mmHg** for systolic blood pressure and of **-8,5 mmHg** for diastolic blood pressure in a hypertensive population at the end of a 10-session program. This reduction in blood pressure after a 1-month program exceeds what is typically observed in the scientific literature (Dickinson et al., 2006). It should be noted that the change in blood pressure with medication ("active drugs"; Patel, 1988) is less significant than the change observed with **REBALANCE<sup>®</sup> Impulse**, achieved without drugs.

In addition, the 10 **REBALANCE<sup>®</sup> Impulse** sessions carried out over a period of 1 month enabled the hypertensive population to reduce their resting heart rate by an average of 13 beats per minute. This result was described as "enormous" by Professor Hausswirth and **demonstrates a significant activation of the parasympathetic branch of the autonomic nervous system** thanks to the various exercises offered during the **REBALANCE<sup>®</sup> Impulse** sessions.

The sleep study, through all of the analysis and control methods, witnesses not only **a strong improvement in sleep quality** but also promptness in obtaining a restorative sleep. This performance can be observed from the third session: these three sessions having taken place over an average of 7 days.

In addition to the notable and demonstrated effectiveness of **REBALANCE<sup>®</sup> Impulse** in terms of reducing stress and improving sleep quality, **it is the rapidity in obtaining these benefits that distinguishes the performance of the program.**



## A WORD FROM PROFESSOR **CHRISTOPHE HAUSSWIRTH**

*"We conducted a study on 29 people in a state of stress. In the overall population, we were able to observe a decrease in the level of stress by an associated decrease in blood pressure. What happened over the course of the study, and especially, during the Rebalance sessions? We found that people who were hypertensive at almost 15/9 of tension dropped back below 13/9 during the second evaluation. This is the major result that we can observe and thus the benefits proven by the Rebalance Impulse sessions. The second result, which seems interesting to me in view of Dr. Yann Rougier's remarks, particularly on the Rebalance sessions correlated to parasympathetic reactivation: we observe, within the context of our study, a decrease of about 13 beats per minute in terms of resting heart rate, which is enormous and which of course also testifies to a parasympathetic stimulation. In short, these multiple Rebalance Impulse sessions reduce this blood pressure that has a direct impact on a person's cardiovascular health. Regarding the improvement of sleep quality, we would be able to predict, based on the number of Rebalance Impulse sessions, the improvement not only in the overall sleep score, but also in its perceived quality."*



**Professor  
Christophe Hausswirth**  
Doctor of Physiology  
Founder of beScored Institute

Clinical study selected and published in the renowned scientific journal **Frontiers in Psychology** on 11 May 2022.

To read the publication, please [click here](#).



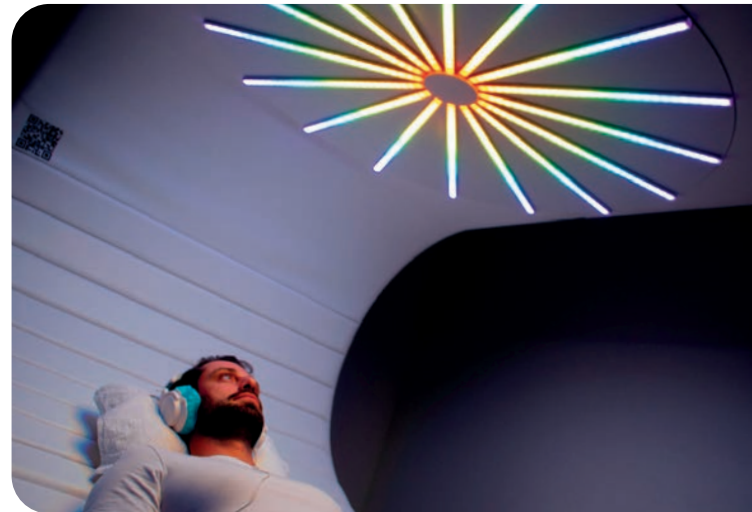


## REBALANCE EEG study: Mental Patterns and Identification of Neural Generators

**OBJECTIVE OF STUDY:** The study entrusted to the Neurophysiology laboratory of the Université Libre de Brussels in collaboration with the spin-off Human Waves was designed to identify more clearly the characteristics of brain activity induced by a typical **REBALANCE** *Impulse* session, and to compare these findings to Rebalance Tech measurements. These observations were also intended to provide a better understanding of the speed and magnitude of the physiological benefits observed during the clinical study and tests conducted by beScored Institute and the European Sleep Institute.

Professor Guy Cheron's team, of the Neurophysiology laboratory, concluded that the various stimulations and exercises conducted during the test session yielded and confirm the following results:

- 1• A strong increase in alpha wave amplitude and duration, particularly significant at 11 Hz. This amplitude was maintained even after the sessions ended.
- 2• A sharp increase in theta wave rhythm, associated with robust stability throughout the sessions.
- 3• These two major characteristics were observed whether participants' eyes were open or closed, which is unusual.



This three-dimensional mental pattern observed from the first test session is reminiscent of characteristics more commonly observed in studies carried out on expert meditators.

The protocol of the study was similar in every respect to that applied during studies with NASA astronauts on the International Space Station. **It used the same technologies, the same *modus operandi*, and the same team of researchers.**

Clinical study selected and published in the renowned scientific journal **Frontiers in Psychology** on 3 March 2022.

To read the publication, please [click here](#).

# REBALANCE® *Impulse*: HOW IT WORKS

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The clinical studies have demonstrated that the stimulation and cognitive training sessions offered by **REBALANCE® *Impulse*** achieve a dual goal:

- 1) A rapid rebalancing of the autonomic nervous system through increased parasympathetic activity
- 2) A rebalancing of brain waves by favoring the production of alpha waves conducive to relaxation in waking state



## Why alpha waves?

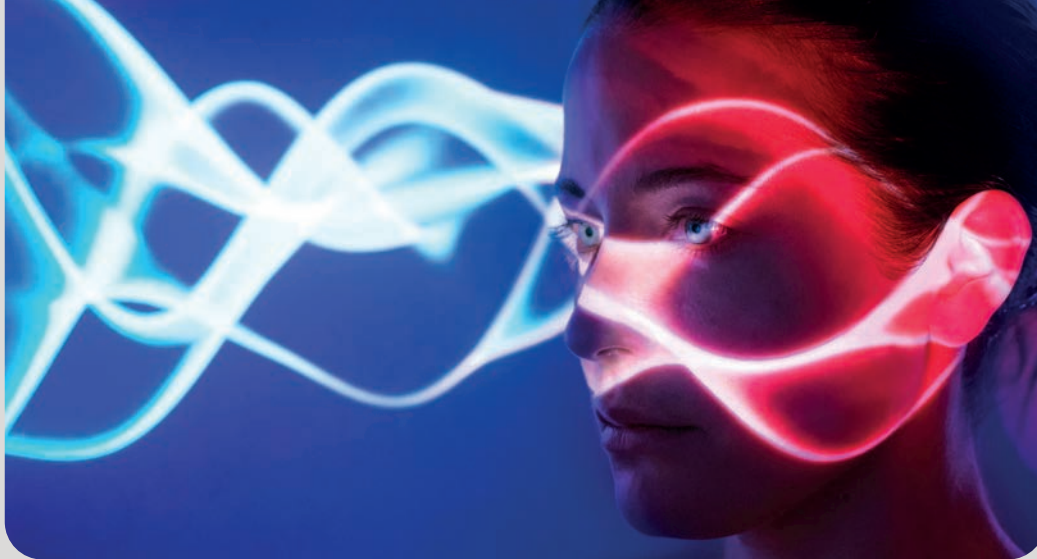
The activity of the brain produces waves, easily measurable by EEG, the frequency of which varies depending on whether one is active or asleep, stressed or relaxed. Thus, when it is in waking consciousness, our brain emits mainly fast waves, named beta (from 12 to 30 Hz). During intense intellectual and mental activity, gamma waves (around 40 Hz) appear. In times of light relaxation or calm wakefulness, sitting on the sofa with eyes closed for example, it is rather alpha waves (8 to 12 Hz) that dominate. Theta waves (4 to 8 Hz) correspond to deep relaxation, meditation, and REM

sleep. Finally, in deep sleep, the majority waves are of delta type (0.5 to 4 Hz).

Considered as relaxation waves, alpha waves are therefore the most interesting when we want to regain a state of relaxation. In addition, the alpha and theta rhythms favor the production of neurohormones, such as serotonin (good mood hormone), dopamine (pleasure hormone), and oxytocin (tenderness hormone) and rebalance the autonomic nervous system, orthosympathetic (activity) and parasympathetic (relaxation).

By rebalancing the brain waves, especially alpha waves, **REBALANCE® *Impulse*** can thus act on chronic stress and the subsequent fragilities that accompany it (sleep disorders, overweight, premature ageing, addiction, impaired memory, decreased vitality, difficulty concentrating, etc.).

Beyond Mental Wellness and Neuro-Relaxation, the work done with **REBALANCE® *Impulse*** is considered a true brain training, beneficial for restoring or enhancing cognitive functions.



## A WORD FROM DOCTOR **YANN ROUGIER**

*“Stress, or rather over-stress, tires and wears out two essential parts of our nervous system: on the cerebral level, it forces our brain to remain alert and to*

*emit beta waves. At the same time, it imbalances the autonomic nervous system, composed of two branches - orthosympathetic and parasympathetic: while the orthosympathetic system acts as an accelerator, the parasympathetic system acts as a brake or “inhibitor”. In the event of stress, the orthosympathetic nervous system is mostly active and releases adrenaline.*

*All of the neuroscience tools developed through the REBALANCE® Impulse concept help to restore a balance between the ortho and parasympathetic systems, a duo that normally allows for the control, the individual control of stress. The ability to rebalance the autonomic nervous system means that this duo will act in synergy and restore amplitude but above all balance to the three neuro-hormones that lead our quality of life: serotonin, dopamine, oxytocin, therefore an immediate improvement in quality of life.*

*The REBALANCE® Impulse concept will also help to rebalance the brain waves that animate the brain, notably by increasing the median wave which is the alpha wave, making the link between the low and high frequencies. The applied neuroscience programs of the REBALANCE® Impulse concept will aim to restore the presence and amplitude of the alpha waves: a bridge between regeneration and creativity, a bridge between our unconscious and our mindfulness, like an anti-stress shield that allows us to have a very good quality of life. When alpha waves have a nice amplitude, it also leads to two qualities: they will form a link, a much stronger bridge and the effect will be lasting in the medium and long term.”*



### **Doctor Yann Rougier**

Medical Specialist in  
Neuropsychiatry  
Writer and lecturer on  
applied neuroscience tools

# THE **REBALANCE**<sup>®</sup> *Impulse* DEVICE

## ALL-IN-ONE TECHNOLOGY

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### Exercises and techniques

- Breathing exercises and techniques chromorhythm-based
- Guided mental imagery
- Mindfulness training
- Full body chromotherapy protocol
- Sound therapy protocol
- Binaural synchrotherapy protocol
- Synchromotherapy\*\* protocol
- Advanced Neuromeditation exercises

### Immediate benefits of the zero gravity position

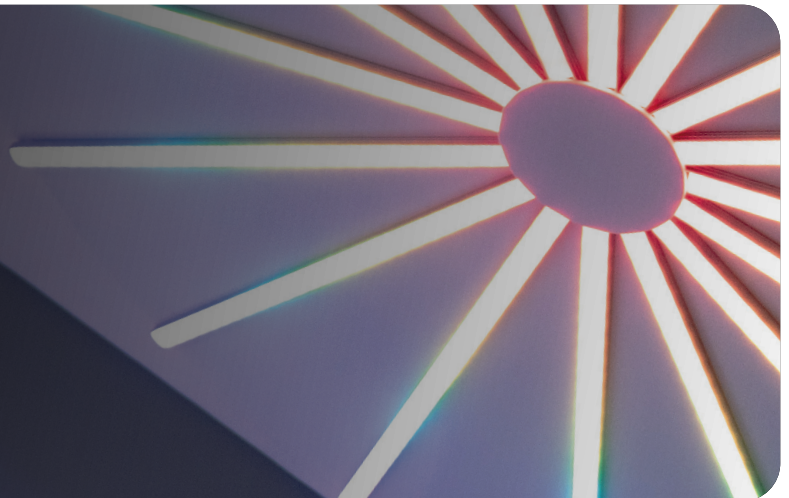
This is the position astronauts use during take-off. It is also recommended by ergotherapists and sports and healthcare professionals.

#### **This posture offers many benefits:**

- Muscle tension is reduced
- Less strain is placed on the heart
- Blood flow improves
- Lung capacity increases
- Blood circulation to the legs improves
- Joint pain is relieved
- The intervertebral discs are decompressed
- Stress decreases

#### **\*Synchromotherapy\***

is a new therapeutic discipline emerging from applied neuroscience. It mainly combines three techniques: Innovative chromotherapy protocols using targeted wavelengths expressed in nanometers, Pulsed light protocols expressed in hertz and lux, Dynamic light scenarios in the shape of an iris (patent registered) acting on targeted frequencies.





Shoulders, heart, knees,  
and ankles are aligned

Bust/thigh angle of  $125^{\circ}$ - $135^{\circ}$

Slight bend at the knee to  
relax posterior leg muscles

Seat depth for good lumbar support

Long leg rest to support legs to the heel



< Back

**REBALANCE**  
impulse

## YOUR INDICES



REBALANCE® indices have been developed to help you identify which sessions are the most beneficial to you. Remember that the relevance of indices does not lie in the instantaneous analysis of a session. To erase any unusual event, they must be compared after a minimum program of 5 Rebalance Impulse sessions.



### Relaxation

This index is used to assess the level of perceived stress. The level of stress, mood, drowsiness, alertness and muscle pain are assessed through Visual Analogue Scales which have been scientifically designed and validated: **Feelingback®**. The higher your relaxation index, the less you are subjected to chronic stress. This perceptual index is perfectly consistent with the results of the two clinical studies conducted in 2020, in terms of physiological markers of stress<sup>1</sup> and neurophysiological markers related to the Alpha wave increase (wave of relaxation in wake-up state)<sup>2</sup>, following a cycle of 10 Rebalance Impulse sessions. Thus, the more Rebalance sessions you practice, the less you experience symptoms of chronic stress and your relaxation index improves.



## A personalized monitoring and tracking system

The **REBALANCE**® indices have been developed to help users identify which sessions are the most beneficial to them. The psychological and neurophysiological responses for each session are expressed as follows:

- Your stress level, mood, drowsiness, wakefulness, and muscle aches and pains are rated on scientifically proven **Visual Analog Scales: Feelingback**®.
- Your brainwaves are recorded in real time via a **Neurofeedback headset**. This technology is quite similar to electroencephalogram (EEG) technology.
- A **Biofeedback wristband** tracks your cardiac rhythm in real time.

**MyREBALANCE**® app allows users to access their indices from their smartphone at any time.

*Remember that the relevance of indices does not lie in the instantaneous analysis of a session. To erase any unusual event, they must be compared after a minimum program of 5 Rebalance Impulse sessions.*

### THE INDICES



Relaxation  
Index



OBF™ Optimal  
Brain Flow Index



Autonomic Nervous  
System Balance Index



Vitality  
Index



Muscle Soreness  
Sensation Index



Emotional Balance  
Index



Sleep Quality  
Index

# THE **REBALANCE**<sup>®</sup> *Impulse* EXPERIENCE

## GETTING SETTLED IN

We designed the **REBALANCE**<sup>®</sup> *Impulse* experience to be as simple as possible. You do not need to change your clothes before starting a session. Just slip off your shoes and get settled in.

## STARTING THE SESSION

On the tablet, you can view the catalog and select the goals you want to achieve during your session.

## DURING THE SESSION

Your voyage begins, and a gentle voice will guide you throughout your session.

Each session is made up of various guided mental imagery exercises, timed breathing exercises and musical interludes. Each exercise is tailored to your goals: anti-stress, managing your emotions, managing pain, and so on.

Throughout this session, you will bathe in an ocean of light that softly, but directly, influences each cell and each nerve fiber of your body.

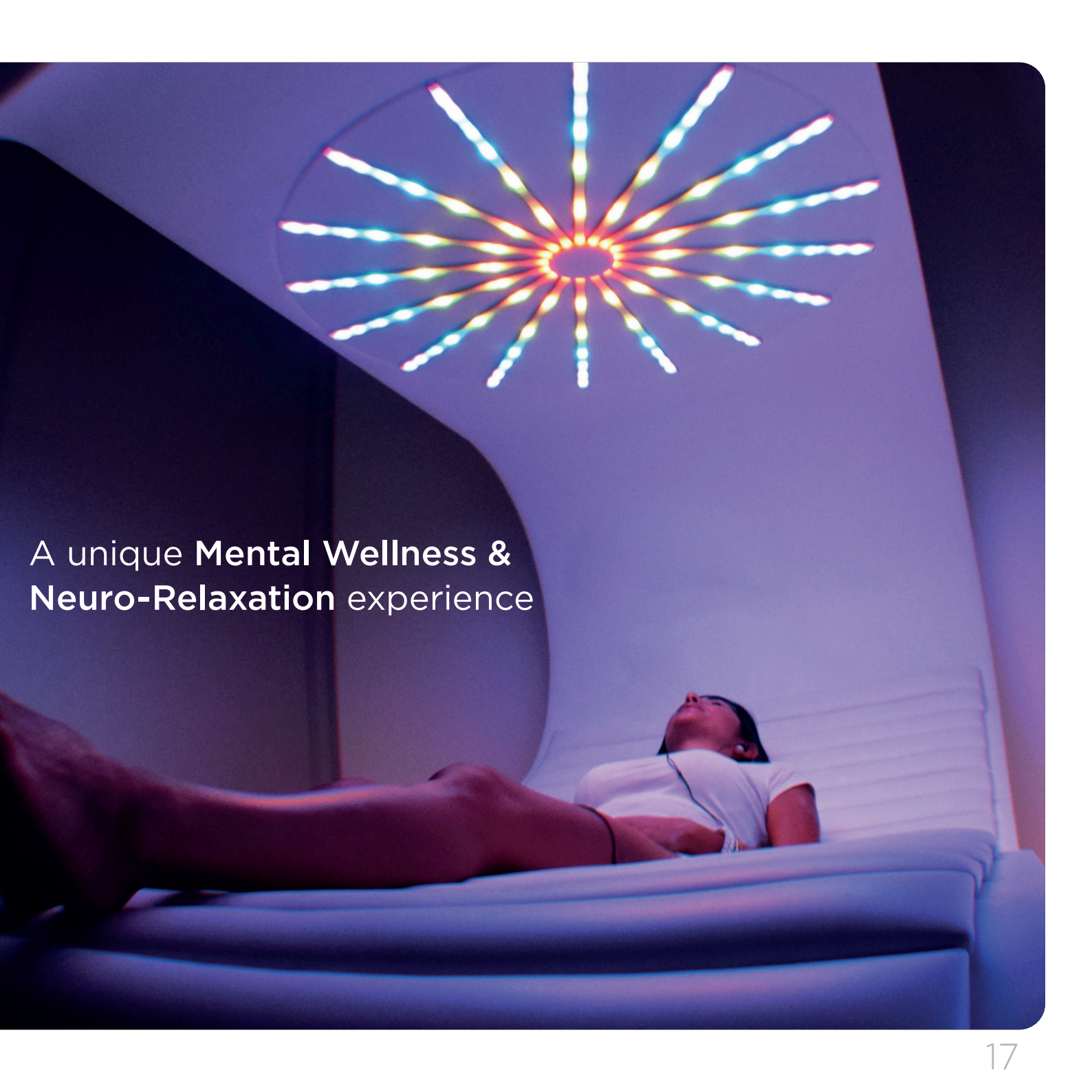
No matter which theme you chose, at the end of the session, you will feel relaxed, fully aware, with a clear mind. You will feel complete wellbeing.

## AND AFTERWARDS...

Take a few moments to describe how you feel on Visual Analog Scales. Your metrics will be calculated immediately. If you wish, you can track your session results on the **MyREBALANCE**<sup>®</sup> app on your smartphone.

**Show stoppers:** Eye surgery less than 3 months ago, Epilepsy, Pacemaker



A person is lying on a massage table in a dimly lit room. Above them, a large, circular projection of a starburst light pattern is visible on the ceiling. The light pattern consists of many thin, radiating lines of light in shades of blue, green, and yellow, creating a starburst effect. The person is wearing a white t-shirt and is looking up at the light pattern. The overall atmosphere is relaxing and futuristic.

A unique **Mental Wellness & Neuro-Relaxation** experience

# THE ORIGINS OF **REBALANCE® Impulse**

*“The **REBALANCE® Impulse** concept began with a research project focusing on the professional sports sector in 2012. The initial goal was to develop a high-performance solution based on applied neuroscience that would enable athletes to manage their stress levels and facilitate their recovery. As anyone can see, stress management is a key success factor for sports performance, regardless of the discipline. More than 600 high-level athletes of various nationalities and disciplines have contributed to the validation and optimization of our research programs.*

*Recent studies have indicated that the **physiological stress markers for high-level athletes**<sup>(1)</sup> were similar to those of company employees suffering from burnout<sup>(2)</sup>. The health effects of chronic stress and the correlation with performance are therefore very similar for a **professional athlete** or a **company executive**.*

*As a result, we decided to help one and all benefit from the advanced solutions that we have developed in high-level sport in terms of **fighting chronic stress, improving sleep quality, and enhancing vitality**.*

*Today, **REBALANCE® Impulse** is acclaimed by many top athletes and has been adopted by prestigious MedWellness addresses.”*

Rebalance Tech

(1) A multidisciplinary approach to overreaching detection in endurance trained athletes. Le Meur Y, Hausswirth C, Natta F, Couturier A, Bignet F, Vidal PP. J Appl Physiol (1985). 2013 Feb;114(3):411-20.

(2) Neuro-computational Impact of Overload on Economic Decision-Making. Blain B, Schmit C, Aubry A, Hausswirth C, Le Meur Y, Pessiglione M. Curr Biol. 2019 Oct 7;29(19):3289-3297.





## Where to find us

The list of equipped centers on  
[www.rebalancetech.com](http://www.rebalancetech.com)

### A few references:

- Odéon Spa, Monaco
- Thermes Marins, Monaco
- Life-Gen Studio, Mougins Mouans-Sartoux
- Cryorecup, Bordeaux Mérignac
- Ryokan, mobile recovery unit (high-level sport)
- Villa Thalgo, Paris 16ème
- Maison Epigenetic, Paris 16ème
- Rebalance Wellness Studio, Point-à-Pitre
- Martin's Agora City Resort, Louvain-la-Neuve
- PsyPluriel Human Waves, Uccle
- Spa Guerlain Waldorf Astoria, Jerusalem
- My Clinics, Geneva
- Rebalance Wellness Studio, Marbella

**Price: from \$60 to \$120 for a 30-minute session**



Contact  
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