

THE BIOFEEDBACK BOOK

by Andreea Taflan

Everything
you need to know
about biofeedback



Fascinated by frequencies 1

What is frequency re-education? 2

How stress affects the body and mind 3

Eustress 4

Distress 4

Chronic stress 4

Stress as a spectrum 5

Examples of stressors 5

Stress reduction 5

Biofeedback 6

The history of biofeedback 8

46 AD 8

1840-1860 8

1920-1960s 8

1700s 8

1891-1908 8

1970s 9

2010-present 9

1980s 9

What's next? 9

Different types of biofeedback 10

Respiratory biofeedback 10

Thermal biofeedback 10

Electroencephalography (EEG) 10

Electromyography (EMG) 10

Electrocardiography (ECG) 10

Electrodermography (EDG) 10

Quantum biofeedback 10

What are the benefits of biofeedback? 11

Gain control over your health 11

Non-invasive method 11

Suitable for (almost) everyone 11

A booster for other therapies 11

How does a biofeedback session work? 12

Lifestyle inventory 13

Calibration 13

Biofeedback 13

Debrief 13



Popular applications	14
ADHD / Learning difficulties	15
Allergies and asthma	16
Animal health	16
Beauty treatments	17
Bedwetting / incontinence / constipation	17
Blood pressure	17
Decision making	17
Pain management	18
Migraine	18
Sleeping problems	19
Smoking and other addictions	19
Stress and anxiety	19
Biofeedback devices	20
Unparalleled research and development	21
Quantum biofeedback technology	21
The complete package	21
Xrroid® scan	22
Like learning to ride a bicycle	22
How to become a biofeedback therapist	23
Why include biofeedback in your offer?	24
A shared journey	24
Broader approach to health issues	24
Booster for traditional healthcare	24
The biofeedback therapist as an educator	25
Suppressions and Obstructions to Cure (SOC)	25
Sharing information	25
Maintaining distance and empathy	25
A three-way collaboration	25
Three lives transformed	26
FAQs about biofeedback	31

HEALTH IS A CHOICE, AND WE MADE IT YOURS.

Dear Reader,

When I experienced my first biofeedback session at the age of 19, I was amazed by the effect it had on me. And I keep on being fascinated by how this non-invasive technique can be used to help identify unconscious problems, reduce stress and benefit our health in so many areas. It's why I wake up fully motivated every day to share this incredible technology with the world.

Thanks to numerous studies that provide evidence in support of traditional biofeedback methods, the healthcare industry is now finally starting to embrace biofeedback technology and its capacity to help 'reset' the mind and body. And I like to think that pioneering companies such as QX WORLD, of which I am co-founder and CEO, have something to do with that as well.

QX WORLD works tirelessly to finetune and upgrade biofeedback technology in line with the most recent discoveries. Our quantum biofeedback devices are renowned for their ability to activate the body's self-healing capacity, and the wide range of stressors which they can address.

But ultimately, I feel that education is where we as a company make the biggest difference. We not only set out to develop top-notch technology but also teach healthcare practitioners how to get the most out of our biofeedback devices. And we share our knowledge of good health practices with anyone who's interested. Because we believe everybody deserves easy access to a healthy lifestyle.

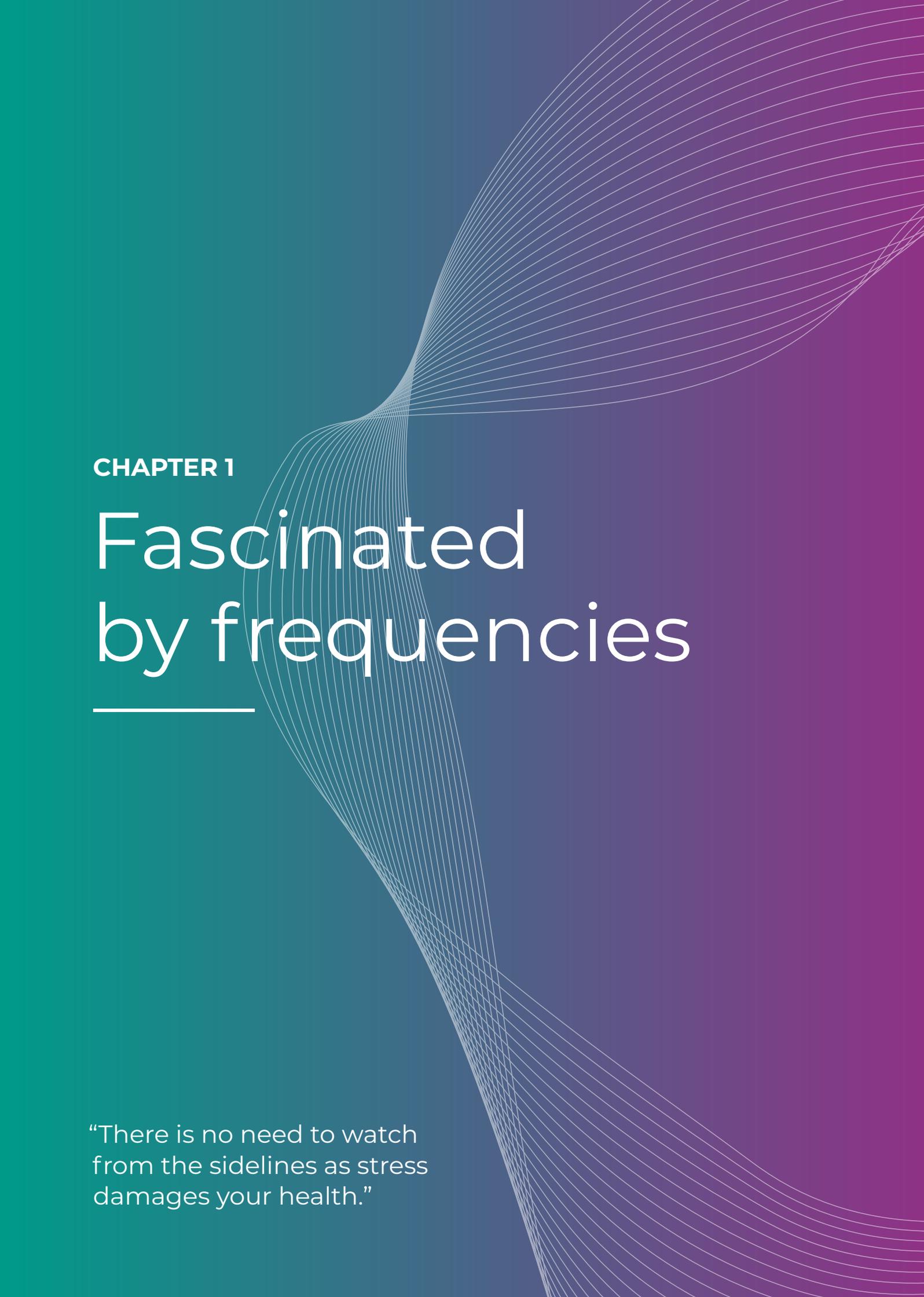
Hopefully, this book on biofeedback will inspire and support you on the way to a lifestyle that is healthy in every possible sense.

Sincerely,

Andreea Taflan

CEO and co-founder of QX WORLD





CHAPTER 1

Fascinated by frequencies

“There is no need to watch
from the sidelines as stress
damages your health.”

Fascinated by frequencies

Stress, believe it or not, can be a good thing. It releases hormones that motivate us to perform. It is nothing more than a normal psychological – and physical – reaction to the challenges we face in life.

Yet sometimes we find ourselves pushed beyond our ability to cope. Instead of returning to their relaxed state after the stressful event is over, our body and brain get stuck in a freeze-fight-or-flight response. The consequences of which, over time, can include serious health problems such as insomnia, chronic pain, overall unhappiness and even depression, to mention but a few.

However, there is no need to watch from the sidelines as stress damages your health and zest for life. What biofeedback experts call frequency re-education can work wonders. It is a fascinating technique, to say the least.

What is frequency re-education?

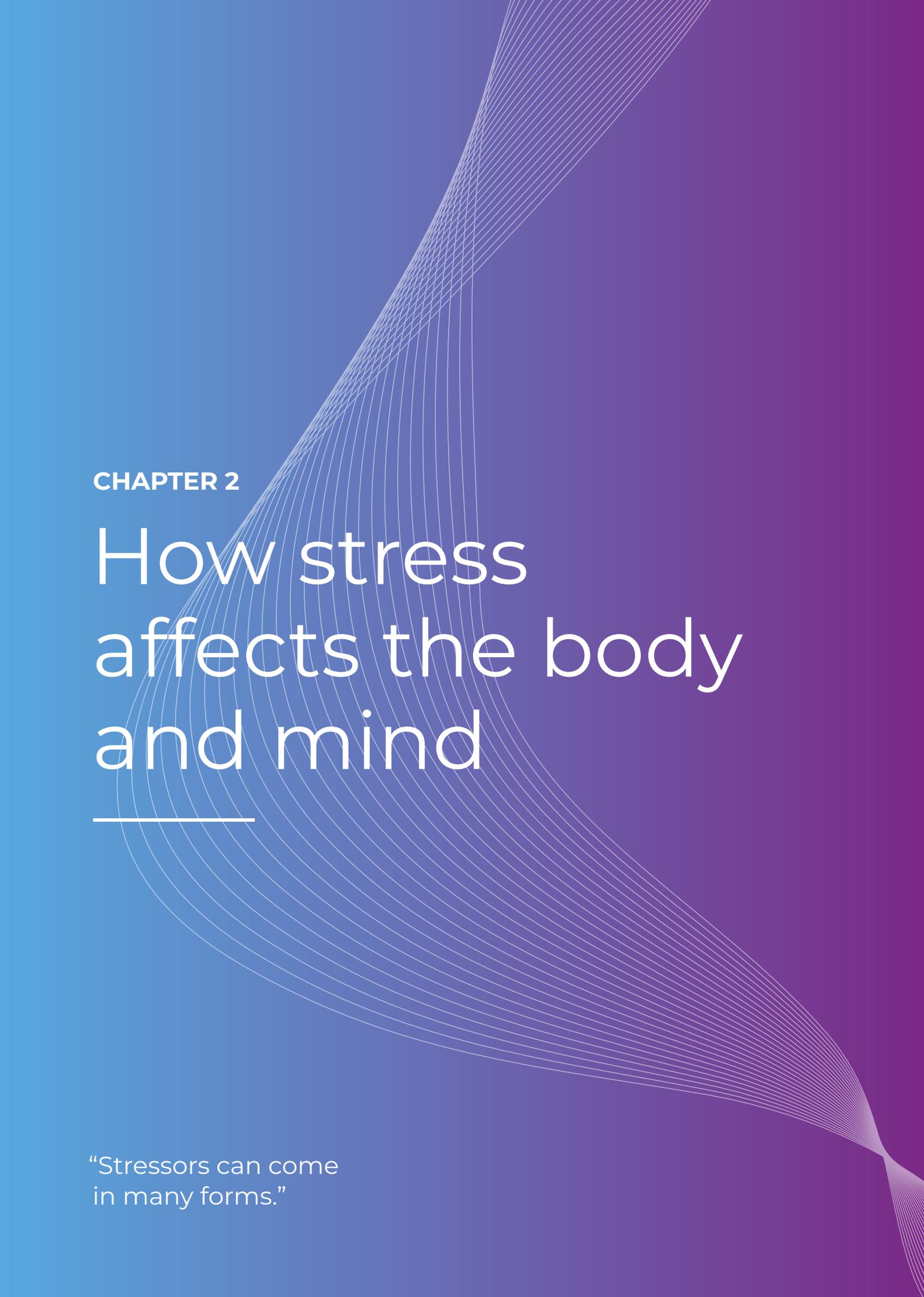
In a healthy body, all cells operate at their ideal frequency, just as nature intends it. In a body that is unbalanced, by contrast, some cells vibrate differently. They emit **electromagnetic waves** that are not optimal. Quantum biofeedback all comes down to exploring the different frequencies on which the human body operates and re-educating those frequencies if needed.

To **explore** the nature of a person's health problems, i.e. to find the cause of the imbalance, a quantum biofeedback device sends electric pulses throughout the body.



In so doing, it maps the body's stress reaction to over 15,000 voltametric signatures including muscle tension, heart rate, and brain waves that signal stress. Even stress related to allergies, conditions, and addictions can be spotted by a biofeedback device due to the frequency of the cells they affect.

In addition to exploring the nature of a person's health problems, quantum biofeedback devices are designed to re-educate the frequencies at which the body operates. They send a loop of electromagnetic waves through the body to **rebalance** the frequencies of certain cells, helping those cells return to their balanced state.



CHAPTER 2

How stress affects the body and mind

“Stressors can come
in many forms.”

How stress affects the body and mind

Stress is a natural response of the body to a demand or threat. When the brain detects danger, real or perceived, the body's defense mechanisms are rapidly and automatically activated in what is called the fight-or-flight reaction or the stress response. This is the body's way of protecting you and helping you stay focused, energetic, and alert. In emergencies, stress can be a life saver by giving you the strength to defend yourself or react quickly to avoid accidents. In other situations, stress can keep you alert during an important presentation or motivate you to study instead of watching TV, to offer just two examples.

Eustress

Stress can have both positive and negative effects on the human body and mind. Any type of beneficial stress – physical or psychological – is referred to as eustress, which produces a **positive response**. Eustress is usually short-lived, manageable, and exhilarating, and is perceived as motivating. It can push individuals out of their comfort zone and help them succeed in situations that require them to extend themselves and learn new skills.

Distress

Distress, by contrast, is the negative type of stress that causes individuals to feel overwhelmed. It can harm their mood and outlook, disturb their sleep, and trigger health problems such as depression and anxiety. Distress occurs when individuals feel they have more challenges in their daily life than they can handle.

Unfortunately, the nervous system does not distinguish between emotional and physical threats, which means that even everyday issues like disagreements, work, or money can trigger a response as strong as if someone were in a true life-or-death situation. The more the **emergency stress** system is activated, the easier it is to trigger, making it harder to turn it off. Frequent stress can lead to serious health issues and can become a semi-permanent state.

Chronic stress

When the body experiences long-term stress, it remains in a constant state of readiness for physical action. The lack of time to re-balance puts an overwhelming strain on the body, leading to a weakened immune system and physical health problems. Shockingly, research shows that up to 90% of illnesses and diseases, including but certainly not limited to high blood pressure, cardiovascular disease, and heart disease, can be caused by stress. Stress is also known to wreak havoc on the digestive and reproductive systems, and to accelerate the aging process.

Moreover, stress can rewire the brain, making individuals more susceptible to **mental health issues** such as anxiety and depression. That is why it is important to recognize the harmful effects of stress and take (proactive) measures to manage it. Practicing stress management techniques and seeking support can help you protect your physical and mental health and improve your overall well-being.

Stress as a spectrum

It is helpful to think of stress as a spectrum, with eustress and distress at opposite ends. Along with distress, the fight-or-flight response is at the far end of the spectrum. It occurs when an individual feels threatened or in danger, triggering the release of stress hormones that prepare the body for emergency action. However, a person's **individual perception** of stress influences whether they experience eustress or distress in a situation.

For example, if someone is worried, exhausted, and overwhelmed by an impending deadline, they may experience distress. Yet if they are excited about meeting the deadline and feel it will help their career, the stress they have may be more motivating and beneficial.

Examples of stressors

Stressors can come in many forms. **External** emotional factors, such as major life changes, work or school pressure, relationship difficulties, financial problems, and family responsibilities can all contribute to stress. Lifestyle factors such as **sleep deprivation** and **dehydration** can be sources of stress as well, alongside **internal** emotional factors such as pessimism, fear of failure, perfectionism, and low self-esteem.

Even the things we consume can affect our stress levels. **Fast food**, for example, contains various toxic ingredients such as partially hydrogenated fats, trans fats, artificial colorings, taste enhancers, appetite appeasers, aromatic agents, and sweetening agents that can make the body more susceptible to stress.

Infections from **bacteria, viruses, parasites, and fungi** can impair bodily functions, reduce nutrient supply, and slow down the immune system, leading to stress. Even nutritional deficiencies caused by disease, poor nutrition, or poor absorption can be significant stressors.

Prescription drugs have also been known to cause physical and mental disorders and conditions, thus causing stress in the body. **Heavy metals** like arsenic, mercury, and lead can also affect various organs and bodily systems.

Chemicals in cleaning agents, fungicides, growth hormones, herbicides, insecticides, paints, and manufactured products can trigger stress as they attack the immune system, impair breathing and oxygen intake, reduce nutrient absorption, and increase the acidity of bodily cells.

Hyper reactants and allergens like aromatic oils, automobile emissions, caffeine, dander, latex, pollen, pollution, specific foods, and tobacco smoke can suppress the immune system, reduce bodily functions and mental energy, and cause lethargy, thus contributing to stress.

Stress reduction

Stress is believed to disrupt the body's **electromagnetic frequencies**, causing disturbances in the resonance of cells and organs. It is a known fact that people who are overstressed produce different brain wave patterns from those who are not, and that ignoring natural stress and emotional signals can lead to more significant problems like chronic stress, anxiety, or pain.

That is where (quantum) biofeedback comes in. By attempting to return frequencies to their natural state, quantum biofeedback devices can address stress and electro stress patterns at the most fundamental physiological levels. They can help individuals develop **effective stress responses** and regulate their emotions by making them more aware of their body's functioning. Increased awareness of the mind and body can decrease anxiety, stress, depression, tension, pain, and emotional dysregulation, as well as improve sleep and overall health.

CHAPTER 3

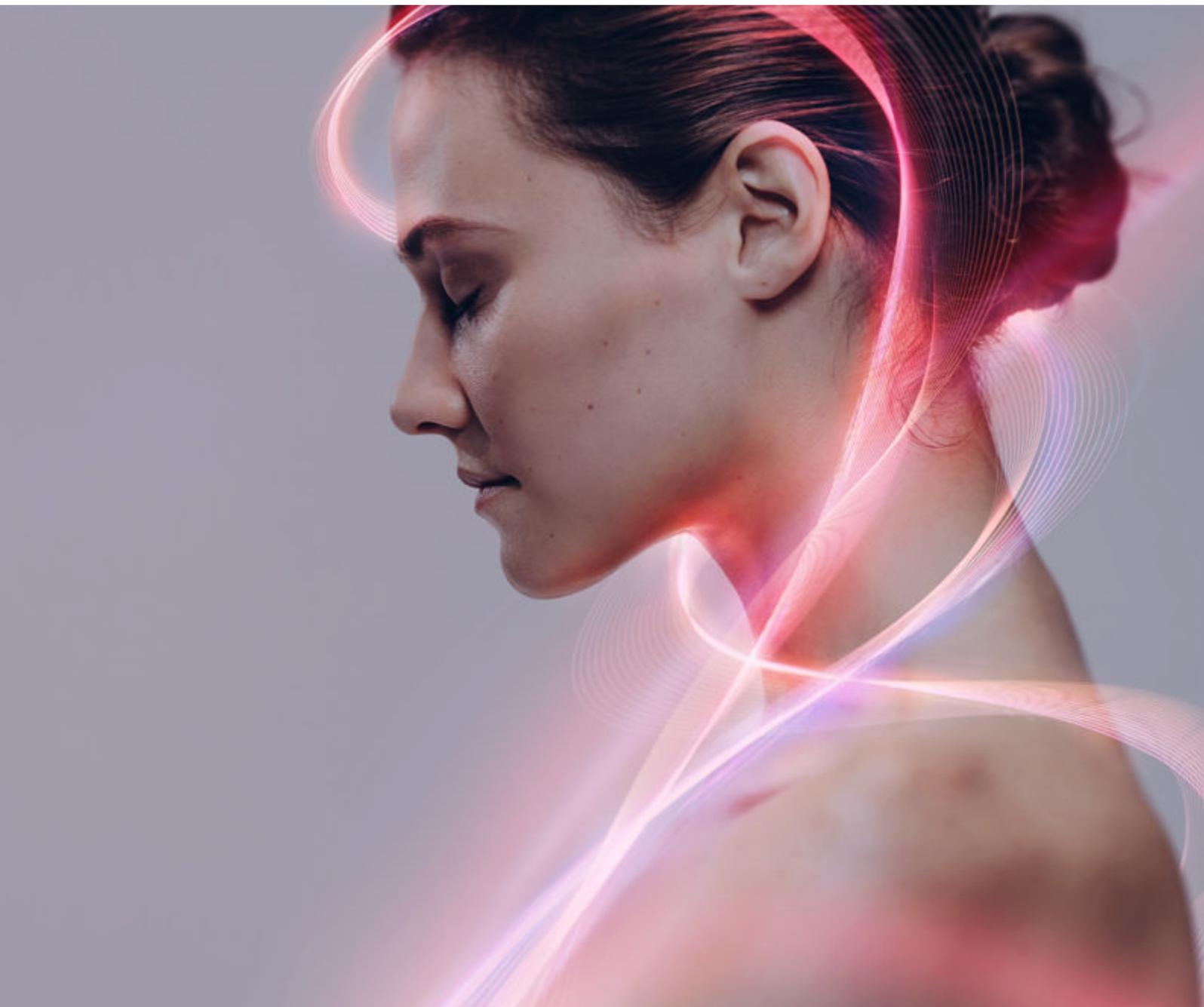
Biofeedback

“The benefits are almost endless.”

Biofeedback

Biofeedback is a technique that teaches you to control your body by measuring involuntary body functions (such as heart rate, breathing patterns, and muscle tension) and feeding that information back to you in real time. By sending electric pulses through the body, a biofeedback device can explore health-related issues and may even help cells that are out of balance to return to their original state.

Healthcare professionals specializing in various fields are noticing that biofeedback as a complementary healthcare practice is becoming more popular every year. While certainly not a recent development, it is currently making waves because of its scientific foundation and non-invasive approach.



The history of biofeedback

The concept of biofeedback has a **long history**. Various cultures and medical practices have utilized it for thousands of years. Throughout the centuries, scientists and medical professionals have

made significant contributions to the field, using **electrical impulses** to better understand the body and promote its natural healing processes.

46 AD

In ancient Greece, doctors Largus and Dioscorides observe that the electrical impulses emitted by **electric eels** in clinical foot baths alleviate pain and enhance blood circulation. They document the therapeutic effects of electrical currents on circulatory disorders, neuralgia, headaches, and arthritis.

1840-1860

Galvani's experiments lead to the use of Galvanic currents. England's **first electrical therapy** department is established at Guy's Hospital under Dr. Golding Bird. 1860 sees the emergence of faradic stimulation – a type of electrical stimulation therapy that uses a specific frequency and intensity of electrical current to stimulate muscles or nerves.

1920-1960s

Several scientists, including Royal Rife, Nikola Tesla, and Neal Miller, extensively research **biofeedback for healing wounds**. In 1929, George Lakhovsky publishes his book 'The Secret of Life', in which he concludes that cells have resistance, capacitance, and inductance, and are capable of resonating when subjected to a range of frequencies.

In the 1950s, Dr. Reinhold Voll's investigations pioneer electrical reactivity research, measuring changes in skin resistance at acupuncture points to show that the body electrically reacts to potentially harmful substances.

1700s

Many European physicians use **controlled electrical currents** from electrostatic generators to treat various medical conditions including pain, trauma, and circulatory disorders. Benjamin Franklin even offers electrostatic machines for pain management. During this time, Kratzenstein outlines the use of static electricity to address affected body parts, while Galvani, a professor of anatomy in Italy, experiments with the effects of electricity on muscular movement.

1891-1908

In 1891, Nikola Tesla outlines the medical use of high-frequency currents and develops the forerunner of longwave, shortwave, and microwave **diathermy devices**. These heat deep body tissues to promote healing and relieve pain. Von Berndt, Von Priess, and Von Zeyneck publish a paper in 1908 on treating joint disease with high-frequency waveform currents.

In 1959, the **Nobel Prize in Chemistry** is awarded to Jaroslav Heyrovsky for his discovery and development of the polarographic voltammetry methods of analysis, demonstrating that all chemical species (ions or molecules) have an energetic signature in the form of a voltammetric field.

1970s

Transcutaneous Electrical Nerve Stimulation

(TENS) is acknowledged as a viable method of pain management by America's Food and Drug Administration (FDA), and many American companies begin producing TENS devices. The 1970s is also when the first pacemaker is developed

2010-present

In recent years, advancements in technology and computing have enabled the development of more sophisticated biofeedback devices, as well as the integration of biofeedback into virtual reality and gaming technologies. This has led to the creation of **new forms of biofeedback**, such as neurofeedback, which uses EEG to provide real-time information about brain activity and help teach individuals to self-regulate their brainwaves.

Biofeedback is now also applied to various fields beyond healthcare, such as sports and performance training, stress management, and meditation. As the benefits of biofeedback become more widely recognized, it is set to grow even further as a valuable tool for **improving health and well-being**.

1980s

In 1985, Robert O. Becker publishes his groundbreaking book, **'The Body Electric'**, which challenges the established mechanistic understanding of the human body. Through his research findings, Becker sheds light on the healing process and reveals the vital role of electricity in the body's functioning.

Three years later, in 1988, the Voll electro-acupuncture energetic medicine device is registered with the FDA. Despite its one-dimensional measurement of skin resistance, this device is a significant step in understanding the **body's electrical properties**.

In 1989, the FDA registers **biofeedback Xrroid**, a trivector three-dimensional device able to both send and measure voltammetry. Used exclusively by QX WORLD, this innovative technology represents a major leap forward in the field of biofeedback, allowing for more accurate and comprehensive measurement of the body's electrical signals.

What's next?

Overall, the history of biofeedback is a testament to the human desire to understand and harness the power of the body's natural processes for healing and self-improvement. The contributions of many scientists, inventors, and practitioners over the centuries have led to the development of an increasingly sophisticated field that **holds great promise** for the future of medicine and human well-being.

Different types of biofeedback

There are several different types of biofeedback available, depending on the bodily function you want to measure and/or gain control over. Here is a brief overview of the most common types of biofeedback methods.

Respiratory biofeedback

- Focuses on breathing rates and patterns.
- Helpful for people experiencing anxiety.

Thermal biofeedback

- Focuses on body temperature (hands).
- Reduces or eliminates the effects of stress.
- Known to reduce migraines.
- Can relieve symptoms associated with Raynaud's disease.

Electroencephalography (EEG)

- Also known as neurofeedback.
- Monitors brain wave activity.
- Can help train the brain to stay focused for longer.
- Often used by people who have ADHD.

Electromyography (EMG)

- Looks at muscle tension.
- Commonly used to help detect neuromuscular abnormalities.

Electrocardiography (ECG)

- Focuses on heart rate and pulse.
- Can support people dealing with asthma, heart conditions, COPD, abdominal pains, anxiety, depression, ...

Electrodermography (EDG)

- Monitors the skin and sweat glands.
- Can support psychotherapeutic purposes.
- Commonly used to help people deal with anxiety disorders.
- Known to decrease excessive sweating.



Quantum biofeedback

At QX WORLD, we specialize in an advanced field of biofeedback called quantum biofeedback. The result of decades of research and development, our QUEX S® and QUEX ED® devices take biofeedback to a whole other level. The unconscious level, to be precise. Whereas traditional biofeedback devices measure a physiological response and simply feed it back to the conscious mind, quantum biofeedback takes things to a higher – or deeper – level by also addressing the **subconscious**.

Biofeedback can be useful for both exploratory and therapeutic purposes. Obtaining therapeutic benefits through biofeedback used to be quite demanding for users, as it would take a great deal of time and effort to master the necessary techniques. Quantum biofeedback technology rings in a new era where users can simply sit back, relax, and let the biofeedback device do (most of) the work.



What are the benefits of biofeedback?

Biofeedback provides very useful information about the mind and body. Based on this information measured by a biofeedback device, biofeedback sessions can teach you how to **take control of your physical and mental health**.

In other words, the benefits of biofeedback are almost endless. Let's list some of the most important ones.

Gain control over your health

Through continued sessions, you can use quantum biofeedback to adjust how your body and brain, as well as different parts of the brain, 'talk' to each other. Potential long-term results include increased focus and relaxation, relief of allergy symptoms and other kinds of mental and physical problems.

Non-invasive method

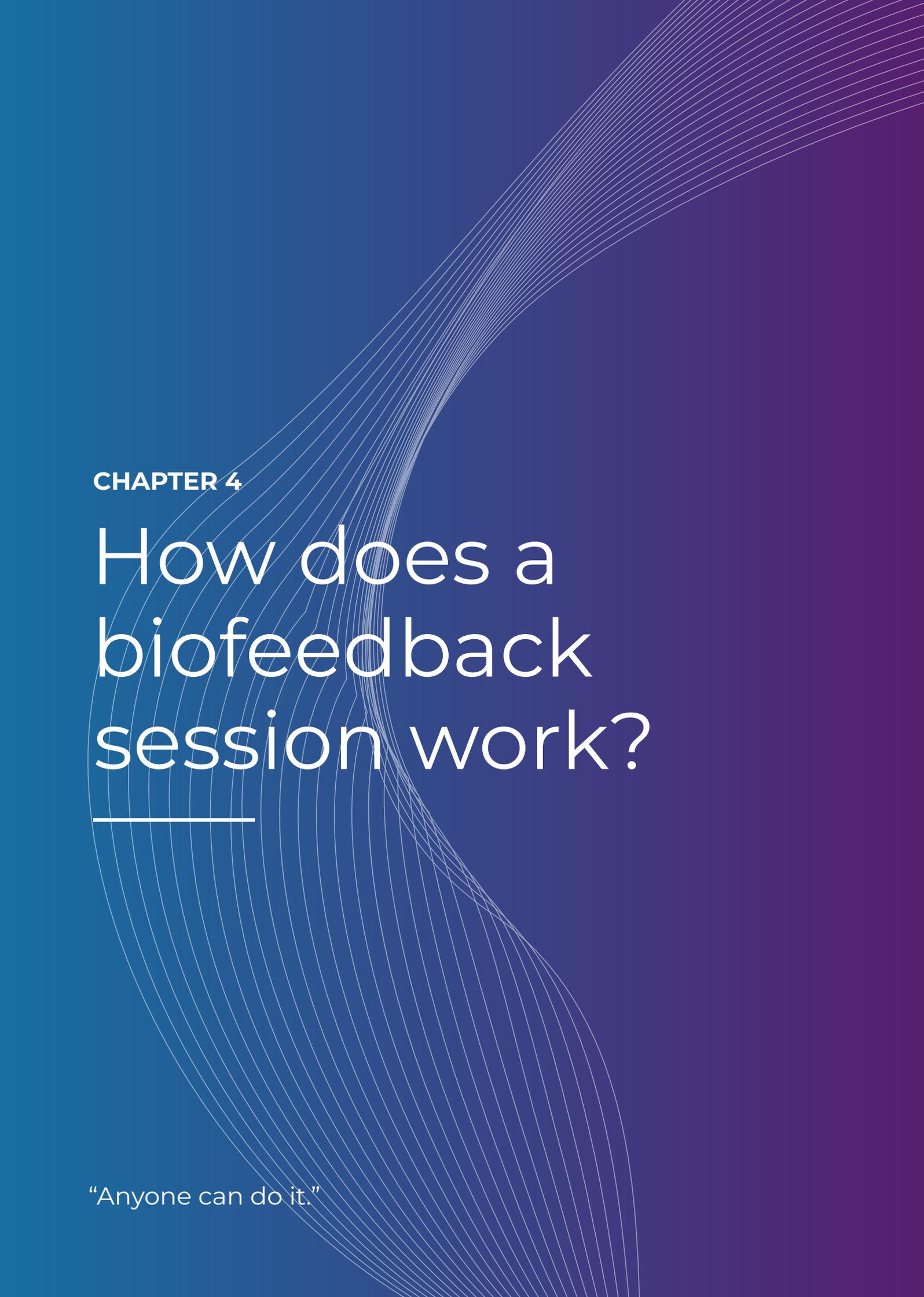
Just like other types of biofeedback, quantum biofeedback is non-invasive. The devices used consist of harnesses and/or electrodes which are painlessly placed on the skin. In other words, no drugs are involved.

Suitable for (almost) everyone

Quantum biofeedback is suitable for almost anyone. Regardless of their medical condition, both children and adults can reap the benefits. However, while quantum biofeedback in itself is risk-free, **people with pacemakers** form the exception to the rule as the electric current may interfere with their device. This does not imply that quantum feedback therapy is dangerous, though, as the electric current remains too low to cause any detrimental effects for people who do not carry a pacemaker. Still, it is advisable to consult with your healthcare provider before starting a biofeedback program.

A booster for other therapies

Quantum biofeedback sessions have been known to improve the effects of medication and various kinds of therapies, reducing and, in some cases, eliminating the need for medication entirely.



CHAPTER 4

How does a biofeedback session work?

“Anyone can do it.”

How does a biofeedback session work?

Biofeedback may sound complicated or hard to master, but anyone can do it. Let's zoom in on the four steps of a biofeedback session together, which are not at all difficult.

01

Lifestyle inventory

To personalize your biofeedback session for optimal results, the therapist will ask you about your lifestyle or **conscious SOC profile**. Questions may include how much exercise you get, how much and how well you sleep, how many hours you work, if you drink alcohol or smoke, how much water you drink, whether you take any medication, ...

02

Calibration

The next step is setting up the biofeedback device, also referred to as the calibration process. A **very subtle electrical signal**, so gentle that most people don't even feel it, is sent through the body to measure the body electric and to make sure the device has the **correct settings** for you.

03

Biofeedback

Once the inventory of stressors or SOCs is complete, the actual biofeedback part of the session starts. While you're still hooked to the biofeedback device, the practitioner has it run **specific software** based on the inventory of stressors created in the previous step.

Depending on your specific stressors, the program monitors your brain waves, heart rate, breathing, skin temperature or muscle tension using quantum algorithms. The information gathered is fed back to you – hence the term 'biofeedback' – on a monitor or, in some cases, through sound or light.

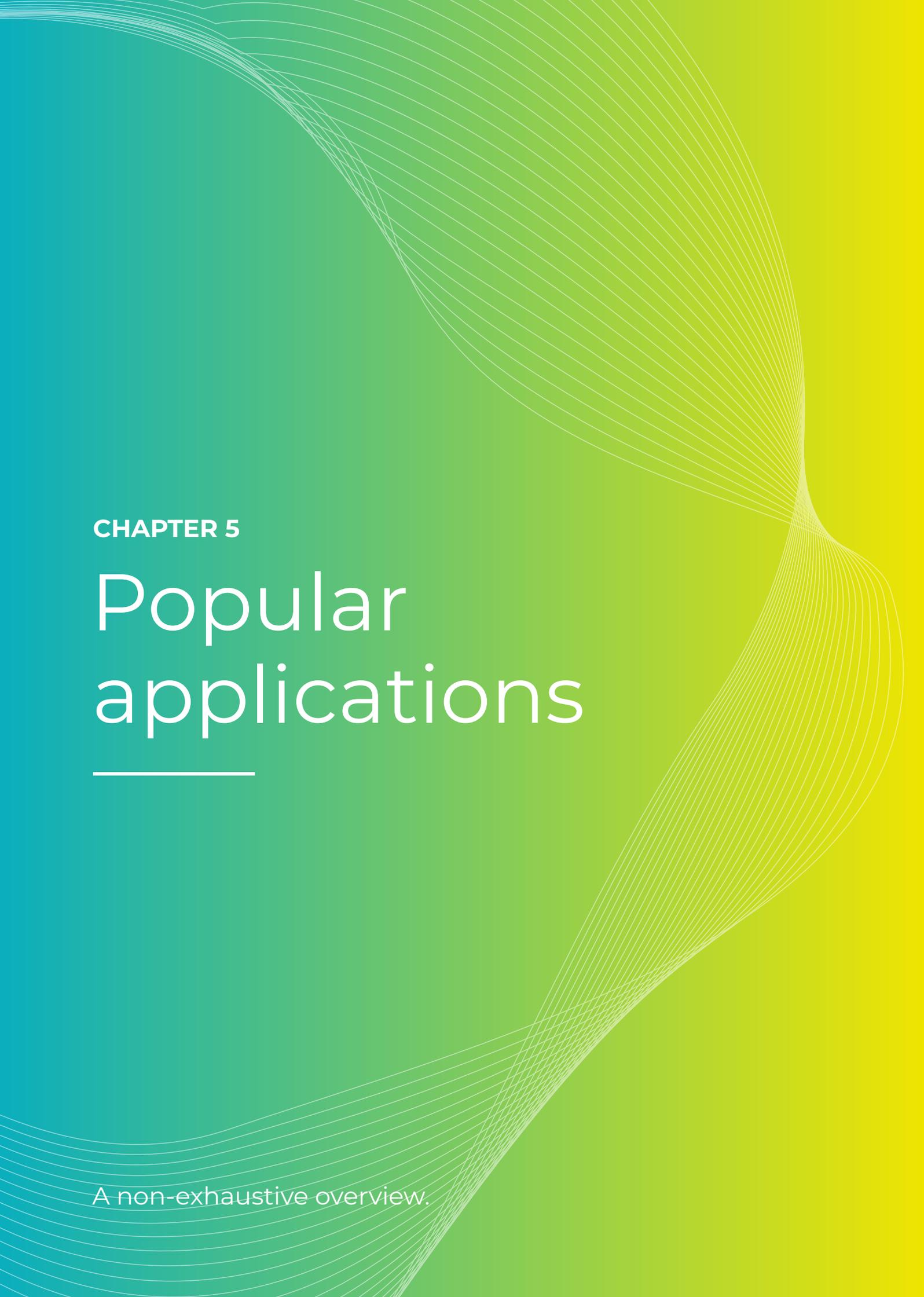
With the program running, the biofeedback therapist teaches you to make deliberate changes in your body and, by doing so, change the measurements at will. If the therapist uses a quantum biofeedback device, the device sets out to **activate the body's self-healing capacity** as well.

04

Debrief

Most biofeedback sessions take between thirty and ninety minutes, and end with a debrief. This report summarizes the feedback your body provided and contains **personalized lifestyle tips** important for reaching your health goals.

The number of biofeedback sessions needed varies from client to client, with most achieving optimal results in fifteen to thirty sessions.



CHAPTER 5

Popular applications

A non-exhaustive overview.



Popular applications

Because there has been little financial backing by the healthcare industry so far, biofeedback technology has had a tough time finding its way to a mainstream audience. Fortunately, change is happening.

Biofeedback is becoming more recognized by doctors as **research continues to reveal** an increasing number of conditions for which it can be effective. Below is a (non-exhaustive) overview of popular applications.

ADHD / Learning difficulties

In children and adults with ADHD and certain types of learning difficulties, the frontal and parietal lobes – the parts of the brain that enable us to organize, concentrate, and process sensory information – work differently. In 2020, Arns deemed biofeedback a valid method to help children with ADHD. Specifically, quantum biofeedback devices attempt to **reset brainwaves** that are out of balance.

Here's how it works. While hooked to the biofeedback device, the client tries to complete a task that requires special focus, for example trying to make a video pause by using brainpower alone. Depending on how the client performs, the video responds differently. Through repeated practice, the brain figures out how to **concentrate** for longer periods of time.



I was sure that there was no way I would be able to sit in a chair for an hour, especially not with my head and limbs hooked up to a biofeedback system. But it worked. My weekly triathlons to help me cope with my ADHD have now become a six-weekly affair.

Thomas M. (43)



Allergies and asthma

Allergies are essentially an overreaction. They occur when the immune system is out of balance. To tackle a 'harmful' substance, the body produces more antibodies than needed because the immune barriers don't function properly or the micro-organisms living at those barriers are out of sync. Research by Jaber suggests that quantum biofeedback devices can help **re-educate the immune system**.



As I see it, there is no restriction to the types of animals that can benefit from a biofeedback session. Because it is harmless and painless, there is no need to hesitate to use a biofeedback device on them. We can safely assume that humans and animals share the same experience when it comes to quantum biofeedback. In terms of results, I've seen hundreds of animals over the years whose medication started to work more effectively thanks to repeated biofeedback sessions.

Margrét Margétardóttir



It happened very gradually, but I am very happy to say that my hay fever symptoms completely vanished after about twenty weekly sessions. I never thought I would be able to go outside on a lovely summer day and not have to blow my nose all the time without resorting to pharmaceuticals. But here I am, completely free of hay fever symptoms and without drugs in my body. To my surprise, and much to my wife's joy, even the snoring has stopped.

Péter P. (40)



Animal health

Biofeedback can not only work wonders for humans but for animals as well. For them, biofeedback can act as a **mouthpiece**, telling their owner what is troubling them. Biofeedback can even help us understand what changes an animal may need to become healthier. There are multiple types of biofeedback training out there, but it is **quantum biofeedback entrainment** that proves particularly effective with various kinds of animals.

Beauty treatments

Biofeedback is becoming increasingly popular for beauty treatments, and for good reason. Essentially, the microcurrent – an electric current delivered at a rate of 1 microampere – created by a quantum biofeedback device activates the skin's regeneration processes. Extremely beneficial for the skin, the current boosts blood circulation and **collagen** production. It also helps heal damaged tissue and remove toxins. Ultimately, microcurrent can resurface the skin, **filling wrinkles** and creating a **lifting effect** by stimulating cell growth. A study by Dr. Márta Simon shows that, combined with biofeedback, the effect of certain natural cosmetics was much improved.



I recently conducted a study on the use of microcurrents in combination with natural cosmetics. The results were astounding. We observed a group of women between the ages of 35 and 67 with various skin types. By the end of the trial, subjects with moderate wrinkles saw an average of 26% improvement, and women with more severe facial lines noticed at least 20% improvement.

Dr. Márta Simon



Bedwetting / incontinence / constipation

For people suffering from constipation, biofeedback can re-educate the **muscles** and help them gain full control over this otherwise partially involuntary bodily function, Willis concluded in a 2004 study. Conversely, as Ebiloglu pointed out in 2016, biofeedback can also re-educate the body and brain to improve bladder and bowel control in adults who suffer from incontinence and children who tend to wet the bed at night.

Blood pressure

Biofeedback sessions can also help reduce blood pressure, according to a 2021 study by Costa Vital. Also worth mentioning is that the **Food and Drug Administration (FDA)** has approved biofeedback devices for lowering blood pressure.

Decision making

Research shows that **stress** negatively influences the decision-making process. It alters the homeostatic equilibrium, narrowing our attention span and inhibiting our **ability to make rational choices**. When we are under stress, the decisions we make tend to be based on an incomplete evaluation of the information at our disposal. A study by Jerčić & Sundstedt shows that biofeedback, specifically quantum biofeedback, can increase your ability to self-regulate stress-related psychological phenomena, and consequently make optimal decisions even in a crisis.

Migraine

Migraines are a neurological condition that come with intense headaches and possibly other symptoms including but not limited to nausea and sensitivity to light. While no official cure for migraine exists yet, [Šecić, Cvjeticanin & Bašić Kes](#) found that the symptoms can be managed through biofeedback.

Biofeedback mostly focuses on the type of migraine attacks **triggered by stress**. By learning to sense physical signs of stress early on and how to relax their body during such events, migraine patients can reduce the severity of migraine attacks or even prevent them from occurring.



Pain management

Many healthcare professionals believe that there is a universal link between chronic pain and **raised stress** levels. It is this common link that is known as 'the vicious circle' of chronic pain, where stress and pain feed into one another. Stress hormones can not only cause muscles to tense, but also affect the body's ability to control inflammation, making chronic pain feel even worse. The key to effectively dealing with chronic pain lies not so much in taking drugs as in acknowledging and breaking that link.

Several studies including one by [Chrousos & Boschiero](#) in 2019 show that biofeedback can help with [chronic pain](#), while improving various pain-related issues such as lower back pain, abdominal pain, joint pain, ... and even fibromyalgia, in people of all ages.

“ I thought it would be hard, but you get to watch your brain's reactions on a monitor the whole time. So, you can immediately see if what you are doing works. **Éva C. (50)** ”

By teaching us how to identify any abnormal tightening of the muscles and **how to relax** those muscles, biofeedback sessions can help relieve discomfort both as a standalone and a complementary intervention.

Sleeping problems

Lambert-Beaudet confirms that people suffering from **insomnia** and other sleep-related issues such as **sleep apnea** can benefit from biofeedback sessions that focus on relaxation, raising their awareness of exaggerated physical stress reactions and teaching them how to respond.

Smoking and other addictions

Did you know **nicotine** calms you down? Some doctors even compare it to popular tranquilizers such as Valium. If you've ever tried to quit smoking yourself, it shouldn't come as a surprise that smoking and anxiety go hand in hand. Just like most drugs, however, nicotine leaves you feeling worse once you stop using it. While smoking may relax you, trying to overcome smoking is likely to make you feel anxious. It is only when you grasp this vicious circle that you can truly start to try and break it.

Because biofeedback teaches you to mimic the relaxing effect of nicotine on your own, it becomes much easier to make your desire to smoke decrease. A study by Pandria et al shows that biofeedback can indeed support people trying to quit smoking. The same principle applies to other types of addiction since most addictions tend to be rooted in attempts to **cope with stress**.

Stress and anxiety

Biofeedback enables you to better handle stress and anxiety, Biondi & Valentini conclude in their 2004 study. If the biofeedback therapist uses a quantum biofeedback device, handling stress and anxiety becomes even easier as quantum biofeedback focuses on the **unconscious** parts of the organism and the autonomic nervous system. Specifically, the therapist will teach you to **get in touch with your body and brain**, and become aware of how your body operates when under pressure. Because you are better able to sense when your stress and anxiety levels are about to surge, you also become more efficient at nipping those unpleasant feelings in the bud.



I'm coping much better with stress now. Problems no longer seem unsolvable. It's as if my brain has been completely re-wired.

Ádám S. (27)



CHAPTER 6

Biofeedback devices

“Exploring health from
all possible angles.”

Biofeedback devices

In the world of biofeedback, the QUEX S[®] and QUEX ED[®] devices developed by QX WORLD set the standard for at least five reasons.

01

Unparalleled research and development

The result of more than 35 years of research and development, our QUEX devices are reliable, safe, and efficient. Compared to other biofeedback devices on the market, they also support better visualizations with deeper insights.

02

Quantum biofeedback technology

QUEX S[®] and QUEX ED[®] differ from other biofeedback devices in that they run on quantum biofeedback technology. Not only do they explore the body for stressors or SOCs (Suppressions and Obstructions to Cure), they also attempt to rebalance the unstable frequencies of certain cells by means of electric pulses that trigger those cells to return to their original state autonomously, i.e. by stimulating their capacity for self-regeneration.

Unlike basic biofeedback technology, quantum biofeedback devices do not require you to alter certain automatic bodily functions yourself. Quantum biofeedback devices send out electromagnetic waves that do (most of) the work for you.

03

The complete package

QX WORLD has invested over ten years of intensive R&D and many years of strong commitment to the healthcare industry to develop OMNIS[®]. Installed on over 12,000 biofeedback devices worldwide and continuously enhanced, maintained, and improved for maximized efficiency, OMNIS[®] is a field-proven solution that uses and links multiple known perspectives in complementary health knowledge. This software boosts operational efficiency for therapists and enables them to give more in-depth advice.

In other words, therapists do not need to rely on a combination of energetic devices to diversify their offer. Using only one device, they can **explore** their clients' mental and physical health from all possible angles, and offer them a complete package in terms of **frequency re-education** as well.

On top of that, OMNIS[®] comprises a variety of optional modules, each with its own purpose and extra benefits. Popular examples include:

- **Body Viewer**

This module offers a 3D experience, with a mix of vibrational, auditive and visual stimuli that actively involve the client.

- **Disease Dictionary**

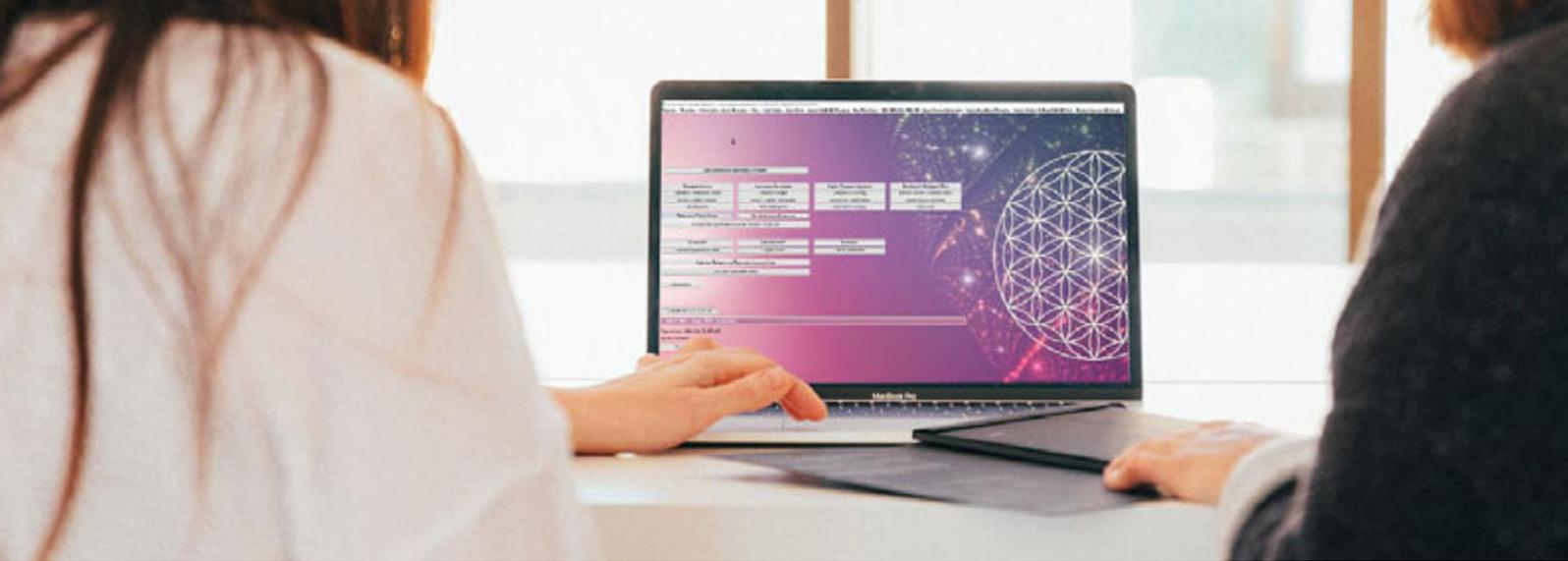
Biofeedback therapists can simply click on a condition to access a whole list of natural solutions to address it.

- **Biofeedback Interface Graphics (BIG)**

As a therapist, you can follow your client's reactions, the device output, the harness connection, and valuable information taken from the OMNIS, all at the same time.

- **Degen Scan**

Find stressors and work on eliminating them. From multiple session threads to examinations focused on emotional versus physical causes, the Degen Scan has it all



- **Iridology**

Address stress factors in the face, eyes, gums, and teeth as well as hand-eye coordination, general anatomy and much more. Choose your protocol and let your QUEX device carry out the rest.

- **Smart Report**

Everything therapists need for engaging with their clients and building up their practice. Session information is now simple, visual, and captivating for all.

More specifically, Xrroid® scans take the **voltammetric signatures** of thousands of items, sending them through the body to measure response reactions. The scan tunes into the body's physiological stress levels so that this information can be used to balance the physiology, and consequently trigger a decrease in those stress levels, resulting in improved physical and emotional wellbeing.

Ultimately, the stress reactivity scores are mapped on a numeric scale from strongest to weakest, which are then compared with the original baseline or normal range of responses. In short, the Xrroid® scan offers a comprehensive overview of **stress reactivity** to many aspects of life.

04

Xrroid® scan

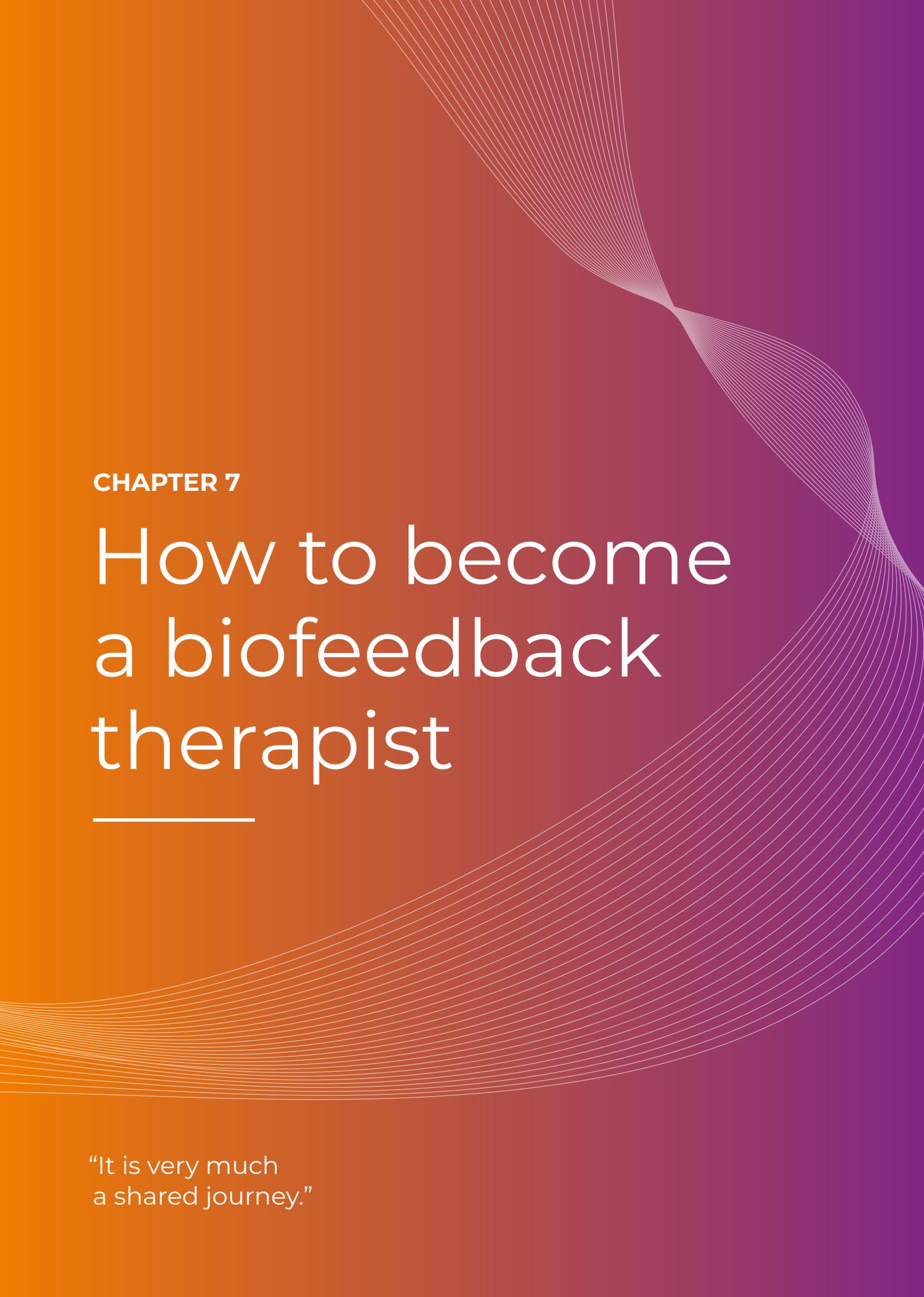
As well as exploring possible stressors or SOCs (Suppressions and Obstructions to Cure) and offering frequency re-education, the QUEX ED® and QUEX S® are the only biofeedback devices with **licensed technology** to perform Xrroid® scans. This proprietary technique allows practitioners to make very specific suggestions in terms of complementary healthcare.

Xrroid® scans measure the body's electrical parameters of voltage, amperage, resistance, hydration, oxygenation, and pH (or VARHOP for short) as well as stress in response to thousands of trivector signatures at biological speed.

05

Like learning to ride a bicycle

The results achieved with the help of a quantum biofeedback device can be permanent. It's not unlike learning to ride a bicycle, as **new pathways in the brain** are created through repeated practice. Even years after completing the program, the brain will remember how it can use these pathways to concentrate for longer periods of time.



CHAPTER 7

How to become a biofeedback therapist

“It is very much
a shared journey.”

How to become a biofeedback therapist

Biofeedback is used in different kinds of professions. Many biofeedback therapists are also counsellors, teachers, psychologists, health and lifestyle coaches, and so on. If you're interested in getting started with biofeedback, you must become **certified by an accredited organization**, by having completed a comprehensive course in biofeedback.

One of the organizations organizing **official training in biofeedback** is the QX World Health Academy, of which more than 3,750 complementary healthcare practitioners are a member. Next to mastering all the features of the multifunctional QX biofeedback devices, students of the QX World Health Academy develop a deeper understanding of how the brain, metabolism, endocrine system, and immune system interact.

Why include biofeedback in your offer?

Biofeedback has many advantages for people who are struggling with their health. Yet healthcare providers, too, have plenty of reasons to include biofeedback in their offer.

A shared journey

Any therapist determined to help improve their clients' health knows that doing so effectively takes patience, attention, and care. An important attribute of biofeedback is that it allows for a very **personal approach**. After all, a biofeedback session is always tailored to the individual client. A lot depends on trust and communication, which means that, after continued sessions, seeing improvements is just as rewarding for the therapist as it is for the client. In that sense, it is very much a shared journey.

Broader approach to health issues

Working with biofeedback as a healthcare provider can also broaden your approach to health issues, as biofeedback is **non-invasive**. The devices used consist of harnesses and/or electrodes which are painlessly placed on the skin. Moreover, no drugs are involved (except for medication which the client may be taking outside of therapy).

Because the **risk of unwanted side effects is low**, biofeedback sessions are especially recommendable for people who seek relief from a physical or mental condition yet want to avoid taking drugs or who are non-responsive to drug treatments.

Additionally, biofeedback enables therapists to get a more detailed understanding of a client's health, both physically and mentally, and of possible causes of a certain condition. A biofeedback device always looks at **the body as a system** rather than taking a siloed approach.

Booster for traditional healthcare

Biofeedback can also serve as a **supplement to traditional healthcare**, boosting its benefits. Specifically, it has proven very helpful in preventing and dealing with conditions including, but not limited to, anxiety, depression, chronic pain, and insomnia.

The biofeedback therapist as an educator

Quantum biofeedback plays a vital role in educating individuals about leading a healthy lifestyle and practicing preventative healthcare. Many people who seek the help of a biofeedback practitioner lack knowledge and understanding about caring for their bodies and overall wellness. Practitioners therefore have the **responsibility to educate and support** clients on their journey towards discovering the power they can have over their own health.

Suppressions and Obstructions to Cure (SOC)

Conducting the Suppression and Obstruction to Cure (SOC) **interview** is crucial at the start of the first biofeedback session with your client. It is the first step towards achieving optimal wellness and preventing chronic health problems, enabling individuals to better support their body's natural healing processes and improve their overall health and well-being.

SOCs are factors that may impede the body's natural healing process, leading to chronic or recurring health problems. They can include **physical, mental, or emotional stressors**, such as poor nutrition, lack of exercise, inadequate sleep, unresolved trauma or emotional issues, and exposure to toxins. SOC's can also include **beliefs, attitudes, and behaviors** that may hinder the body's ability to heal itself, such as negative self-talk, self-sabotaging behavior, and lack of self-care.

The SOC interview in the **OMNIS program**, which I will discuss later in the chapter on biofeedback devices, is specifically designed to help biofeedback practitioners identify and address these factors with their clients.

Sharing information

As a practitioner, you can encourage clients to educate themselves, too, on various health and wellness topics such as nutrition, sleep, relaxation, and exercise. Attending biofeedback events and taking regular classes is a sure means of gathering **supportive materials** which you can share with them to aid them in their journey towards self-realization, self-responsibility, and better health.

Maintaining distance and empathy

Maintaining a certain distance while remaining warm and approachable is essential when working with clients. Practitioners need to have empathy for their clients' situations and believe in their ability to overcome and change their circumstances. It is crucial to **distinguish between sympathy and empathy** and put yourself in your clients' shoes to understand where they are coming from.

If you feel you lack communication and educational abilities, or if you want to improve your emotional **awareness overall**, you can consider enrolling in an adult educational program that focuses on teaching, communication and psychology.

A three-way collaboration

Working with the biofeedback device and the OMNIS program is a collaboration between you, the client, and the device. It is vital to explore and get to know your device and the program thoroughly to develop a trusting relationship with it. However, most biofeedback experts will emphasize that the device merely offers a second opinion, and warn that practitioners should not let the device deskill them. Always trust in **your own abilities** and intuition, using the indications the device gives you as an aid.

CHAPTER 8

Three lives transformed

“Unforgettable journeys
with biofeedback as a guide.”

Three lives transformed



Thomas

Neurologist Dr. Márta Simon sees clients of all ages at her practice. One of them is triathlon enthusiast Thomas (43), a contractor living in Mogyoród, Hungary. At one point, his struggles with ADHD became so severe that his family life started to suffer. While skeptical of biofeedback sessions at first, Thomas now feels more relaxed and focused than ever. Much to his family's joy, his weekly triathlons have now become a six-weekly affair.

Weekly triathlons

Thomas has a very busy life. Extremely busy, even. Being a contractor, he's always traveling all over the country, and his ADHD at one point was getting so bad that he had to take on weekly triathlons just to get through the days. His wife Elena was unhappy with him almost never being home, and his two sons Endre and Viktor were missing their dad. It was Elena who persuaded Thomas to try biofeedback as a replacement for the extreme exercise he was doing.

ADHD affects all ages

Contrary to popular belief, ADHD is not a typical children's condition. While many children are diagnosed with secondary ADHD due to a sedentary lifestyle and other environmental factors (including poor nutrition and too much screen time), primary ADHD comes down to genetics and is therefore not age-related.

Coping mechanism

To fully understand Thomas' problem, it is important to know that in people with ADHD, the body craves something that can give the brain a dopamine and adrenaline boost. While many ADHD patients manage to carry on without a coping mechanism, others are prone to developing addictions. Some turn to substances such as nicotine or alcohol, for instance, or adopt certain habits that mimic the effect. In Thomas' case, his coping mechanism consisted of extreme exercise.

Brainpower

During their biofeedback sessions together, Dr Simon hooked Thomas up to a biofeedback device monitoring the brainwaves of his frontal lobe. Meanwhile, Thomas was given tasks that required special focus to complete. For example, he watched videos that were connected to the biofeedback device, and had to try and make the images stop moving by using brainpower alone.

Through repeated practice, Thomas' brain figured out how to concentrate for longer periods of time. At the same time, the waves sent out by the biofeedback device had a relaxing effect on him.

Favor to his wife

Thomas was not a believer at first. But he came to Dr. Simon anyway as a favor to his wife. He was sure that there was no way he would be able to sit in a chair for an hour, especially not with his head and limbs hooked up to a biofeedback system. But he found it so relaxing that, during his first session, he dozed off after five minutes.

Iron Man Race

As well as feeling more relaxed overall, Thomas now spends much more time with his wife and their two sons. Instead of weekly triathlons, he now does one every six weeks on average. And he's even become better at them, too. Thomas asked Dr. Simon to help him prepare for the Iron Man Race, which he recently completed with higher scores than he had ever achieved before. "A race like that not only requires physical strength but mental energy as well," he says.



A lady from Scotland

Some years ago, Margrét Margétardottir was approached by a wonderful lady from Scotland asking for a biofeedback session. This lady had been experiencing diarrhea for over three years, and it had turned her life into a nightmare. Chronic diarrhea made her rush to the restroom after each meal. She felt it was affecting her job and she did not trust herself going out either. She skipped birthdays and dinners with friends, and felt scared up to the point of exhaustion.

Chemotherapy

A few days before arriving at Margrét's practice, this lady from Scotland had one of many doctor's appointments. She was asked to consider chemotherapy, just to see if it would help, even though she had not been diagnosed with cancer. But she decided to wait and try a biofeedback session with Margrét first.

Bowel flora and parasites

So, this lady eventually came in and had her session. Her stressors proved to be much related to her bowel flora and parasites, and that didn't surprise Margrét at all. The kidney imbalances she had were, simply put, linked to dehydration. Margrét directed the session, carefully focusing on possible parasites and detoxing, finishing with a so-called AutoZAP protocol.

A lot to talk about

As a biofeedback therapist, Margrét finds it important to educate clients about their options to lead a healthier life. That's why she always ends a biofeedback session with some homework, in the form of tips the client can follow. In this case, she suggested a 10-week detox, for all major organs to get rid of potential parasites in the gut, in addition to drinking more water and a diet that included probiotics – which the lady turned out to have never even heard of before – and micro minerals, to name but a few things.

In addition to physical health, Margrét also focuses on her clients' mental health because they are intrinsically linked. Emotions associated with the large intestine include sadness and grief, so she and the lady from Scotland had a lot to talk about as their sessions continued to go deeper.

A whole new person

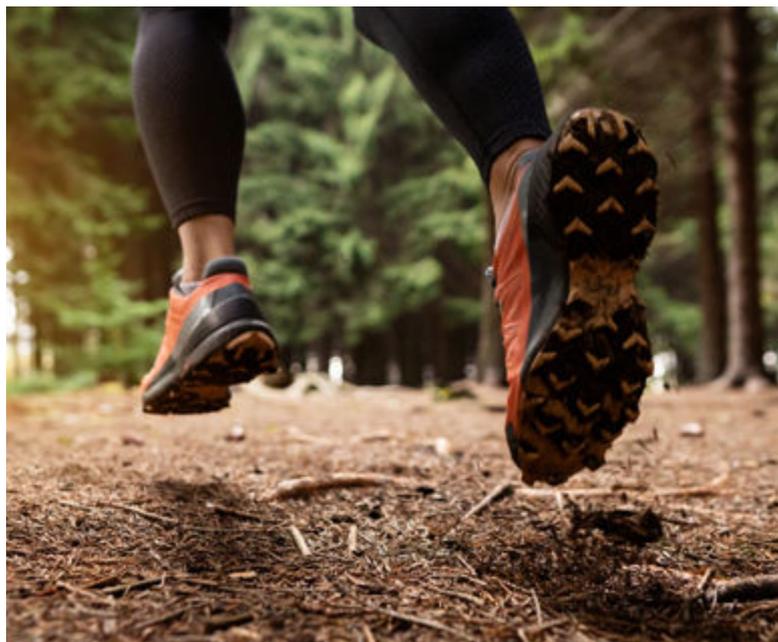
The day following her first session was the first day in three years where this lady did not experience diarrhea. Three sessions in, she felt like a whole new person: happy, relieved and ready to grab life by the horns again. Eventually, even her kidneys started to show signs of recovery.

Life-changing decisions

Deciding to try biofeedback before taking drastic health measures was the lady from Scotland's first life-changing decision in a series of many. To this day, she and Margrét continue their lifestyle and counselling sessions, and she has made some very important choices in the emotional department, too. Everyone including myself can see she's thriving.

Unexpected doors

This story goes to show that biofeedback can help you make better decisions in numerous ways. It opens so many doors, often unexpected, that help us learn about ourselves, to take better care of ourselves, and to trust our body in its capacity to self-heal. Biofeedback can empower anyone who is motivated to take better and more focused decisions, for the time being but also with potential future developments in mind.



Ádám

When Ádám S., a 27-year-old customer relations advisor living in Esztergom, Hungary, first arrived at Dr. Sara Balla's practice, he – and his wife – hadn't had a good night's rest in months due to his sleep apnea. Ádám's somnologist had recommended wearing a CPAP device at night, but he did not feel comfortable with it at all. Thanks to regular biofeedback sessions with Dr. Balla, Ádám is sleeping much better and – much to his wife's relief – has stopped snoring, too.

Snoring and panting

In the summer of 2018, Ádám started feeling exhausted and low on energy, even though he spent 8 to 9 hours in bed. He would wake up with a sweaty neck every single day. Because his snoring was so bad, his sleep apnea began to affect his wife's sleep as well. To make matters worse, she also noticed that her husband would regularly stop breathing in his sleep, followed by even louder snoring and panting, which obviously concerned her very much.

Trouble at work

Ádám did try wearing the CPAP mask his doctor had prescribed, but it just felt so uncomfortable to him, as you can imagine. He hated the idea of having to wear that mask and machine for the rest of his life to avoid further symptoms.

Moreover, because Ádám would wake up feeling very tired in the morning and continue feeling sleepy throughout the day, he was having trouble concentrating at work. His manager warned him that if he continued making mistakes they would have to let him go. So, Ádám started to think... "What if I lose this job? I won't be able to pay my mortgage without it. What will my life look like then. What will it do to my wife?"

That, not to mention seeing his wife become increasingly worried about his health, gave him the final push to book a biofeedback session with Dr. Sara Balla.

What causes sleep disorders like sleep apnea?

What exactly causes sleep disorders is hard to say as each case is different. While insomnia is almost always connected to stress and anxiety, it is not entirely clear whether it can cause sleep apnea. In many cases, anxiety-related insomnia comes down to overthinking due to a fear of losing control. As far as sleep apnea is concerned, being overweight is certainly a risk factor.

Stress management

Fortunately for Ádám, Dr. Balla knew that combining stress management techniques with a healthy diet and light exercise has been proven to be very efficient in helping patients who struggle with sleep apnea. Using a biofeedback device that measures heart rate, breathing patterns, and even brainwave activity, Dr. Balla was able to show Ádám exactly how his body operated.

It helped him to sense when his stress and anxiety levels are surging, and how to act on them. By improving his ability to let go of his worries, it also became easy for him to fall, and stay, in a deep sleep.

New pathways

Because Ádám's weight made him more prone to sleep apnea, Dr. Balla also addressed his diet. Her biofeedback device hinted that Ádám's body could benefit from a diet free of gluten, sugar and lactose. She also used her biofeedback device to attempt to create new pathways in Ádám's brain by using frequency-specific microcurrents to re-educate the cells that make up his emotional processing system.

Re-wired

Ádám stopped snoring already after the first appointment. His breathing while asleep also returned to normal and he lost 10kg within just 3 months.

Can biofeedback help with weight loss?

Biofeedback can certainly help with weight loss, because obesity is often a result of food addiction. For such people, food has a relaxing effect not unlike the effect nicotine has on people who smoke.

Now that he has completed all his sessions, Ádám wakes up feeling fresh and full of energy, too. "I'm sleeping so much deeper now," he told me. He also copes much better with stress. For the first time in months, he does not see problems as unsolvable anymore. "It is as if my brain has been re-wired completely," he says.

CHAPTER 9

FAQs about biofeedback

There is so much to discover.



FAQs about biofeedback

As (quantum) biofeedback continues to find its way into mainstream healthcare, many people continue to find their way to QX WORLD with all kinds of questions about this amazing technology. I would like to use this opportunity to answer the ones people most frequently ask. But please don't hesitate to [contact](#) our experts for more information. I recommend keeping an eye on our [blog](#) and [videos](#) as well to keep up with the latest innovations.

Is biofeedback evidence-based?

Evidence supporting biofeedback only continues to increase. So much so that the medical world, which is normally not so eager to embrace alternative methods, is now starting to see the incredible potential of biofeedback technology for what it is.

What health problems can biofeedback help to address?

Biofeedback has been proven to be effective in improving both mental and physical health. While biofeedback does not diagnose or replace existing treatments, it can help to address a wide range of [conditions](#).

For instance, it is certainly worth looking into if you suffer from [allergies](#) (including hay fever), digestive problems, addiction (including [smoking](#)), [stress and anxiety](#), depression, schizophrenia, ADHD, ...

Does biofeedback have any side effects?

Rest assured that (quantum) biofeedback is perfectly safe and comes with [no side effects](#). The voltage used is so low that most people don't even feel it. If they do, they describe the sensation as warm and pleasant. However, it is recommended to steer away from (quantum) biofeedback if you carry a pacemaker.

Is biofeedback suitable for children?

Biofeedback is suitable for people of all ages who are eager to learn about their bodies and improve all aspects of their health. Among other mental, emotional or behavioral disorders, biofeedback has been proven to be especially beneficial for people dealing with the increasingly prominent diagnosis of [ADHD](#), primarily associated with children. Biofeedback can even be considered a fun exercise for children, which has many essential benefits, such as reducing anxiety and stress levels, alleviating chronic pain, and gaining a sense of control.

Why should healthcare providers include biofeedback in their offer?

Working with biofeedback as a healthcare provider can broaden your horizon in approaching health issues, as biofeedback is **non-invasive**. The devices used consist of harnesses and/or electrodes which are painlessly placed on the skin. In addition, biofeedback enables therapists to get a more detailed understanding of their clients' state of health, both **physically and mentally**, and possible causes of certain conditions. Biofeedback devices always look at the body as a system rather than taking a siloed approach. Biofeedback can also serve as a supplement to traditional healthcare, acting as a **booster** to increase its benefits. Specifically, it has been proven that biofeedback therapy can be very helpful in preventing and dealing with conditions including but not limited to anxiety, depression, chronic pain, and insomnia.

Do you have to be licensed to practice biofeedback?

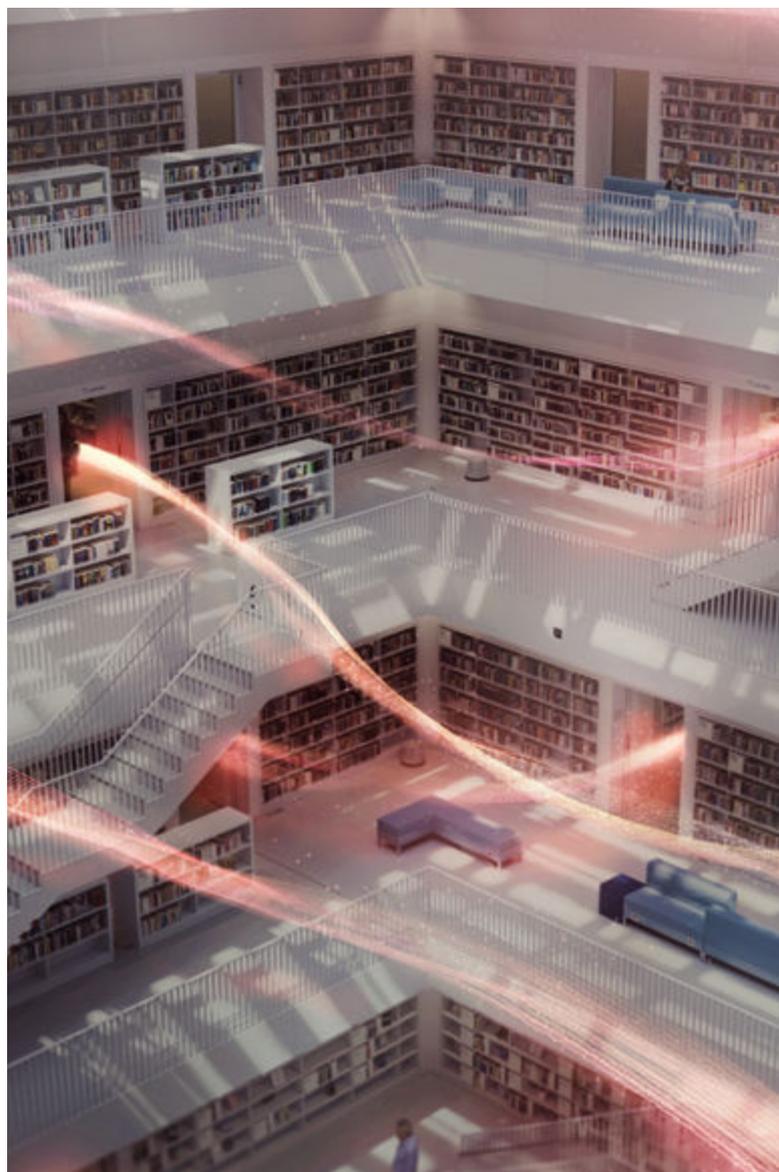
If you want to practice biofeedback you are required to **become certified** by an accredited organization upon completing professional training. Signing up for the QX WORLD [Health Academy](#) is a great first step.

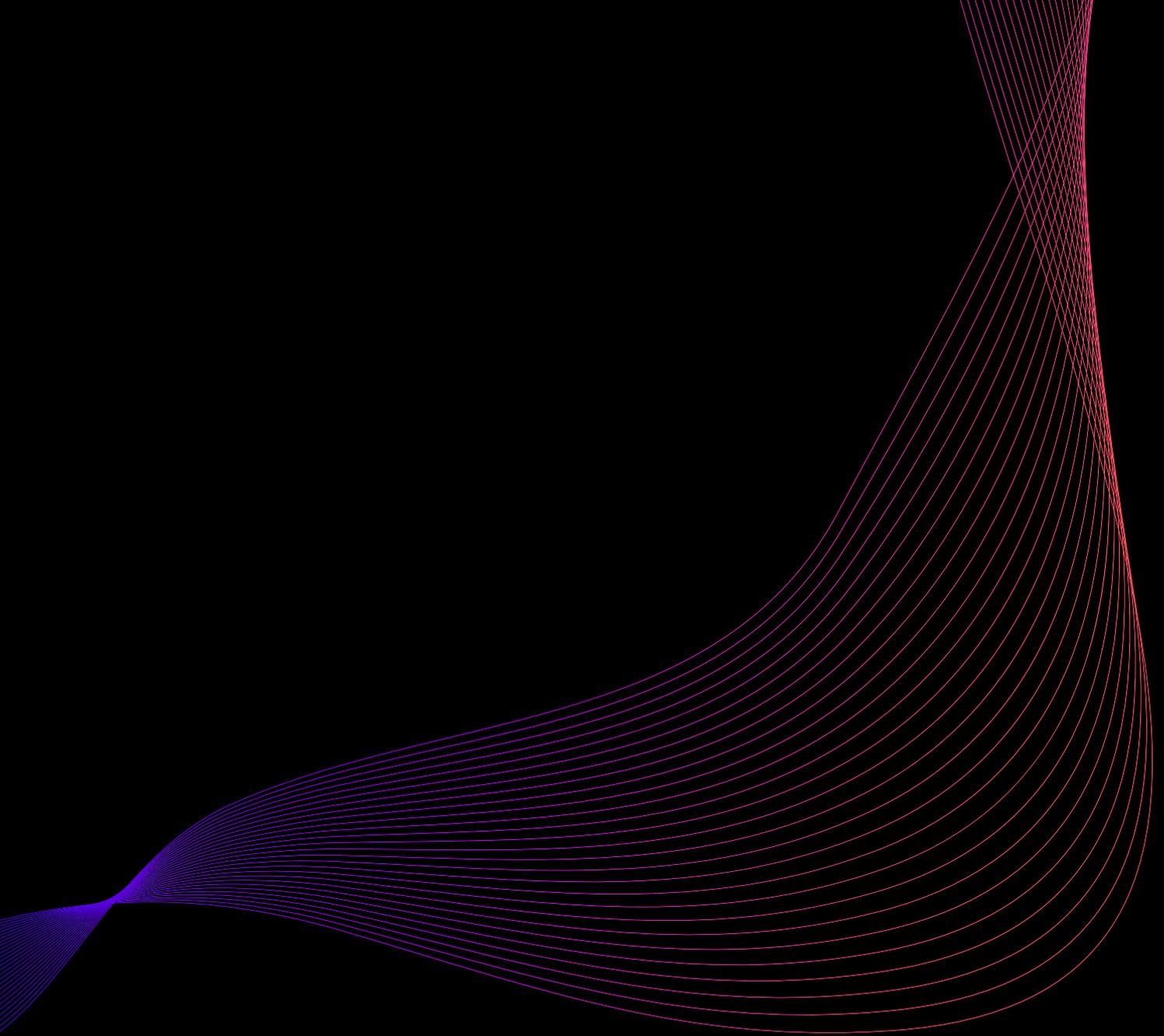
Where do I find a biofeedback therapist?

Biofeedback is used in different kinds of professions. Many biofeedback therapists are counsellors, therapists, teachers, psychologists, and health and lifestyle coaches. If you are having trouble finding a biofeedback therapist you feel comfortable with, get in touch with us. We would be happy to help.

Why are QUEX ED® and QUEX S® so popular?

A first and very important reason why QUEX S® and QUEX ED® are so popular is that they enable quantum biofeedback sessions and are, in other words, able to address the subconscious. Another reason why QUEX S® and QUEX ED® are making waves in the field of biofeedback is that they run on OMNIS software which has also been developed by QX WORLD. That means they offer all known **health knowledge** integrated into one holistic system, as opposed to other devices that work according to specific approaches.





WHO IS ANDREEA TAFLAN?

Andreea Taflan is CEO and co-founder of QX WORLD. She was first introduced to biofeedback by her mother, a General Practitioner and early adopter of biofeedback devices. She went on to study Business Management and Marketing and obtained a Master's degree in Public Relations and Communications. In 2005, Andreea was appointed as the right hand of the original developer of biofeedback technology. Since 2012 she has taken the lead in further developing the technology. Today, she is considered a leading expert in the field of biofeedback.