



# The NewMind Neurofeedback Process

The NewMind Neurofeedback process allows flexibility for both clinician and client. With easy and intuitive setup, the clinician can spend their time focusing on client needs.

The emergence of individualized medicine and evidence based medicine has brought with it a new paradigm that has become known as Functional Medicine as envisioned by Jeffery

Bland (Bland, 2018; 2019a). Functional Medicine seeks to treat the source of the patients problems rather than just treating the symptoms and consequently forces the practitioner to transcend the one size fits all approach of acute care medicine in its institutionalized form. Functional Medicine is less concerned with the dysfunction of a disease and more concerned with the dynamic processes that generate disease. Disease is a descriptor of a pathological endpoint and function is about the sources of the pathological process and how it is shaped by multiple causal factors in a biological system. It is a scientific systems based perspective (Bland, 2017; 2019b). The importance and validity of this rapidly developing approach has been recognized in JAMA (Chang & Lee 2018). The Institute for Functional Medicine defines Functional Medicine as follows (IMF) (<https://www.ifm.org>):

## Some Key Features of Functional Medicine Include:

- ⇒ It addresses root cause rather than just symptoms
- ⇒ It recognizes the complexity of contributing factors to disease
- ⇒ It promotes “optimal wellness”
- ⇒ Assessment requires a detailed understanding of each patient’s genetic, biochemical, and lifestyle factors
- ⇒ It’s individualized
- ⇒ It’s patient centered
- ⇒ Patient and practitioner work together
- ⇒ It empowers the patient
- ⇒ It’s science based but not RCT dominated
- ⇒ It considers lifestyle a critical factor

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***Functional medicine determines how and why illness occurs and restores health by addressing the root causes***

Functional medicine physicians do exhaustive patient interviews covering all aspects of their lives and then form hypotheses regarding the potential sources of the patients ailments and symptomology. It then utilizes scientific testing both in initial assessment as well as in a methodical and strategic manner with each intervention to assess its efficacy and help determine whether associated side-effects justify such an intervention. In this step by step fashion, physicians eventually isolate the source of the patients suffering and are able to effectively treat them. Functional Neurofeedback seeks to emulate this model.

This approach stands in stark contrast to traditional acute care and chronic care institutions that have formalized diagnostic and treatment protocols that apply equally to any patient engaging the institution regardless of whether it is an ER, hospital or mental health facility. Many of these protocols involve standard medications and treatments that overlook individual differences in response and efficacy. Functional Neurofeedback at the same time stands in stark contrast to other neurofeedback approaches that seek to “fix” a symptom by training at one defined Region of Interest (ROI) supposedly associated with that symptom or the use of one protocol to treat one label such as beta up and theta down for all ADHD clients while disregarding family dynamics, nutrition, sleep and other contributing factors.

## The Functional Approach Concept & Neurofeedback (NFB)

Early in the field of Neurofeedback there was a developing paradigm

that encouraged practitioners to see NFB as a panacea that drew its strength from treating the CNS as the ultimate solution. Many in the field felt that by training the central nervous system, the majority of human afflictions might be overcome. To some extent this was driven by unexpected and impressive outcomes in many inexplicable cases that seemed to border on the miraculous (Robbins, 2000). In response to these cases Jim Robbins, a science writer for the New York Times, authored an article in Psychology Today that was entitled Wire for Miracles (1998).

An expectation emerged that with enough sophisticated technology all obstacles could be overcome. Much of the product development was driven by engineers and entrepreneurs who had no little or no clinical experience and training. Based more on clinical experience than research, clinicians fell in line and this perspective matured and to some extent temporarily dominated the field. If a client failed to respond to treatment, then it was considered due to a failure of technology and such issues would be eventually resolved through future product development or enhanced techniques alone.

This perspective was paralleled in the field of mental health and the psychiatric community's effort to join the ranks of experimental deductive sciences by deploying drugs designed specifically to treat each specific and categorized disease (van der Kolk, 2014; Whitaker, 2010). If one drug did not work then eventually RCT research would find a better drug that did the job. This approach found favor in the insurance companies seeking an effective and efficient way to manage

health claims and pharmaceutical companies that gain massive sales through marketing the same concept. Unfortunately mental health outcomes got worse rather than better and the DSM fell into disrepute (Healy, 2004; Whitaker, 2010).

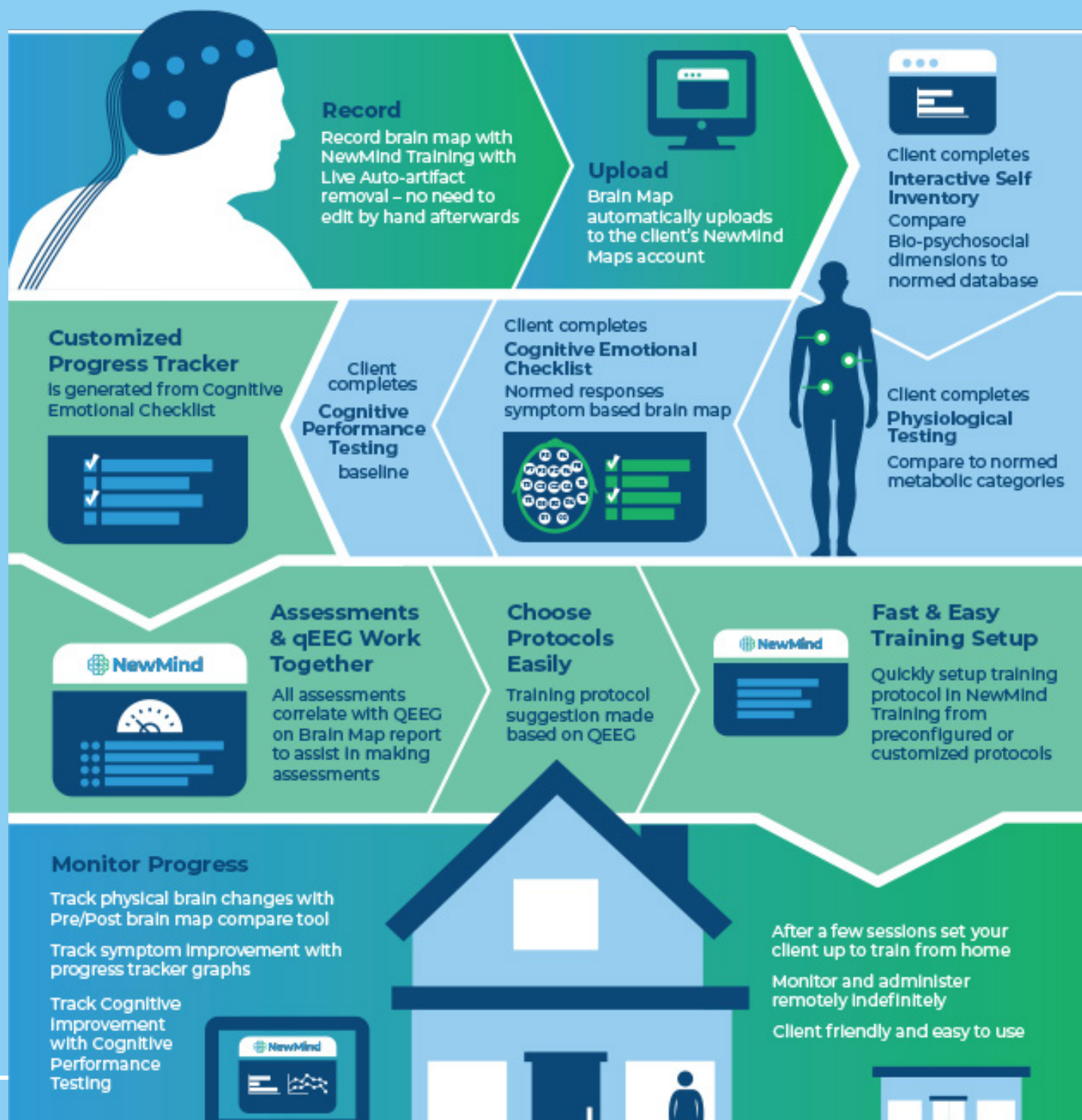
In 2014 the Cleveland Clinic For Functional Medicine was established. Dr Mark Hyman, author of 12 New York Times bestsellers, in conjunction with the Cleveland clinic and others have been leading the change in medicine with the Functional Medicine paradigm with growing evidence of significantly better outcomes than previous approaches. The personalized lifestyle healthcare model is co-evolving with the Functional Medicine model (Bland, 2018). At the same time they are finding this approach is resolving many mental health issues as well, supporting with evidence the theory that many disorders have a strong basis in physical health problems.

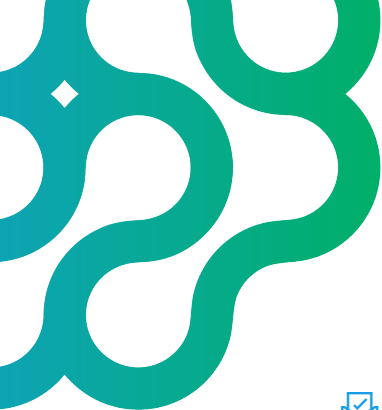
In both the mental and physical health paradigms a strong awareness has been growing that multiple vectors of causality are at work with health disorders. The same applies to disorders such as ADHD which is defined by multiple etiological pathways rather than being a unidimensional construct with one remedial protocol or solution (Nunez-Jaramillo, 2021). The DSM and psychiatric community have been very reluctant to recognize the significant contribution of social and ecological factors to poor health despite the findings of the Adverse Childhood Experiences (ACE) study, one of the largest and most comprehensive longitudinal health studies conducted to date, as well as position papers by the American Pediatric Association

(van der Kolk; Shonkoff & Garner (2012). The research evidence is quite clear that mental and physical health problems emerge from a combination of social and ecological system contributions and that those findings engender a perspective that threatens established economic, political, and cultural paradigms as is commonly the case in institutionalized science (Kuhn, 1970).

NewMind technology was founded upon the multi-disciplinary research findings driving these same changes in medicine in general. We have promoted a bio-psych-social approach to neurofeedback from our inception that is in harmony with the Functional Med-

icine approach. Consequently such a perspective may be characterized as Functional Neurofeedback. A key concept in this approach is that electronic technology and interventions by themselves will never be sufficient alone to treat disorder regardless of how many iterations it pursues. Coben et al (2018) note that most of these highly evolved technical approaches to neurofeedback have not been demonstrated to be superior to traditional neurofeedback by any significant research to date. Truly efficient remediation of symptoms requires an inclusive awareness of the contributions of multiple causal factors arising from social and ecological sources.





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The assessments constructed for the New Mind Database System were built in concert and from the ground up for the purposes of applying them from a psychophysiological perspective, rather than a medical or psychiatric perspective, to a bio-psycho-social approach to neurofeedback. Consequently they comprise a highly consistent and integrated assessment tool for tracking the effects of complex clinical protocols that define the Functional approach. This was done in recognition of the many clinical confounds that have to be accounted for in successful clinical outcomes. The system was constructed using standard and universally recognized statistical methods with one of the largest and fastest growing clinical neurofeedback databases in existence with over two million subjects. The instruments cover traditional physiology, socio-emotional, psychological and cognitive dimensions from an integrative psychophysiological perspective that is more wholistic and systems based in its approach than other academically traditional isolated efforts of understanding health and wellness.

New Mind enables practitioners to assess multiple dimensions of psychophysiological dysregulation and their global contributions to presenting symptoms including a physiological checklist, a socioemotional assessment, a cognitive emotional checklist, computerized cognitive performance tests and qEEG brainmaps. This suite of statistically validated assessments provides a more comprehensive understanding of the client and the sources of dysregulation. It also provides the practitioner with a good foundation for working in concert with other professionals in nutrition and functional medicine as well as other specialists. By using multiple measures in conjunction with qEEG driven neurofeedback, a one size fits all approach to client wellness is avoided and a

more individualized and empirical approach is encouraged. With the addition of neurofeedback we have found outcomes significantly accelerated and enhanced and easy to document using our symptom tracker and pre-post brain-mapping tool. In this manner, New Mind operationalizes the Functional approach and fulfills in parallel fashion in terms of neurofeedback and psychophysiology the client centered individualized vision inherent in Functional Medicine as defined by Bland and his associates.

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