**What coaches can learn from neuroscience research**

*Neuroscience research can help coaches*

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Advances in [neuroscience](https://www.psychologytoday.com/basics/neuroscience) now can provide guidance for the development of a new view of mental [health](https://www.psychologytoday.com/basics/health)/illness that can be translated into practical applications for personal, executive and life coaches.

In a ground breaking article entitled "*A New Intellectual Framework for*[*Psychiatry*](https://www.psychologytoday.com/basics/psychiatry)*,*" Nobel Prize winner Eric Kandel proposed several principles based on neuroscience research. Of these principles, perhaps the most important is that "a*ll mental processes, even the most complex psychological processes, derive from the operation of the brain,"*Kandel also suggested that genes do not explain differences in mental illness and that experience and [environment](https://www.psychologytoday.com/basics/environment) have significant influences.

Researchers Nydia Cappes, Raquel Andres-Hynan and Larry Davidson of the Yale School of Medicine have proposed 7 principles of brain based [psychotherapy](https://www.psychologytoday.com/basics/therapy) that all coaches should become familiar with:

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| **Principle 1**: Both [genetics](https://www.psychologytoday.com/basics/genetics) and the environment interact in the brain to shape the individual. Both nature and nurture are equally capable of modifying brain structures  **Principle 2**: Experience transforms the brain. New experiences, creating new neural pathways, can physically change the brain  **Principle 3:** Memory systems in the brain are interactive. [Memories](https://www.psychologytoday.com/basics/memory) are not a perfect account of what happened; they can be constructed at the time of retrieval in accordance with the method used to retrieve it. The sense of well-being and the development of [personality](https://www.psychologytoday.com/basics/personality) and emotions are clearly tied to the capacity to store and retrieve information  **Principle 4:** [Cognitive](https://www.psychologytoday.com/basics/cognition) and emotional processes work in partnership. There can be no knowledge without emotion. Emotional feelings and memories are interactive  **Principle 5**: Bonding and [attachment](https://www.psychologytoday.com/basics/attachment) provide the foundation of change. The therapeutic relationship between coach and client can have the capacity to help clients modify neural systems and enhance emotional regulation  **Principle 6**: Imagining activates and stimulates the same brain systems as does real perception  **Principle 7:** The brain can process non verbal and [unconscious](https://www.psychologytoday.com/basics/unconscious) information. Unconscious processes exert great influence on thought, feelings and actions. It is possible to react to unconscious perceptions without consciously [understanding](https://www.psychologytoday.com/basics/empathy) the reaction |

In the past decade, [coaching](https://www.psychologytoday.com/basics/coaching) as a profession has grown significantly to the point of being the second fastest growing profession next to IT. Organizations such as the International Coaching Federation have attempted to establish uniform principles and standards to underpin coaching practices, but coaching remains an unregulated profession with a wide range of training programmes and coaching practices.

As a trainer of coaches entering the profession or sharpening their skills, or in assisting executives in augmenting their coaching skills, I have been struck by the prevalence of the basic lack of a fundamental understanding of the principles of human behaviour and human performance by many. Anyone who is serious about becoming a coach or practicing their coaching skills would be [wise](https://www.psychologytoday.com/basics/wisdom) to become knowledgeable about the most recent developments in neuroscience, such as the seven principles described above.