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**Session 5: Visualization**

If we were to attach electrodes to your head and watch the activity in your brain, we would see something very interesting. When you raise your arm or you just visualize raising your arm, the same part of the brain lights up. Thanks to the EEG technology, we now understand that our brains do not differentiate between what actually happens in the real world, and the vivid pictures we create in our imagination! Most successful athletes use this to their advantage by visualizing their success before a competition.

Visualization is the process of creating a mental picture in your mind of an outcome that you want to achieve. Using the five senses, a person mentally rehearses the sport in their mind. Michael Phelps, for example, would visualize each stroke he would take in his swim from one end of the pool to another. By focusing on what the athlete would see, hear, and feel, they create images and feelings in their mind. They then tie these images to the future which literally rewires their brain to perform that way.

Visualization helps to prepare and to teach you how to respond to a situation before it happens. It also helps you achieve your goals by conditioning your brain to see, hear, and feel the success in your mind. Studies have demonstrated that imagining moving certain parts of your bodies almost trains the muscles as much as the actual movement. A study looking at brain patterns in weightlifters found that the patterns activated when a weightlifter lifted hundreds of pounds were similarly activated when they only imagined lifting. In some cases, research has revealed that mental practices are almost as effective as true physical practice. Guang Yue, an exercise psychologist from Cleveland Clinic Foundation in Ohio, compared results of those who did physical exercises to the results of those who carried out virtual workouts in their heads. In the physical exercise group, finger abduction strength increased by 53%. In the group that did "mental contractions", their finger abduction strength increased by 35%. However, "the greatest gain (40%) was not achieved until 4 weeks after the training had ended" (Ranganathan et al., 2004). This demonstrates the mind's incredible power over the body and its muscles.

 When you visualize what you want to achieve, you are consciously deciding to look for information about a situation that will improve your outcomes. Visualization is training for your mind the same way that practicing physical moves is training your body. Muhammad Ali once said, “If my mind can conceive it and my heart can believe it – then I can achieve it” and Oprah Winfrey said, “anything you can imagine, you can create.” Arnold Schwarzenegger first learned to use visualization to help in weightlifting contests and later used it in both his acting and political careers. Jim Carrey famously wrote himself a $10 million check for acting and carried it in his wallet until he earned that sum for his role in Dumb and Dumber. Natan Sharansky, a computer specialist who spent nine years in prison in the USSR after being accused of spying for U.S., has a lot of experience with mental practices. While in solitary confinement, he played himself in mental chess, saying: “I might as well use the opportunity to become the world champion!” Remarkably, in 1996, Sharansky beat world champion chess player Garry Kasparov!

When visualizing, you have two choices. You can visualize your outcome by imagining your end goal. The other choice is to visualize the process by imagining each step it will take to get to your end goal.

If your goal is a non-physical goal, then you might want to “feel the feeling” of winning. This is a great strategy for calming your nerves, feeling more confident and allowing you to divert that wasted energy to focusing on the performance. Using visualization as a tool for achieving goals is a powerful strategy, it is also a great tool for stress management. By focusing your attention on a calming, comforting scene, you will trigger the parasympathetic response, aka the rest and digest condition, which slows both your brain activity and your heart rate. This will allow you to think more clearly and creatively and this, by itself, is going to improve your sense of control of your environment. When visualize being calm, peaceful, and safe, the same parts of the brain are stimulated that would be stimulated if you were actually in that calm, peaceful place. You are literally creating your actual experience.