

Exercise, Interoceptive Awareness, and Neurodiversity

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IT'S NO SECRET that exercise is good for physical health. However, the more powerful implications are subtle, yet essential for brain health.

People who are physically active develop a strong sense of interoception. They have an enhanced ability to tune in to their body's cues and understand their meaning. This heightened sensitivity allows them to respond quickly to valuable signals of hunger, thirst, anxiety, temperature, or stress. They are more attuned to positive indicators of calm, invigoration, or happiness. Interoception plays a crucial role in physical health, emotional wellbeing, and social relationships.

Tuning in comes naturally to some, but for others, the unpredictable nature of the outside world makes self-awareness very difficult. The excessive toll of navigating external stimuli hinders their ability to connect with their own inner state. In my experience as a physical therapist and life coach, I often see this manifest when ADHD and ASD coexist.

These individuals experience a wide range of sensory processing difficulties that make it hard to balance sensory sensitivity. Those with heightened responsiveness are prone to overwhelm and emotional dysregulation. Others with a lower level find it hard to notice their own body's signs. I have found that exercise is an invaluable tool to cultivate this ability. It has a positive influence on self-awareness and sensitivity to interoceptive cues, particularly in those with ADHD and ASD.

Physical activity and the brain

Engaging in physical activity stimulates receptors that transmit direct information about our body's state. Cells in our joints, muscles, and tendons send signals to our brain about movement, stretch, pain, pressure, and position. This vital information directly enhances motor skills, balance, and coordination.

Exercise naturally draws our attention to heart rate, breathing, temperature, and muscle responses. A regular fitness program offers the opportunity to pay attention to these physiologic changes. This builds our ability to identify and label sensations. Becoming aware of a rapid heart rate while jogging heightens our sensitivity to that feeling when we are fearful or stressed. While emotional intuition alone is powerful, there is a powerful layer of self-confidence and stress management that results from exercise.

Experiencing predictable physiologic stress, followed by recovery to a calm, post-workout state, teaches us that we can handle elevated states. We become more capable of self-regulating. We build confidence in our ability to de-escalate. This offers the chance to more readily access executive skills to manage unexpected feelings or challenges, rather than respond with emotional overwhelm.

Fitness and neurodivergence

Fitness is not always easy to prioritize for those who experience life uniquely due to neurodivergence. It would be a disservice to simply recommend a gym membership or team sport. The most valuable suggestion I can offer if you have neurodivergence, is to choose something you love and make it a habit.

Choose activities that safely align with your interests and abilities. Find a partner to move with, for social engagement and safety. If you enjoy walking, get outside on a sunny day. Wear a pedometer to track your steps and incrementally build your daily count. If it rains, power walk at a local mall. Group fitness, biking, dancing, hiking, and swimming are all fabulous ways to move your body.

Focus on small, incremental goals to build consistency and intensity. Most importantly, be intentional about paying attention to how you feel.

- What changes do you feel in your heart rate or breathing when you increase your speed?
- What muscle groups “wake up” on an incline or stairs?
- Do your calves feel tired immediately, or is there a delayed response the next day?
- Is your mouth dry, signaling that you need to hydrate?
- Is your stomach growling after calories are burned?
- Do your muscles need stretching?

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Practice listening and responding to these cues. Our bodies provide valuable information. It's our responsibility to acknowledge and respond.

Physical activity is a powerful way to enhance interoception. I find this to be particularly relevant for individuals with both ADHD and ASD, who often struggle with self-regulation and awareness.

When we move, we have a natural opportunity to sense the dynamic interaction between our brain and physical body. The key is to be intentional by directing awareness and energy to that information. When we practice this skill, we enhance our physical health, emotional regulation, and well-being. There are endless possibilities to creatively incorporate regular movement into our lives. What will you choose? 🧠



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