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Rhythm Explained

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The word rhythm comes from a Latin word meaning 'movement in time.' Everything we do happens within a time frame…and rhythm organizes that time into pieces. Whether it's a heartbeat, drum beat, ocean waves, days of the week, or self-imposed routines – rhythm is there creating little mile markers for the brain to organize life into. In music, rhythm serves as the primary element that creates the perception of time. And because moving, speaking, and thinking happen in time, rhythm can play a crucial role in brain development.

To explain how rhythm impacts the brain, imagine yourself standing in a grocery store aisle trying to decide whether to buy Jif or Peter Pan when you notice you are tapping your toe to the beat of the 80s classic playing in the background. What we know about rhythm is this: (1) the effects are immediate – you didn't spend time practicing how to tap your toe (2) the effects are accurate – you didn't have to develop the skill to be in sync with the beat (3) the effects are subconscious – you were thinking about peanut butter, not the music (4) the effects don't depend on your preference – you might not even like 80s music!

The nervous system is designed to entrain to (or be in sync with) the rhythm that it hears. And in therapy, utilizing rhythm can help the brain and body develop at a micro level (the neurons themselves change) and at a macro level (the functions of the body change). Neurons either 'fire' or 'don't fire.' There is no such thing as a 'strong' or 'weak' neuron. Instead, think of them as 'organized' or 'disorganized.' Rhythm causes groups of neurons to fire in a more organized and efficient fashion. And neurons that fire together, wire together. Because this is true, rhythm has a powerful impact on the development of cognitive abilities. It is often said that musicians are better at math. In actuality, music (which involves rhythm) improves our thinking. Period.

Rhythm also organizes time…and time defines space…and space is where we move. Therefore, rhythm has an impact on functions and movements of the body. These movements can be large (walking, reaching) or small (writing, speaking), external (moving arms and legs) or internal (heartbeat, breathing). Because rhythm is a language that the brain thinks in, using rhythm in therapy can greatly enhance the brain's ability to anticipate how to move, plan elements of movement, and develop movement patterns.

So what does this mean for individuals with developmental disabilities? Well, the brain is defined as plastic. This doesn't mean that Rubbermaid is going into the brain-making business, but rather that the brain is capable of being molded or changed. When you boil down a developmental disability to its essence, it involves a brain that has certain networks or connections that are disorganized. And remember, (1) rhythm organizes time, and (2) rhythm is a language that the brain understands. Also, rhythm is processed in many parts of the brain, brainstem, and spinal cord. So when we sum all of that up, we find that rhythm is a backdoor into supporting the development of the brain, which translates into an individual who can better interact within their environment and better express who they are and what they think.