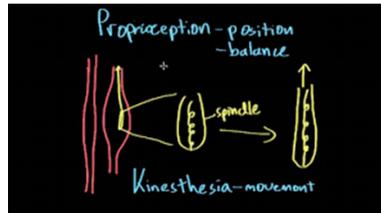


Quick Proprioceptive Activities

What is proprioception?

- Proprioceptors are sensation receptors in the muscles, skin and joints.
- They detect the stretch and contraction of the joints and deep pressure.



Proprioception as a tool

- Deep touch pressure **increases activity in** the parasympathetic nervous system (**calming system**) and **lowers activity in the sympathetic (fight/flight/freeze system)** division of the Autonomic Nervous System (Hsin-Yung Chen et. al., 2011).
- **Proprioception increases endorphin levels (happy hormones)** and decreases heart rate and blood pressure (indicators of anxiety and stress). Deep touch pressure also causes the release of both serotonin and dopamine in the brain. These are "happy" neurotransmitters and produce a feeling of calm within our nervous system.

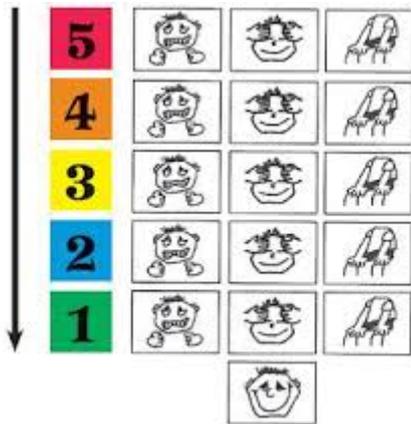
Deep pressure touch can benefit individuals suffering from:

- chronic stress
- anxiety
- pain
- For individuals with proprioceptive seeking behaviours, **deep touch pressure gives them the sensory input they require and crave in order for the body to function effectively with the environment.**
- **Raising one's heart rate through proprioceptive movement can actually reverse damage to the brain caused by stressful events.** Stress atrophies the brain — especially the hippocampus which is responsible for a lot of things including memory. When you're stressed, you tend to forget things.

- Exercise promotes production of norepinephrine which is associated with **improved cognitive function (thinking brain)**, elevated mood and learning.
- Exercise helps build reserves of the neurochemicals that help the brain communicate with the body (interoception) and **improve ability to manage responses to stress**.

Simple Strategies

- Calming routine, sequence to be completed five times:
 - Squeeze my hands (massage hands)
 - Rub my head (slowly rub the forehead and brows)
 - Pressure on my legs (pushing down and rubbing thighs)

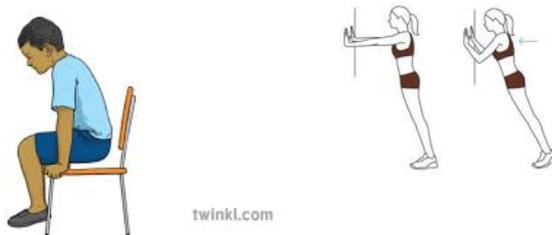


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- Use a therapy ball:
 - Bouncing whilst seated
 - Rolling on tummy, weight bearing through the arms as this is good for self-regulation
 - Laying on your back and lifting the therapy ball up with the feet
 - Laying on your back and lifting the therapy ball up over your head and onto your tummy and back
 - Squishes – give deep pressure using the therapy ball as this is calming and a good way to finish a movement break.





- Anywhere body breaks:
 - Wall push ups
 - Isometrics, pushing hands together, clasping hands together and squeezing, chair push ups, wall push ups



- When seated:
 - Place the feet on a slightly under inflated ball for movement
 - Sit on a wobble cushion or better still sit on a physio ball/ physio peanut
 - Use lap or shoulder weight for feedback through the legs/ upper body
 - Wrist weight (small light ones) or ankle weights to give extra body feedback. (See sensory direct online).
- At play:
 - Den building, pulling through the arms either by climbing, swinging or pulling on rope.
 - Burying and burrowing under toys, blankets, pillows
 - Make your own squeeze box to sit in (a box stuffed with pillows)
 - Exergaming (interactive games such as just dance or ring fit etc)

I hope the above information is useful in helping your child to find ways to stay well regulated at home. Please do not hesitate to contact me for further information or useful links. gcarlier@centreacademy.net.