Proprioception

What is proprioception?

Proprioception is the sense of where your body is in space. It lets you know where parts of your body are without you having to look at them – when you touch your nose, proprioception is telling you where to put your finger. When you walk, proprioception is telling you where your foot is in relation to the ground so that you don't fall over. When you pick up an object without looking, proprioception is telling you where your hand is in relation to the object, and letting you grab it without missing or knocking it over.

Proprioception also lets you know how fast and forcefully parts of your body are moving. When you decide to nudge a soccer ball with your foot so that it only travels a couple of centimetres, or to kick it hard and send it across a field, you decide how much force to put into the movement, and your sense of proprioception tells you if you've gotten it right and whether you need to adjust the speed or force of your movement.

Autism and proprioception

Autistic people's sensory systems are wired differently. This is very variable – some autistic people are oversensitive to things like texture or bright lights; others are less sensitive to sensations like cold, or to internal cues like hunger.

Many autistic people have difficulty with proprioception, because their brains and bodies are not picking up the proprioceptive cues that most people pick up automatically. For these people, it can take effort and concentration to touch their nose, balance, or navigate around a room. In young children, this often looks like a very clumsy child who frequently walks into furniture, trips over, and drops or knocks over toys.

People with proprioception difficulties often have trouble estimating how fast or forcefully their body is moving, so they may collide hard with furniture, walls, or other objects. This is particularly common with young children, who are still learning to control their bodies in the first place, and may take a long time to learn motor skills because they aren't getting the proprioceptive feedback that tells them when they've got it right.

How to help

There are a few things that can help when setting up an environment for someone with proprioception trouble:

- Keep furniture and objects in the same place as much as possible. Many people who struggle with proprioception find it easier to move around familiar spaces using muscle memory rather than trying to process where their body is in relation to everything around them.

- Keep as much furniture as possible around the edges of the room, and keep floor space as clear as possible. (It can help to try moving through a space slowly and safely with your eyes closed - if you hit anything unexpected, it's likely someone with proprioception difficulties will run into it as well, even when they can see it.)

- Child-proof your house, even if you don't have children or your children aren't babies any more – covering sharp corners, covering furniture with soft rugs or throws, and making sure anything children are likely to want or need is in easy reach can go a long way towards reducing injuries.

- An occupational therapist can help children learn to work with their bodies and their senses, and to find workarounds when their senses aren't working for them. If occupational therapy isn't a possibility, you can also try playing games that involve judging the speed and force of movement, or navigating around (safe, soft) objects. Some examples include making obstacle courses out of blankets, cushions, and soft furniture; making and navigating through blanket/cushion forts; games like 'sneak up on granny' that involve moving and then suddenly stopping; and games like lawn bowls (or a variation with toy balls) that involve trying to throw or roll a ball to a specific spot.

- If someone you know seems to really struggle with proprioception and motor skills, it may also be worth looking into dyspraxia, a condition that affects motor planning (figuring out which parts of the body to move when) as well as memory and more general task sequencing. You can find more info about dyspraxia here: https://dyspraxia.org.nz/