Our 8 Senses Video Script

Welcome to the Greater Glasgow and Clyde Occupational Therapy service training on sensory processing. The aim of this second video is to give you information about the eight sensory systems we have and talk about what we might notice if we process information differently. Watch our other videos for information on sensory processing and strategies.

Did you know we have 8 sensory systems?

Five which help us get information from the outside world - seeing, hearing, touch, taste and smell.

And three senses were we get information from inside our bodies:

Vestibular (balance), proprioception (information from our muscles and joints about where our body is in space) and interoception (sensing changes inside our body about how it is 'feeling' like hunger, needing the toilet).

First, let's talk about our visual system. Sensory processing is not about how well we see or whether we need glasses. It's about what our brains do with the information. Our eyes take in information from the world which then goes to the brain. The brain then decides what information it needs to pay attention to and what it can ignore. If we have a low threshold we might become overwhelmed by visual information for example lights too bright or room too distracting to work. We might have to close or cover our eyes. If we have a high threshold so we need a lot of information we might not notice things in the environment. We might seek out visual input like shiny, spinning toys or stare at things intensely.

Our auditory system is our sense of hearing. We take information in from our ears. Our brain then decides what we need to concentrate on and ignores the rest. For example if you hear a ticking clock, after a while you get used to the noise and you will no longer notice it. If we have a low threshold we might become overwhelmed or upset by lots of noise. We might hear sounds other people do not hear like the buzzing of a light or people talking over the other side of the room. If we need lots of input and have a high threshold we might seek out noise. We might make it ourselves by humming or singing or banging the table. We might listen to music or watch the TV with the volume turned up.

Our touch system picks up information about our environment from sensors in our skin. This gives us information about differences in things we touch. For example temperature (how hot or cold something is) or texture (for example if something is rough or smooth). The touch receptors in our mouth give us important information about whether food is crunchy, smooth or chewy or whether it is hot or cold. Our touch system also plays a part in protecting us for example we quickly move our hand away if we touch something very hot. If we have a low threshold we might not like being cuddled or hate getting our hair brushed or washed. We might hate the feeling of certain clothes or become upset if someone brushes past us. We might not like standing in a line. If we have a high threshold we might not notice if we have food on our hands or face. We might not notice if we have hurt ourselves or if our clothes aren't on properly.

Our olfactory system or sense of smell works really closely with our gustatory system (our sense of taste). If we have a low threshold we might become upset by smells that no one else can smell. If we have a high threshold we might seek out smells and smell objects or people. Processing smell differently can make us refuse to eat different food. We all have definite sensory preferences about tastes we like or dislike. If we have a low threshold we might only eat bland food and find it difficult to eat different foods so have a limited diet. We might gag when eating something new. If we have a high threshold we might choose to eat intense flavours like spicy or sour foods. We might also lick objects which are not food or put them in our mouths.

Proprioception is the awareness if body position and movement or knowing where your body is in space. Proprioceptive receptors are in the muscles and joints. They send messages to the brain to tell it where your body parts are in space. They tell you how much force or pressure your muscles are using. This helps us to know which position our body is in. We don't look at body parts and we know the right amount of force to lift objects of different weights. Think about the difference in force you would use to pick up a feather or a heavy bag. If we are processing proprioceptive information differently we might bump or crash into things, we might hold our pencil too tightly, be too rough when playing with friends or chew on objects like clothing or ends of pencils.

The vestibular system gives us information about balance and movement. When your head and body move, fluid in your inner ear moves too. This gives your brain information about how you are moving. When you are processing vestibular information differently and you have a high threshold, you might need lots of vestibular information to help your body feel just right. You might spin or move more than other people. If you have a low threshold you might also avoid lots of movement and not like it when your feet leave the ground or feel sick if you're spinning too much.

Interoception receptors are all around our body in organs like the heart, lungs, stomach, bladder and skin. They help us feel what is going on inside our bodies. How do you know, for example, if you are hungry or need the toilet? Your interoception receptors pick up information and send it to the brain. It is translated into feelings relating to body comfort like hunger, needing the toilet, being too hot/too cold. If you are hungry your stomach might rumble, you might feel shaky or find it difficult to concentrate. When you put these clues together, you might realise this means you are hungry. Once you eat something those feelings go away. Your interoception system also gives you clues about your emotions. If your heart is racing, you have butterflies in your tummy or have shaky hands, this might mean you are feeling anxious. If we process this information differently we might not be able to read the clues our body is giving us. We might not connect these signals with feeling full or hungry or thirsty. We might not know when we need to go to the toilet or when we are anxious.

We talk about these sensory systems separately to help us understand them. In real life they all work together. If someone you know has difficulty taking part in activities, it can be because of the way the brain processes more than one type of sensory input. Have a look at the KIDS website for more information about the senses.