

Solihull Children's Occupational Therapy Service

Understanding sensory needs

A sense is how we perceive and receive information about the world around us. Much of what a baby or young child learns about their environment is through sensory exploration.

Each of us has a complex system of organs, tunnels, receptors, cells, and brain waves that are responsible for each sense. These systems work together to send information to our brains to help us process what we are experiencing.

Everyone's senses are completely different. Some people enjoy spicy food, whilst others prefer plain foods. Some people enjoy loud concerts, whilst others enjoy the quiet. Liking or not liking certain sensory information does not mean there is anything wrong, it is personal preference.

Each sense also has a different purpose in our development, and in our enjoyment of and engagement with the world. For parents, it's important to know and understand each one, so you can support your child to develop and understand themselves better.



Our senses

Touch / Tactile

Touch/Tactile is thought to be the first sense that humans develop, this is one of the reasons why skin-to-skin with your newborn is so important, for both bonding and engaging with their senses.

Skin is the sensory organ for touch. We have receptors all over our bodies in our skin that let you feel touch. When we touch something, or something touches us, our brains receive a signal from those receptors that makes us feel and makes our body move. This movement can be voluntary (i.e. feeling a soft blanket against your hand and reaching out to stroke it) or involuntary (feeling something hot and pulling your hand away). This sense allows us to feel touch, pressure, temperature and pain.



Sight / Vision

Sight/Vision lets us observe and engage with the world around us.

Eyes are our sensory organs, so our eyes tell our brains what we're looking at. Sight is how we know when it's day and night, what dangers may be in our environment and a big part of our natural development is watching what is going on around us.



Hearing / Auditory

Hearing/Auditory lets us experience our world through sound.

Sound is funnelled through our ears, and the various vibrations from sounds travel to our brain for it to make sense of what we hear.

Hearing has many purposes, for example, how we enjoy music, stay alert to danger and communicate with others. It can also at times be disruptive, like a honk of a car horn or a baby crying. Sound is one of the main ways babies learn to talk.



Smell / Scent

Our noses lets us experience the world through smell

When a smell enters your nose, it attaches to cells that send the information up to our brains. Our brain then decides whether it likes or dislikes the scent. This sense helps us figure out whether a food is safe to eat, if a baby's nappy needs changing or if something is dangerous, like the gas hob being left on.



Taste

Taste is the sense that lets us experience the world through flavour.

The sense originally was a method of survival. It would help make sure the food people were eating included proper nutrients or wasn't poisonous.

When we put something in our mouth, the taste buds on our tongue act as the receptors that takes in the information and transfers it to our brain to tell us how it tastes. We may experience sweet, salty, bitter or sour tastes and we all have preferences in the types of taste we enjoy.



Vestibular

The vestibular sense relates to our movement and balance. This sense tells us where our body is in space, even without seeing or touching our body parts.

It's responsible for our balance and how we move in space. The vestibular sense helps us with balance while we walk and run, and helps us stay upright when we're sitting or standing.

Our vestibular sense comes through the inner ear. It uses fluid in our inner ear to help us track our body's position and movements. When babies first start walking and are a little wobbly, it's because they are just starting to engage with this sense and find their balance. That's also why we may experience a change in balance if we have an ear infection.



Proprioception

Proprioception is also called the body awareness sense. This sense helps us understand where our body parts are in relation to each other, and it lets us move our bodies without thinking about it.

For example, when we walk up the stairs, we don't have to think about how high to lift our legs, our proprioception sense does it for us.

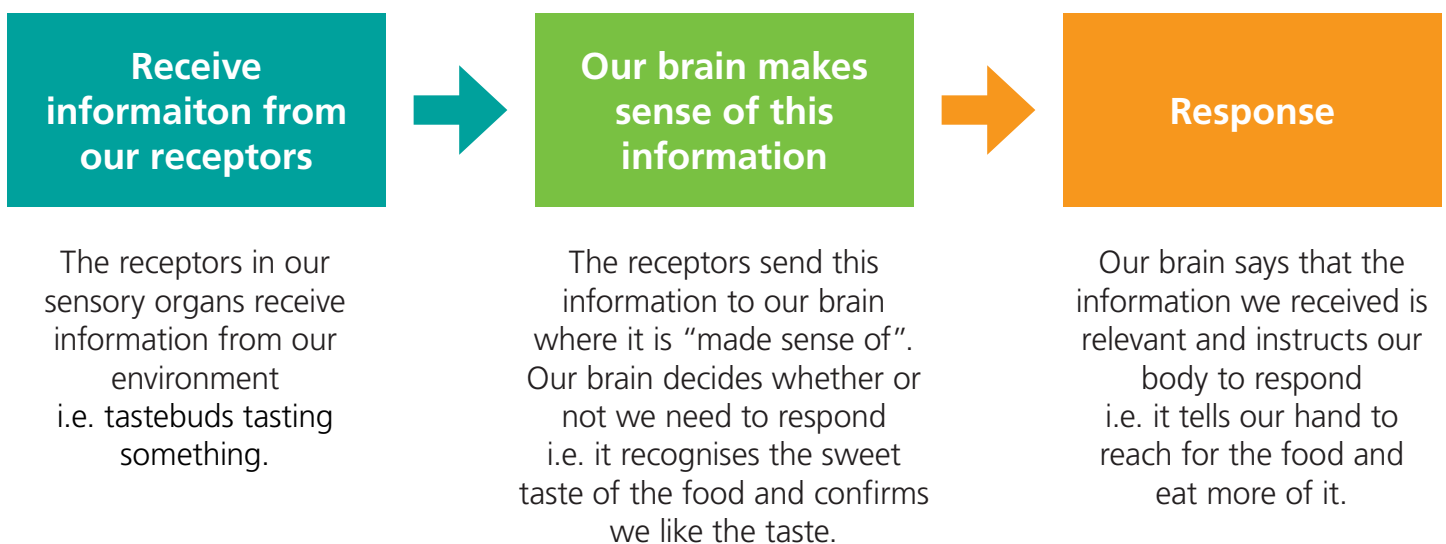
It also helps us figure out how much force to use in different activities (think of picking a small flower compared to a heavy weighted ball).

Proprioception receptors are located in our muscles and joints so therefore has a big impact on our coordination.

When little ones learn to walk, it often tends to be at a slow speed and movements can appear exaggerated (for example, lifting their knee high up to take one small step), and this is because they are still engaging this sense.



Sensory Processing



Sensory modulation

Sensory modulation refers to our brains knowing how much sensory information to tune in to. Our brains automatically decide what information is important and relevant to us, and therefore provides a response. For example, hearing the kettle "click" and going to make your cup of tea.

Not all information our brain receives is important. For example, the sound of the fan whilst cooking, or the feeling of your trousers against your skin. This information does not require a response from us so our brain will filter this out and focus on the important information instead.

Or we may feel overwhelmed from tuning in to too much information, such as being unable to focus on reading a book from the noise and business around us.

When sensory modulation starts to impact how we complete our occupations (activities), we need to consider how we can adapt the occupation to increase independence and develop skills. We do not seek to change a person's sensory preferences.

Remember..

Some days our bodies can process sensory information better than others. This is impacted by many factors including how much sleep we have had, our stress levels, how well we feel, our diets, or the environment we're in.

When we are challenged in other ways (for example, not feeling well) we are less effective at managing our sensory responses. This may mean that our sensory sensitives become exaggerated, and we may

The Just Right Challenge

It is important to enable your child to gain a sense of achievement when learning a new skill. The 'just right' challenge ensures that you are encouraging your child to develop their skills and independence, whilst ensuring that the goal they are working towards is realistic. The sense of achievement that they experience acts as a great motivator to encourage your child to keep working towards mastering these skills. Setting realistic and achievable goals with your child can help them to develop their independence with their chosen occupation.



Things to consider:

- What are you expecting your child to do?
- What specific part of the task are they finding difficult?
- What sense do you think is impacted during the task?
- Is your child over or under responsive?
- What specific part of the task are they able to do?
- Can you change any part of the task to make it easier?

References

Edushape (2024) Sensory Blog. Available from www.edushape.com/blogs/sensory-blog/the-seven-senses-what-you-should-know-as-your-child-develops

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