Special Educational Needs Inclusion Service
Down syndrome
Sensory Integration

- We have SEVEN senses.
- A person may be over responsive in some senses and under responsive in others.
- Think about your child’s sensory profile and how you can help them to meet their sensory needs.

SENSORY INTEGRATION requires the processing of information received through seven different systems:

- Visual
- Auditory
- Olfactory (perception of smell)
- Gustatory (gut, including mouth)
- Tactile (sense of touch)
- Vestibular (balance and movement)
- Proprioception (our body position in space determined by muscles and joints/how much force)
**Under responsive** is when someone has a dampened response to a particular sensory experience. The sensations are not registered enough. Therefore they may then **seek** sensations.

- Constantly fidgeting
- Throwing objects
- Constant climbing in infancy
- Grinding /mouthing objects
- Attracted to loud noises /flashing lights
- Eating excessively, especially strong flavours
- Under sensitive to pain
- Likes wrestling and rough play
- Crashes into things

**Over responsive** is when someone has a heightened response to a particular sensory experience. The sensations are registered too intensely. Therefore they may avoid sensations.

- Dislikes loud noises
- Dislikes being in crowds
- Dislikes bright lights
- Dislikes over–stimulating environments
- Over picky eater
- Extremely cautious in their environment, unwilling to take risks
- Doesn’t like being touched
Be aware that a person may be over responsive in some senses...

...and under sensitive in others.

I hate having my hair cut, washed or brushed
I shield my eyes from bright lights or stare at them
I can be very selective with food and resist to certain textures or smell
I can be oversensitive to loud sounds such as blenders or car horns
I can touch others too soft or too hard
I like to chew on different materials and textiles
I cannot tolerate specific textiles or tags on my clothing
I have poor fine motor skills such as hand writing, cutting or fastening buttons
I can detest being tickled and cuddled or I can adore being squeezed and massaged
I have difficulty dressing myself
I can be clumsy and stumble over things
I like to small people, food or objects
I can walk on my tip toes
I have poor gross motor skills such as riding a bike or climbing a stairway
I like to wear the same shoes regardless of the weather or I always want to walk barefoot
Sensory Processing Difficulties Associated with Down syndrome include:

- Hypotonic
- Joint hypermobility
- Decreased deep tendon reflexes
- Hand-eye co-ordination
- Laterality
- Speed
- Reaction timing
- Equilibrium
- Visual motor control

Our sensory system is primitive and when children are under pressure, they can enter one of these three modes:

**FIGHT MODE**
- Hitting/ punching
- Kicking
- Biting
- Destroying things

**FLIGHT MODE**
- Running away
- Distraction techniques

**FREEZE MODE**
- Sitting down in transitions
- Going under the table
- Refusing to do tasks
Ways we can help

- Be positive
- Challenge in small steps
- Avoid confrontation when in flight, fright or freeze mode
- Channel sensory seeking behaviours
- Desensitisation of Sensory Avoidant Behaviour
- If you are concerned or would like more advice, seek support from Occupational Therapy
- Provide Sensory Breaks
- **Bath time:** Scrub with washcloth or bath brush, try a variety of soaps and lotions for bathing, play on the wall with shaving cream or bathing foam, rub body with lotion after bath time, sprinkle powder onto body and brush or rub into skin.

  - **Meal preparation or baking:** Let your child mix ingredients, especially the thick ones that will really work those muscles. Let child mix and roll dough and push flat. Allow child to help you carry pots and pans, bowls of water or ingredients (with supervision, of course). Let your child tenderise meat with the meat mallet.

  - **Grocery shopping:** Have your child help to push the trolley (as long as the weight is within their capability). Let your child help carry groceries and help put them away.

  - **Mealtime:** Encourage eating of chewy foods and drinking out of a straw. Try having your child sit on a cushion to allow some movement.

  - **Household chores:** Allow the child to help with the vacuuming or moving the furniture. Let the child help carry the laundry basket or the detergent. Let the child help with digging for gardening or landscaping.
• **Play time:** Reading books in a rocking chair or bean-bag chair may be beneficial. You can help your child make up obstacle courses in the house or yard using crawling, jumping, hopping, skipping, rolling, etc. Listen to soft music. You can also go for a neighbourhood walk with a wagon and have your child pull. You can do the same with a toy buggy or pram. Swimming in a pool is a wonderful activity if you have that available, as are horseback riding and bowling. Mini or full-size trampolines are excellent for providing sensory input as well. Make sure the child is using them safely. Sandboxes, or big containers of beans or popcorn kernels can be fun play-boxes too, if you add small cars, shovels, cups, etc.

*Adapted from www.spdstar.org*