

# Sensory Dysfunction

## Signs of Sensory Dysfunction

Tactile Sense: input from the skin receptors about touch, pressure, temperature, pain, and movement of the hairs on the skin.

## Signs Of Tactile Dysfunction:

### 1. Hypersensitivity To Touch (Tactile Defensiveness)

- becomes fearful, anxious or aggressive with light or unexpected touch
- as an infant, did/does not like to be held or cuddled; may arch back, cry, and pull away
- distressed when diaper is being, or needs to be, changed
- appears fearful of, or avoids standing in close proximity to other people or peers (especially in lines)
- becomes frightened when touched from behind or by someone/something they can not see (such as under a blanket)
- complains about having hair brushed; may be very picky about using a particular brush
- bothered by rough bed sheets (i.e., if old and "bumpy")
- avoids group situations for fear of the unexpected touch
- resists friendly or affectionate touch from anyone besides parents or siblings (and sometimes them too!)
- dislikes kisses, will "wipe off" place where kissed
- prefers hugs
- a raindrop, water from the shower, or wind blowing on the skin may feel like torture and produce adverse and avoidance reactions
- may overreact to minor cuts, scrapes, and or bug bites
- avoids touching certain textures of material (blankets, rugs, stuffed animals)
- refuses to wear new or stiff clothes, clothes with rough textures, turtlenecks, jeans, hats, or belts, etc.
- avoids using hands for play
- avoids/dislikes/aversive to "messy play", i.e., sand, mud, water, glue, glitter, playdoh, slime, shaving cream/funny foam etc.
- will be distressed by dirty hands and want to wipe or wash them frequently
- excessively ticklish
- distressed by seams in socks and may refuse to wear them
- distressed by clothes rubbing on skin; may want to wear shorts and short sleeves year round, toddlers may prefer to be naked and pull diapers and clothes off constantly
- or, may want to wear long sleeve shirts and long pants year round to avoid having skin exposed

- distressed about having face washed
- distressed about having hair, toenails, or fingernails cut
- resists brushing teeth and is extremely fearful of the dentist
- is a picky eater, only eating certain tastes and textures; mixed textures tend to be avoided as well as hot or cold foods; resists trying new foods
- may refuse to walk barefoot on grass or sand
- may walk on toes only

## 2. Hyposensitivity To Touch (Under-Responsive):

- may crave touch, needs to touch everything and everyone
- is not aware of being touched/bumped unless done with extreme force or intensity
- is not bothered by injuries, like cuts and bruises, and shows no distress with shots (may even say they love getting shots!)
- may not be aware that hands or face are dirty or feel his/her nose running
- may be self-abusive; pinching, biting, or banging his own head
- mouths objects excessively
- frequently hurts other children or pets while playing
- repeatedly touches surfaces or objects that are soothing (i.e., blanket)
- seeks out surfaces and textures that provide strong tactile feedback
- thoroughly enjoys and seeks out messy play
- craves vibrating or strong sensory input
- has a preference and craving for excessively spicy, sweet, sour, or salty foods

## 3. Poor Tactile Perception And Discrimination:

- has difficulty with fine motor tasks such as buttoning, zipping, and fastening clothes
- may not be able to identify which part of their body was touched if they were not looking
- may be afraid of the dark
- may be a messy dresser; looks disheveled, does not notice pants are twisted, shirt is half untucked, shoes are untied, one pant leg is up and one is down, etc.
- has difficulty using scissors, crayons, or silverware
- continues to mouth objects to explore them even after age two
- has difficulty figuring out physical characteristics of objects; shape, size, texture, temperature, weight, etc.
- may not be able to identify objects by feel, uses vision to help; such as, reaching into backpack or desk to retrieve an item

Vestibular Sense: input from the inner ear about equilibrium, gravitational changes, movement experiences, and position in space.

## Signs Of Vestibular Dysfunction:

### 1. Hypersensitivity To Movement (Over-Responsive):

- avoids/dislikes playground equipment; i.e., swings, ladders, slides, or merry-go-rounds
- prefers sedentary tasks, moves slowly and cautiously, avoids taking risks, and may appear "wimpy"
- avoids/dislikes elevators and escalators; may prefer sitting while they are on them or, actually get motion sickness from them
- may physically cling to an adult they trust
- may appear terrified of falling even when there is no real risk of it
- afraid of heights, even the height of a curb or step
- fearful of feet leaving the ground
- fearful of going up or down stairs or walking on uneven surfaces
- afraid of being tipped upside down, sideways or backwards; will strongly resist getting hair washed over the sink
- startles if someone else moves them; i.e., pushing his/her chair closer to the table
- as an infant, may never have liked baby swings or jumpers
- may be fearful of, and have difficulty riding a bike, jumping, hopping, or balancing on one foot (especially if eyes are closed)
- may have disliked being placed on stomach as an infant
- loses balance easily and may appear clumsy
- fearful of activities which require good balance
- avoids rapid or rotating movements

### 2. Hyposensitivity To Movement (Under-Responsive):

- in constant motion, can't seem to sit still
- craves fast, spinning, and/or intense movement experiences
- loves being tossed in the air
- could spin for hours and never appear to be dizzy
- loves the fast, intense, and/or scary rides at amusement parks
- always jumping on furniture, trampolines, spinning in a swivel chair, or getting into upside down positions
- loves to swing as high as possible and for long periods of time
- is a "thrill-seeker"; dangerous at times

- always running, jumping, hopping etc. instead of walking
- rocks body, shakes leg, or head while sitting
- likes sudden or quick movements, such as, going over a big bump in the car or on a bike

### 3. Poor Muscle Tone And/Or Coordination:

- has a limp, "floppy" body
- frequently slumps, lies down, and/or leans head on hand or arm while working at his/her desk
- difficulty simultaneously lifting head, arms, and legs off the floor while lying on stomach ("superman" position)
- often sits in a "W sit" position on the floor to stabilize body
- fatigues easily!
- compensates for "looseness" by grasping objects tightly
- difficulty turning doorknobs, handles, opening and closing items
- difficulty catching him/her self if falling
- difficulty getting dressed and doing fasteners, zippers, and buttons
- may have never crawled as an baby
- has poor body awareness; bumps into things, knocks things over, trips, and/or appears clumsy
- poor gross motor skills; jumping, catching a ball, jumping jacks, climbing a ladder etc.
- poor fine motor skills; difficulty using "tools", such as pencils, silverware, combs, scissors etc.
- may appear ambidextrous, frequently switching hands for coloring, cutting, writing etc.; does not have an established hand preference/dominance by 4 or 5 years old
- has difficulty licking an ice cream cone
- seems to be unsure about how to move body during movement, for example, stepping over something
- difficulty learning exercise or dance steps

Proprioceptive Sense: input from the muscles and joints about body position, weight, pressure, stretch, movement, and changes in position in space.

### Signs Of Proprioceptive Dysfunction:

#### 1. Sensory Seeking Behaviors:

- seeks out jumping, bumping, and crashing activities
- stomps feet when walking
- kicks his/her feet on floor or chair while sitting at desk/table

- bites or sucks on fingers and/or frequently cracks his/her knuckles
- loves to be tightly wrapped in many or weighted blankets, especially at bedtime
- prefers clothes (and belts, hoods, shoelaces) to be as tight as possible
- loves/seeks out "squishing" activities
- enjoys bear hugs
- excessive banging on/with toys and objects
- loves "roughhousing" and tackling/wrestling games
- frequently falls on floor intentionally
- would jump on a trampoline for hours on end
- grinds his/her teeth throughout the day
- loves pushing/pulling/dragging objects
- loves jumping off furniture or from high places
- frequently hits, bumps or pushes other children
- chews on pens, straws, shirt sleeves etc.

## 2. Difficulty With "Grading Of Movement":

- misjudges how much to flex and extend muscles during tasks/activities (i.e., putting arms into sleeves or climbing)
- difficulty regulating pressure when writing/drawing; may be too light to see or so hard the tip of writing utensil breaks
- written work is messy and he/she often rips the paper when erasing
- always seems to be breaking objects and toys
- misjudges the weight of an object, such as a glass of juice, picking it up with too much force sending it flying or spilling, or with too little force and complaining about objects being too heavy
- may not understand the idea of "heavy" or "light"; would not be able to hold two objects and tell you which weighs more
- seems to do everything with too much force; i.e., walking, slamming doors, pressing things too hard, slamming objects down
- plays with animals with too much force, often hurting them

## Signs Of Auditory Dysfunction: (no diagnosed hearing problem)

### 1. Hypersensitivity To Sounds (Auditory Defensiveness):

- distracted by sounds not normally noticed by others; i.e., humming of lights or refrigerators, fans, heaters, or clocks ticking
- fearful of the sound of a flushing toilet (especially in public bathrooms), vacuum, hairdryer, squeaky shoes, or a dog barking

- started with or distracted by loud or unexpected sounds
- bothered/distracted by background environmental sounds; i.e., lawn mowing or outside construction
- frequently asks people to be quiet; i.e., stop making noise, talking, or singing
- runs away, cries, and/or covers ears with loud or unexpected sounds
- may refuse to go to movie theaters, parades, skating rinks, musical concerts etc.
- may decide whether they like certain people by the sound of their voice

## 2. Hyposensitivity To Sounds (Under-Registers):

- often does not respond to verbal cues or to name being called
- appears to "make noise for noise's sake"
- loves excessively loud music or TV
- seems to have difficulty understanding or remembering what was said
- appears oblivious to certain sounds
- appears confused about where a sound is coming from
- talks self through a task, often out loud
- had little or no vocalizing or babbling as an infant
- needs directions repeated often, or will say, "What?" frequently

## Signs Of Oral Input Dysfunction:

### 1. Hypersensitivity To Oral Input (Oral Defensiveness):

- picky eater, often with extreme food preferences; i.e., limited repertoire of foods, picky about brands, resistive to trying new foods or restaurants, and may not eat at other people's houses)
- may only eat "soft" or pureed foods past 24 months of age
- may gag with textured foods
- has difficulty with sucking, chewing, and swallowing; may choke or have a fear of choking
- resists/refuses/extremely fearful of going to the dentist or having dental work done
- may only eat hot or cold foods
- refuses to lick envelopes, stamps, or stickers because of their taste
- dislikes or complains about toothpaste and mouthwash
- avoids seasoned, spicy, sweet, sour or salty foods; prefers bland foods

### 2. Hyposensitivity To Oral Input (Under-Registers)

- may lick, taste, or chew on inedible objects
- prefers foods with intense flavor; i.e., excessively spicy, sweet, sour, or salty
- excessive drooling past the teething stage

- frequently chews on hair, shirt, or fingers
- constantly putting objects in mouth past the toddler years
- acts as if all foods taste the same
- can never get enough condiments or seasonings on his/her food
- loves vibrating toothbrushes and even trips to the dentist

## Signs Of Olfactory Dysfunction (Smells):

### 1. Hypersensitivity To Smells (Over-Responsive):

- reacts negatively to, or dislikes smells which do not usually bother, or get noticed, by other people
- tells other people (or talks about) how bad or funny they smell
- refuses to eat certain foods because of their smell
- offended and/or nauseated by bathroom odors or personal hygiene smells
- bothered/irritated by smell of perfume or cologne
- bothered by household or cooking smells
- may refuse to play at someone's house because of the way it smells
- decides whether he/she likes someone or some place by the way it smells

### 2. Hyposensitivity To Smells (Under-Responsive):

- has difficulty discriminating unpleasant odors
- may drink or eat things that are poisonous because they do not notice the noxious smell
- unable to identify smells from scratch 'n sniff stickers
- does not notice odors that others usually complain about
- fails to notice or ignores unpleasant odors
- makes excessive use of smelling when introduced to objects, people, or places
- uses smell to interact with objects

## Signs Of Visual Input Dysfunction (No Diagnosed Visual Deficit):

### 1. Hypersensitivity To Visual Input (Over-Responsiveness)

- sensitive to bright lights; will squint, cover eyes, cry and/or get headaches from the light
- has difficulty keeping eyes focused on task/activity he/she is working on for an appropriate amount of time
- easily distracted by other visual stimuli in the room; i.e., movement, decorations, toys, windows, doorways etc.
- has difficulty in bright colorful rooms or a dimly lit room

- rubs his/her eyes, has watery eyes or gets headaches after reading or watching TV
- avoids eye contact
- enjoys playing in the dark

## 2. Hyposensitivity To Visual Input (Under-Responsive Or Difficulty With Tracking, Discrimination, Or Perception):

- has difficulty telling the difference between similar printed letters or figures; i.e., p & q, b & d, + and x, or square and rectangle
- has a hard time seeing the "big picture"; i.e., focuses on the details or patterns within the picture
- has difficulty locating items among other items; i.e., papers on a desk, clothes in a drawer, items on a grocery shelf, or toys in a bin/toy box
- often loses place when copying from a book or the chalkboard
- difficulty controlling eye movement to track and follow moving objects
- has difficulty telling the difference between different colors, shapes, and sizes
- often loses his/her place while reading or doing math problems
- makes reversals in words or letters when copying, or reads words backwards; i.e., "was" for "saw" and "no" for "on" after first grade
- complains about "seeing double"
- difficulty finding differences in pictures, words, symbols, or objects
- difficulty with consistent spacing and size of letters during writing and/or lining up numbers in math problems
- difficulty with jigsaw puzzles, copying shapes, and/or cutting/tracing along a line
- tends to write at a slant (up or down hill) on a page
- confuses left and right
- fatigues easily with schoolwork
- difficulty judging spatial relationships in the environment; i.e., bumps into objects/people or missteps on curbs and stairs

## Auditory-Language Processing Dysfunction:

- unable to locate the source of a sound
- difficulty identifying people's voices
- difficulty discriminating between sounds/words; i.e., "dare" and "dear"
- difficulty filtering out other sounds while trying to pay attention to one person talking
- bothered by loud, sudden, metallic, or high-pitched sounds



- difficulty attending to, understanding, and remembering what is said or read; often asks for directions to be repeated and may only be able to understand or follow two sequential directions at a time
- looks at others to/for reassurance before answering
- difficulty putting ideas into words (written or verbal)
- often talks out of turn or "off topic"
- if not understood, has difficulty re-phrasing; may get frustrated, angry, and give up
- difficulty reading, especially out loud (may also be dyslexic)
- difficulty articulating and speaking clearly
- ability to speak often improves after intense movement

## Social, Emotional, Play, And Self-Regulation Dysfunction:

### Social:

- difficulty getting along with peers
- prefers playing by self with objects or toys rather than with people
- does not interact reciprocally with peers or adults; hard to have a "meaningful" two-way conversation
- self-abusive or abusive to others
- others have a hard time interpreting child's cues, needs, or emotions
- does not seek out connections with familiar people

### Emotional:

- difficulty accepting changes in routine (to the point of tantrums)
- gets easily frustrated
- often impulsive
- functions best in small group or individually
- variable and quickly changing moods; prone to outbursts and tantrums
- prefers to play on the outside, away from groups, or just be an observer
- avoids eye contact
- difficulty appropriately making needs known

### Play:

- difficulty with imitative play (over 10 months)
- wanders aimlessly without purposeful play or exploration (over 15 months)
- needs adult guidance to play, difficulty playing independently (over 18 months)

- participates in repetitive play for hours; i.e., lining up toys cars, blocks, watching one movie over and over etc.

### Self-Regulation:

- excessive irritability, fussiness or colic as an infant
- can't calm or soothe self through pacifier, comfort object, or caregiver
- can't go from sleeping to awake without distress
- requires excessive help from caregiver to fall asleep; i.e., rubbing back or head, rocking, long walks, or car rides

### Internal Regulation (The Interoceptive Sense):

- becoming too hot or too cold sooner than others in the same environments; may not appear to ever get cold/hot, may not be able to maintain body temperature effectively
- difficulty in extreme temperatures or going from one extreme to another (i.e., winter, summer, going from air conditioning to outside heat, a heated house to the cold outside)
- respiration that is too fast, too slow, or cannot switch from one to the other easily as the body demands an appropriate respiratory response
- heart rate that speeds up or slows down too fast or too slow based on the demands imposed on it
- respiration and heart rate that takes longer than what is expected to slow down during or after exertion or fear
- severe/several mood swings throughout the day (angry to happy in short periods of time, perhaps without visible cause)
- unpredictable state of arousal or inability to control arousal level (hyper to lethargic, quickly, vacillating between the two; over stimulated to under stimulated, within hours or days, depending on activity and setting, etc.)
- frequent constipation or diarrhea, or mixed during the same day or over a few days
- difficulty with potty training; does not seem to know when he/she has to go (i.e., cannot feel the necessary sensation that bowel or bladder are full)
- unable to regulate thirst; always thirsty, never thirsty, or oscillates back and forth
- unable to regulate hunger; eats all the time, won't eat at all, unable to feel full/hungry
- unable to regulate appetite; has little to no appetite and/or will be "starving" one minute then full two bites later, then back to hungry again (prone to eating disorders and/or failure to thrive)