

WHAT IS SENSORY INTEGRATION?

SENSORY INTEGRATION ("SI") is the neurological process of organizing sensations for our use in everyday life. Normally, our brain receives sensory messages from our bodies and surroundings; interprets these messages; and organizes our purposeful responses. Example: As we climb the stairs, our brain registers that we're moving upward, forward, and from side to side. We make adaptive responses: we flex and extend our legs, alternate feet, slide our hand along the banister, maintain our balance, keep upright, and watch where we're going.

Fundamental sensory systems, according to Dr. A. Jean Ayres' research, are:

1) The **tactile** sense, which provides information, primarily through our skin, about the texture, shape and size of objects in the environment. It helps us distinguish between threatening and non-threatening touch sensations.

2) The **vestibular** sense, which provides information through the inner ear about gravity and space, about balance and movement, and about our head and body position in relation to the surface of the earth.

3) The **proprioceptive** sense, which provides information through our joints, muscles, and ligaments about where our body parts are and what they are doing.

When these three basic sensory systems are working well, self-control, self-esteem, motor skills, and higher-level functions such as visual perception, auditory perception, and academic skills can develop according to Mother Nature's plan.

WHAT IS SENSORY INTEGRATION DYSFUNCTION?

SENSORY INTEGRATION DYSFUNCTION ("DSI"), the inability to respond appropriately to ordinary experiences, occurs when the brain processes sensations inefficiently. How does SI dysfunction play out?

Ascending the stairs, the child may need to look down at his feet for visual cues about what his body is doing. He may cling to the banister or to an adult's hand. Instead of alternating feet, he may "mark time" in order to keep his balance. He may be very resistant to, or fearful of, heights.

Or . . . instead of being satisfied with five minutes of swinging, he craves 30. Instead of striving to cut with scissors, she gives up quickly. Instead of returning a hug or tolerating an unexpected touch, he punches. Instead of pedaling a trike, she can't plan and coordinate her movements.

Unusual responses to touching and being touched, moving and being moved, suggest sensory integration dysfunction. When the child avoids ordinary sensations or seeks excessive stimulation, and when he can't make his body respond the way he wants it to, he is at risk.

WHAT HELPS?

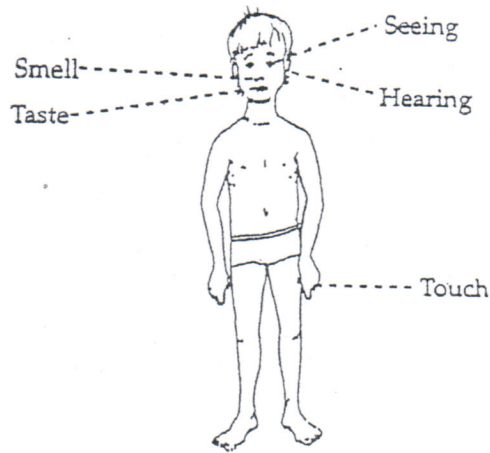
SAFE (Safe, Appropriate, Fun and Easy) activities that involve touching and moving!

SMOOTH SENSORY INTEGRATION IS ESSENTIAL FOR:

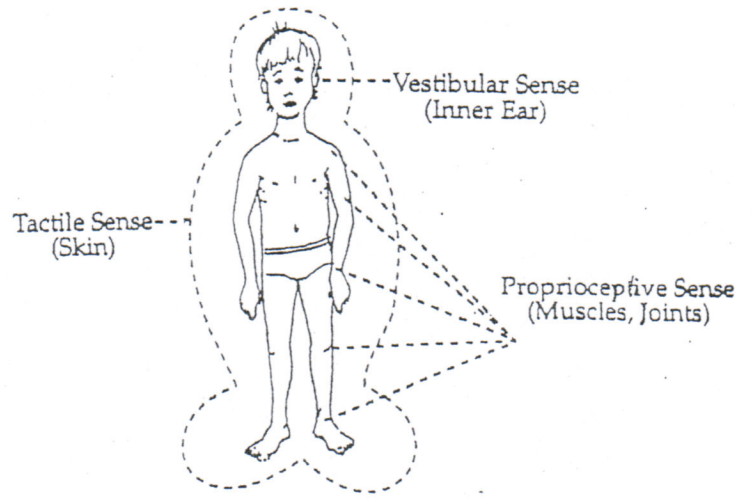
Academic skills
Attention
Auditory perception
Balance
Bilateral coordination
Body awareness
Body position
Emotional security
Eye-hand coordination
Fine motor skills
Grading of movement
Gravitational security
Gross motor skills
Hand preference

Healthy relationships
with others
Motor control
Muscle tone
Postural stability
Praxis,
including motor planning
Self-esteem
Self-regulation
Social skills
Speech and language skills
Tactile perception
Visualization
Visual perception


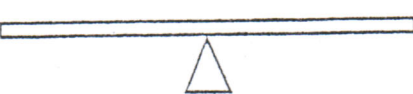

The Far Senses



The Near Senses



How the Discriminative System Takes Precedence Over the Defensive System as Children Mature

Child's Age	Growing Importance of Discriminative System
INFANT: Defensive system is most important	Defensive  Discriminative
TODDLER: Defensive and discriminative systems are equally important.	Defensive  Discriminative
KINDERGARTNER: Discriminative system is most important.	Defensive  Discriminative

To get in sync, many kids know what they need . . . and we need to pay attention!

THE FAMILY CIRCUS BIL KEANE



"I need a hug, Mommy. I used up the last one."

DENNIS THE MENACE HANK KETCHAM



"If I can't touch nothing, I'll be unhandy all my life!"

CLOSE TO HOME JOHN MCPHERSON



Saving herself hours of cleanup time, Carol wisely outfitted Justin with a personal toy rake.

THE FAR SIDE GARY LARSON



The livestock would gather every morning, hoping for one of Farmer Dan's popular "airplane" rides.