Sensory Integration

Normal Sensory Integration

Sensory Integration begins when the brain takes different pieces of information from seeing, hearing, tasting, feeling, smelling, and moving. The brain acts like a traffic director, acknowledging and sending sensory information to its correct destination. Information flows in an organized manner so we can use the past experiences to form perceptions, develop behaviors, and learn about how our bodies work in the environment. Then we have the proper sensory integration for appropriate behavior and learning.

Traffic Jam in the Brain

Abnormal sensory integration is like a traffic jam in the brain. Sensory information comes in but is not directed to the right department of the brain. Information that is not sent to the correct area of the brain cannot be organized or interpreted properly. The information may feel too slight to register or it may feel like an over-whelming jumble of sensations. That's when integration is poor or "dysfunctional" and potentially interferes with motor coordination, academics or social skills.

Why is Sensory Integration Important?

Usually, children are constantly in motion and getting into everything. This is because all children have a natural need to take in information through the sense by moving, touching, feeling, hearing, tasting, and smelling everything that they can. Children do this because that information is nourishment for their developing brains. Their brains need this information in order to learn how to react to their environments. Babies have limited experience and so they must use trial and error to understand how they can interact with and be successful in their environment. When a baby wants a toy that is out of reach they must use all their senses to figure out a way to get that toy. For instance a child must:

- See the toy
- Visually gauge the distance to the toy
- Understand where their arms are in relation to the toy
- Understand how to move their arms
- Feel the speed of their arms moving towards the toy
- Feel the toy when they touch it
- Feel the pressure necessary to support the weight of the toy
- Understand how to move their arms to bring the toy back to their body.

SI GOALS

Issues such as dressing difficulties, behavioral problems and learning impairments may not be directly addressed initially. This is because the root of these problems lie in the child's inability to understand and organize their sensory information.

- **Sensory diet**-this allows the child's brain to be stimulated with the correct type and amount of sensation it needs to function more efficiently.
- Active, child-directed participation in therapy increases the effectiveness of therapy and keeps the child more motivated

Example: A child who is hypersensitive to touch should be actively engaged in a fun game involving a textured item (such as a bin of beans). The child will meet the challenge of touching the beans because he/she is motivated to play. The functional goal to be met may be tolerating brushing his/her teeth or walking barefoot in grass at home.

Treatment should begin as early as possible, because young brains are still developing, thus are easier to organize and improve.