

# Understanding The Senses

## The Vestibular System: Our Movement & Balance



The vestibular system detects movement and changes in head position, helping the brain understand where the body is in space. It plays an important role in balance, posture, muscle development, eye coordination, attention, learning, and overall regulation.

# OVERVIEW

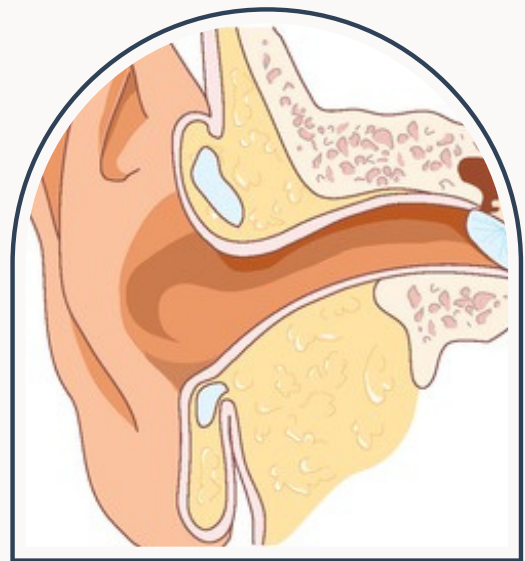
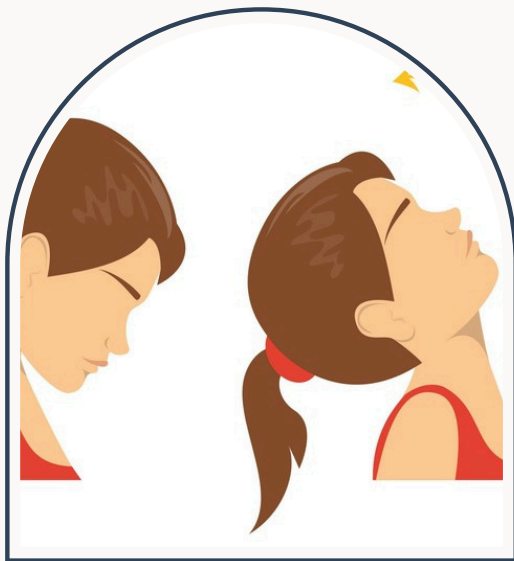
## The Vestibular System

The vestibular system senses movement of the head and body through space. It detects movement from our own body, particularly our head, sending a signal to the brain. The vestibular organs are triggered by:

- Nodding, shaking or tipping of the head side to side or upside down
- Moving including jumping, running, sliding, change of direction, driving, falling, spinning and swinging
- Stopping movement in space

**The vestibular system supports our ability to:**

- Maintain balance and an upright posture, trunk or 'postural stability'
- Build muscle tone and strength throughout our body
- Coordinate eye movements for tracking, allowing us to smoothly use our eyes (to follow moving objects like a ball) or keep our eyes fixed on a 'destination' while we move/run through space
- Supports attention and learning
- Impacts regulation



## WHAT YOU MIGHT NOTICE

# Common Signs of Differences with Vestibular Processing

This can present differently in different people. Some people avoid movement and others will seek it out, others do both. Note that a person having difficulties may not show every behaviour listed below:

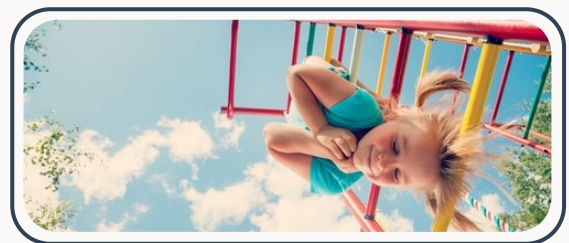
### **Your child tends to avoid or appears uncomfortable / distressed with movement**

- Moving slowly/cautiously, fear of tipping head backwards or of heights Experiences motion sickness/dizziness frequently
- Appearing to never become dizzy even with spinning
- Reduced sense of direction, appearing 'lost in space' sometimes
- Frequently falling and bumping themselves

### **Your child tends to engage in more movement**

- Moving fairly constantly and/or intensely, jumping, running, and/or climbing
- Difficulty sitting still for periods of time, eating dinner at the table
- Doesn't experience dizziness after extraordinary amount of spinning

If you think your child may have differences with vestibular processing contact your local Occupational Therapist to discuss the process of assessment and intervention.



## PRACTICAL TIPS

# Ways to Support the Vestibular System

When offering your child with opportunities to experience sensation, it's important to attune to you child and follow their lead. Invite them to engage rather than rushing or pressuring them.

### **For children who tend to avoid or cautious of movement**

- Joining with your child eg sit on the swing / slide with them on your lap
- Offering gentle, slow rhythmic movement eg slow swinging together
- Airplane rides lying on your tummy or legs, the air, bouncing on your lap.
- Gradually increasing the range and speed of movement as they show delight

### **For children who have an urge to move provide opportunities for more safe, intense movement, such as:**

- Jumping on trampoline, bouncing on a hopper
- Riding a scooter board laying on their tummy
- Swinging high, sliding fast down high slides, spinning
- Tipping head backwards over a gym ball, lap or bed, tunnel ball
- Rolling down hill, crawling games, downward dog



## MOVEMENT & REGULATION

# The Vestibular System Impacts Regulation

Vestibular input can be a very powerful way to change the state of a regulation, shifting the nervous system up or down. However it impacts us in very individual ways, what regulates one person may distress another. Notice how your child responds to different types of movement and offer movement that shapes their state of regulation.

### Notice if movement facilitates:

- A calming and peaceful state
- A giggly and impulsive state
- Gradual change from an urge to move to appearing sated
- Fearful, agitated or withdrawn state.

When we notice a pattern, we can provide opportunities for movement that influences your child's state of regulation.

If you think your child may have challenges with regulation and movement contact your local Occupational Therapist to discuss the process of assessment and intervention.

