



**HOW CAN ORDINARY MOVEMENT BE SCARY?  
UNDERSTANDING GRAVITATIONAL INSECURITY©  
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More basic than our ability to form relationships with people, or to interact with objects, is our ability to respond to gravity and to relate our bodies to the space around us. This sense, which comes from the vestibular system, is a crucial and fundamental aspect of developing a sense of feeling secure and comfortable in the world.

As infants, we begin to develop a sense of trust as we move through space and as our nervous system provides accurate information about the direction we are going, how fast or slow we are moving and in which way we are oriented in space. We are able to sense these things when our head position changes, through stimulation to a part of the vestibular system that reacts to the earth's gravitational pull.

Children who do not perceive gravity in the usual ways are often very fearful of movement, heights and/or change of head position. This type of problem was called "gravitational insecurity" by Dr. A Jean Ayres, the founder of Ayres Sensory Integration® theory and practice. Most of us can imagine feeling threatened by being at the edge of a ledge that is very high, or by feeling disoriented by being moved through space so quickly that we cannot immediately distinguish up from down. For some individuals, however, even slight changes in height or position create an extreme feeling of disorientation, fear and anxiety. It is probably very

difficult for those of us who do not have this reaction to imagine what it must be like to experience these sensations. If you cannot trust your body as it moves through space, it would be very hard to trust anyone or anything else.

Because it is difficult to understand this problem, it may often seem that someone who experiences gravitational insecurity has a psychological or behavioral problem, but the basis of this disorder is related to inefficient sensory integration. However, it is certainly easy to imagine how psychological or behavioral problems could develop from experiences that create so much discomfort in everyday life actions.

Most children go through periods of development in which they react somewhat fearfully to some types of movement or to heights. There are also many individual differences in the way in which people react to heights and to fast motion. However, when reactions to heights or motion which are not usually noticed or bothersome become extreme, or when they begin to interfere with the ability to participate in activities, a problem may exist. Some of the signs which Dr. Ayres considered suggestive of gravitational insecurity included the following:

- Anxiety when feet leave the ground
- An unnatural fear of heights or falling
- An unusual dislike of having one's head upside down
- Fear or uneasiness when walking on uneven surfaces or on stairs
- Alarm at being tipped backwards

Another related problem is called "intolerance to movement." The main characteristic of this problem is an extreme reaction to linear or rotary motion that is usually not perceived as threatening or significant. People who have intolerance to movement may experience nausea and queasiness and may also be prone to extreme car and seasickness. We don't know as much about this problem as we do about gravitational insecurity, but we've observed it in children who have other sensory integrative problems. We also know that people naturally have less tolerance for movement as they get older.

## Try These Activities

Here are some ways you can help a child with gravitational insecurity:

- Acknowledge that this is a real problem for the child and respect the child's reactions to various situations. Treating it as an emotional weakness or behavior problem is likely to make things worse.
- Help the child gradually engage in activities which are threatening. For example, if a child is frightened by being on a swing, first try a swing in which the child's feet can touch the ground or hold the child in your lap on a swing.
- Extra proprioceptive sensation (pressure to the muscles and joints and through the trunk) may help a child feel more secure. For example, if the child is fearful when walking up stairs, try holding him at the hips and applying gentle pressure. This may feel more secure than being held by the hand.
- Gentle, back and forth movement is usually easier to tolerate than rotary movement. Try moving the child in the most comfortable ways first.
- Being tilted backward is often especially threatening. Do not attempt this kind of movement until the child is clearly ready to tolerate it.
- Engaging in play and imagination during challenging activities may help distract from the scary aspect of the situation.
- Practice engaging in movement activities with the child's eyes closed. This may help the child "tune in" to the position of his body in space.
- Adding weights (for example, wrist or ankle weights or a backpack filled with beans or rice) may also help a child feel more secure.

Check with your therapist to see if these activities are appropriate for your child and for more suggestions.

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