

A Comprehensive Model of Brain Function and Behaviors

Holistic

- To understand the complex interactions of our body-mind-brain-spirit requires a systems approach including but not limited to the central nervous system, autonomic nervous system, immune system, digestive system, visual system, family system, and more.
- The external environment and individual's internal make-up influence one another and nothing stands alone.
- Effective theories and practices need to incorporate knowledge from many disciplines.

Approach

- Each individual, regardless of age or presumed abilities, deserves to be included in the discussion of concerns, validation of challenges, and explanation of therapeutic recommendations.
- Social-emotional factors in addition to physical developmental stages need consideration in selecting therapeutic activities that strengthen the nervous system while respecting the psyche.
- Behaviors are communication. They need to be analyzed to determine what is driving the person to engage in these behaviors, rather than viewing the behaviors as negative symptoms to be masked or controlled.
- Standardization is a construct that may provide us a frame of reference, but it is not compatible with the reality of multiple influences on performance and nor is it validating of individual differences.
- Severely or continually stressed systems do not get stronger; therefore, in assessing and treating disorders, individual tolerance must be respected.

Neuro Development

- Neuroplasticity and synaptogenesis are life-long processes, with the nervous systems (including the brain) in a constant state of adaptation to the total environment.
- Developmental history and future aspirations both are important influences on current behaviors.
- Repeated, organized, non-stressful movement, supported by proper nutrition is essential for healthy brains:
 - Influencing the body's biochemistry
 - Organizing mental processing
 - Helping to mold the actual structure of the brain

Learning

- There are many forms of learning: academic, language, motor, social, etc. and they influence one another.
- Mental Rehearsal is a powerful learning tool that entrains brain patterns. Understanding and utilizing this process can lead to altering behaviors that may have been interpreted as familial (genetic) traits.

Efficiency

- Since stressed systems do not get stronger, by gently enhancing weak systems and their connections to other systems, we can build efficient functions, not just effective behaviors in specific situations.
- Conservation of our natural internal resources is necessary for our well-being.

HANDLE[®] embodies these principles in a paradigm employing nonjudgmental observational assessment and in-depth interviews to develop a Neurodevelopmental Profile rather than determining a score and providing a label. From the profile, understanding emerges of the root causes of the presenting concerns. Then a Certified HANDLE Practitioner designs an individualized program employing Gentle Enhancement[®] to improve function, naturally. Groups may also use HANDLE programs designed to fit their settings and needs.

Attentional Priorities, Disordered

One of these boys is relaxed,
able to attend, with energy
to respond, to learn.

The other is trying to relax,
his energy and attention
spent on basic security
because of sensory-
integration dysfunction.

His label? Autism. *Irrelevant.*

His sensitivities? Severe.
Important.

His bravery? Immense.
Frequently overlooked.



Remember, **Gentle Enhancement**[®] is the key.
Stressed systems do not get stronger.

Stop an activity if you see any of the following state change signs:

- Change in muscle tone
- Loss of visual focus
- Reddening of the ears
- Change of facial color
- Change in breathing patterns
- Worsening of an activity once it is becoming integrated
- Complaints of nausea, dizziness, disorientation, or other somatic concern.

Crazy Straw

Benefits:

Drinking through a crazy straw can help to improve many functions: interhemispheric integration, binocular functions (eye teaming), light sensitivity, sound sensitivity, articulation, bowel and bladder control, tongue and lip control for articulation, facial muscle tone for nonverbal communication, and more.

Materials:

You will need a crazy straw - one of those plastic straws with lots of curls or twists and a small diameter, and a clear drink. The twists and turns of the crazy straw create more resistance in sucking, so people whose ears are very sensitive should use a regular straw instead of a crazy straw, because you have to suck so much harder through a crazy straw that it might be painful. Water is the recommended beverage, since water is essential to healthy brain and body functions. Also, it is easiest to clean a crazy straw if it is used only for water.

Procedure:

Hold the straw in the center of your mouth, and sip and swallow, allowing a rhythmic pattern to develop if you can. You will benefit more from doing this with your eyes closed unless your eyes tend to over-converge. If you have a tendency for, or a history of, crossed eyes, be sure that you look at a distant object while drinking.

Variations:

1. When there is a fear of aspiration, sucking is still possible with an activity such as using a straw to create enough suction to transfer small bits of colored paper from the table to make a mosaic on a larger piece of paper. Or use the straw to pick up a light object, such as a paper napkin, to transfer it from one side of a tray to the other.
2. If you cannot swallow thin liquids, use a thick beverage and drink it through a regular straw.

Precautions:

Be sure to rinse out the straw well after each drink, so harmful bacteria do not build up in the loops. If you are pregnant, do not engage in this intense sucking, as it may stimulate contractions.

That's all there is to it for this go-anywhere, non-obvious, fun and therapeutic activity.

More about the benefits of using a crazy straw:

When you examine the importance of sucking in human development, it is truly profound. Not only do we suck for nourishment, but also in sucking we do many other amazing things:

- We integrate the two sides of our mouth and cheeks, stimulating the two cerebral hemispheres in a coordinated rhythmic fashion. This enhances our interhemispheric integration in general. We rely on interhemispheric integration to be able to process language, balance our instincts with logic, and so many other functions frequently compromised in neurobehavioral disorders as well as in brain injury.
- As we suck, many of our cranial nerves are stimulated, and they in turn help regulate many aspects of our vision, including the ability of our eyes to converge – that is focus together on a target (and, by converging on the face of our caregiver who is feeding us, we send messages about faces to the fusiform face area of the brain).
- One reason that people become light sensitive is that the two eyes do not team in their processing of visual images, which of course is based on perception of light and darkness. Another is that the pupils have a reduced degree of reactivity to light. Drinking through the straw enhances these functions and thereby reduces light sensitivity.
- Stimulation of the trigeminal and facial nerves directly stimulates structures in the middle ear, also, dampening the volume of the sounds we hear. It is common knowledge that chewing gum or sucking helps people tolerate the pressure change in their ears during take-off and landing on flights. And through a connection in the part of the midbrain called the colliculus, visual focus directs auditory focus, connecting the work of the Crazy Straw in improving visual focus with reduction of distractibility to noises in the environment.
- Of course, we increase tongue and lip control and coordinated breathing, all of which support our ability to speak with good articulation.
- A little known fact (shared by Paula Garbourg in [The Secret of the Ring Muscles](#)) is that when we strengthen any set of sphincter muscles (such as the lips and also the esophagus) we strengthen all the sphincters in our body (such as the pupils of the eyes and the bowel and bladder, too).
- Sucking, especially early in life, also stimulates the pituitary gland for balanced hormone production, including the human growth factor hormone.

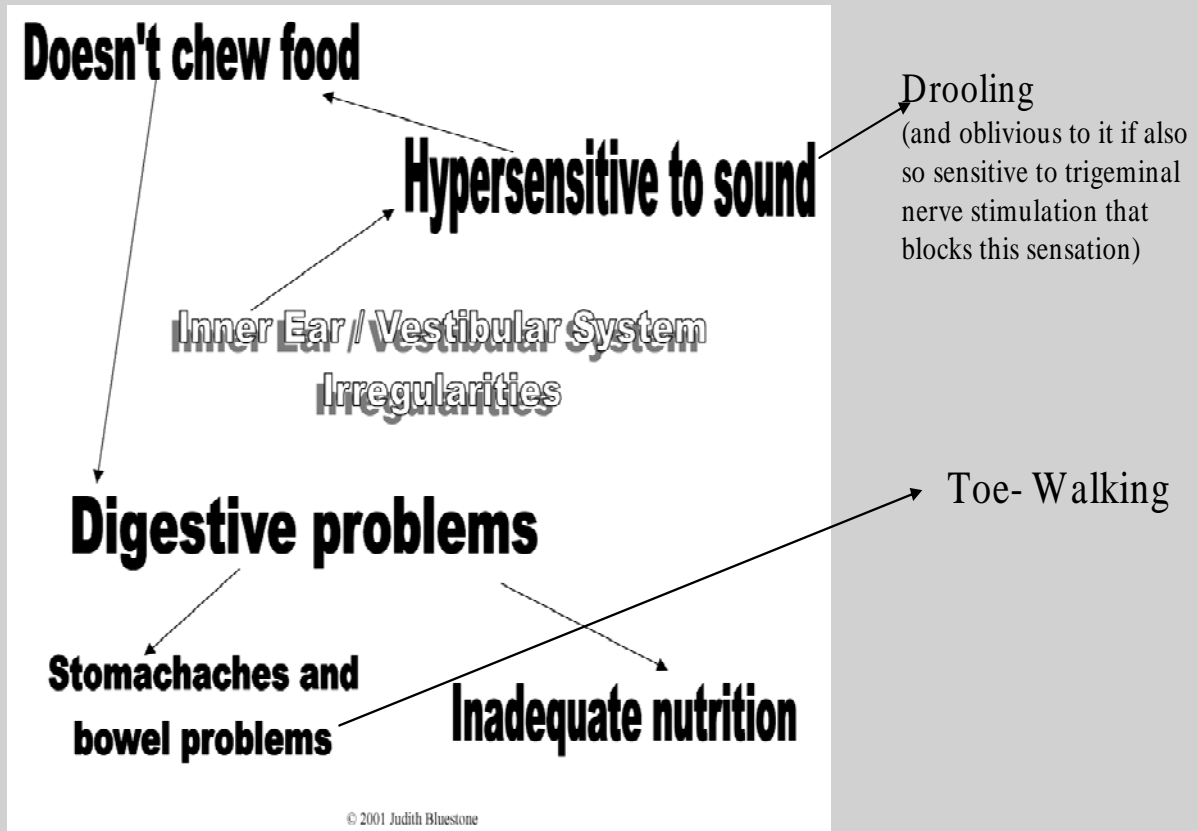
The diagram below represents a womb to emphasize how prenatal environmental influences can affect the developing fetus. The outer ring represents the more outwardly evident behavioral symptoms of autism. The inner rings represent those symptoms less easily seen but common in individuals on the spectrum.



Fear and Anxiety

Depleting our internal natural resources that would support muscle tone, the immune system, general resiliency, and more

“Obvious” Causes of Unusual Behaviors



Sensible “prescriptions”—Crazy Straw and Face Tapping