



## A world where sensory processing challenges are recognized, understood, and supported

### Treatment • Education • Research

### What we know as a society:

We know more about body-brain development and function than ever before. What has been established, without a doubt, is that a crucial part of surviving and thriving in the modern world is a functional, intact nervous system that responds normally to sensory stimulation.

### What we know about sensory processing:

Individuals with compromised sensory processing feel unsafe in the world. They can be traumatized by every day experiences, which are disabling and limit an individual's ability to participate with their family and in their community.

Sensory processing difficulties can be treated, however, most individuals with this disorder are misdiagnosed or not diagnosed at all. This is unacceptable.

### A glimpse at success:

When a person with sensory processing challenges receives the right treatment and support, they can live transformed lives. They connect with others, engage positively, demonstrate self-control, and contribute to the world.

**“Sensory processing issues are a growing public health concern and are becoming a major societal factor.” - Lucy Jane Miller Ph.D., OTR (2017)**

### Impact on Society

Sensory processing difficulties occur in at least 5% of individuals. Without treatment, sensory processing issues may lead to school failure. Additionally, consequent mental health disorders may escalate to anti-social behavior, addictions, and other conduct issues.

### Why is this occurring?

- Neurodevelopmental disorders have become more common in recent decades. Many experts believe that this has to do with genetics, our epigenetics, the environment, our current way of living and more<sup>1</sup>.
- Every year, more children are born pre-term, with low birth weights for gestational age, with pre-natal exposure/addiction to drugs and alcohol, and with other serious birth risk and post natal factors<sup>2</sup>. And as our ability to save these children increases, more children with vulnerable nervous systems need our support at home, in school and on the playground<sup>3</sup>.
- Increasing reliance on screen time, around the world and across socio-economic groups, limits face-to-face relationships and creates isolation. Outside physical play is diminishing and so is connecting with nature, movement based activity, laughter, and times for families to experience 'just plain fun.'<sup>4</sup>

<sup>1</sup> Shonkoff & Phillips, (2000). Committee on the Integrating Science of Early Childhood Development

<sup>2</sup> Martin et al. (2017) Center for Disease Control

<sup>3</sup> Glass, et al. (2015) Anesthesia and Analgesia

# The STAR (Sensory Therapies And Research) Approach

STAR Institute has three areas of focus: Research, Education, and Treatment, which co-exist as three teams working in one center, continuously informing each other and our research outcomes.

The focus in intervention is “out of the box” occurring in natural settings as much as possible. By transforming and supporting the primary relationships of the child or adult ‘treatment’ can take place everywhere - all the time. STAR Institute gives away as much insight and strategies as possible to the individuals, families and support teams. This way the approach facilitates change that is profound, generalized and sustainable.

STAR Institute uses a strengths-based approach that supports people with sensory and relationship issues throughout the lifespan, from birth through older individuals. The approach respects individual differences and neurodiversity, focusing on each individual within his/her unique family context, and in their own world. Function is promoted while disability is minimized. Differences are celebrated and every individual is supported to experience success and joie de vivre (joy in life).

## What can be done?

**Our Treatment Center** and specifically early intervention changes lives. Studies show positive impact of early<sup>5</sup> and intense stimulation for young children with sensory conditions<sup>6</sup>. Working with parents and children together results in better outcomes than intervening with children alone. The STAR approach makes significant changes in children’s function and happiness.

**Our Education Center** increases public awareness of sensory processing challenges, improves knowledge about how to effectively address the issues, and trains professionals to identify and care for individuals/families living with sensory processing challenges. We offer education, free online resources, and advocacy materials.

**Our Research Center** provides the basis for our education and treatment programs, demonstrating the effectiveness of our approach<sup>7</sup>. For 22 years (1995-2017) sensory processing has been researched by an Interdisciplinary university-based research group spearheaded by STAR Institute with support from the Wallace Research Foundation. For over two decades STAR recruited and coordinated ~50 scientists from the fields of neuroscience, epidemiology, genetics, intervention, and neuropathology. Outcomes from cutting-edge neuro-science technology and behavioral studies are published in > 100 peer-reviewed articles. The scientific findings of the group demonstrate brain differences between neurotypicals and those who have sensory challenges including significant differences in: autonomic functioning, white matter in the posterior brain, and multisensory integration. Research also drives advocacy initiatives that promote recognition of sensory processing challenges.

## Current Needs for Global Change

### Treatment

More children, adolescents and adults need correct diagnosis and effective support than ever before.

### Education

Parents, individuals, educators, and clinicians around the world are hungry for knowledge about sensory processing.

### Research

The nature of sensory processing challenges and how to treat them must be researched and better understood for global change to occur.

**Help and Hope exist: We are committed to changing the world for those with sensory challenges.**

**Our work is not done. Will you join us?**

<sup>4</sup> Maller, et. al., (2006), Health Promotion International

<sup>5</sup> Weikart, (2016), The Journal of Special Education

<sup>6</sup> Miller et al., (2007) American Journal of Occupational Therapy

<sup>7</sup> Schoen et al. (2018) Open Journal of Occupational Therapy



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