

iLS
INTEGRATED
LISTENING SYSTEMS

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- iLs Method
- Who is iLs for?
- How does iLs work?
- iLs Listening Component
- iLs Programs
- Equipment Summary
- Program Structure
- Interactive Language Program
- Supporting Research
- Summary

What is the iLS Method?

The **iLS Method** is based on the fact that the brain can change in reaction to specific stimulation (“neuroplasticity”). iLS programs provide simultaneous, multi-sensory stimulation to areas of the brain involved in emotional regulation, sensory processing, learning and communication.

The **iLS Method** combines **3 modules**:

- Ear-brain Module (using auditory pathways)
- Visual-Balance-Coordination Module
- Interactive Language Module

Who is iLs for?

- iLs focuses on the foundation by improving the critical functions of Emotional Regulation, Sensory Processing and Motor Skills.
- As these 3 areas improve, changes result in:
 - attention, impulse control
 - auditory processing, sensory processing
 - communication, self-expression
 - reading/writing
 - self-confidence, motivation



How Does iLS Work?

- **Building a strong neurological foundation** through specific auditory, visual and vestibular stimulation.
- **Strengthening hemispheric integration and sensory processing**, especially information coming from visual, auditory and vestibular systems .
- **Improving attention through regulation**; iLS' auditory program stimulates the vagus nerve, which activates our parasympathetic nervous system (“rest and digest” vs. the “fight or flight” response of the sympathetic nervous system).
- **Neuroplasticity**; the brain's ability to change given the right stimulation. iLS stimulates parts of the brain involved in processing sensory information.

Training the brain's processing for input and output

- iLs Programs
 - designed for specific therapeutic goals, filtering music to emphasize different frequencies.
 - Example: programs focusing on language related goals emphasize the language frequencies of 750-3000 Hz
 - Example: programs focusing on sensory goals emphasize frequencies in the 0-750 Hz range
- Audio techniques: frequency filtration, gating, bone conduction
- Bone conduction equipment adds benefit of vestibular engagement

Sensory Motor – 60 hours

Balance, Coordination, Muscle Tone, Spatial Awareness, Laterality as well as for those with significant delays in reaching developmental landmarks and those on the spectrum

Concentration and Attention – 40 hours

Concentration, Attention, Ability to Focus, Memory, Motivation

Reading and Auditory Processing – 40 hours

Reading, Language, Speech, Articulation, Auditory Processing

Optimal Performance – 2 versions of 24 hours each

Concentration, Performance & Productivity, Energy, Mood, Enthusiasm

- Customized **headphones**
 - **air** and **bone** conduction
 - **vestibular** stimulation
- **Mini-amplifier** powers headphones
- **iPod** loaded with processed music
- **Waistpack**: portable pack for wearing auditory equipment



- **PlayBook** guide to movement activities
- **Visual tracking equipment**
 - hanging ball
 - bouncing ball
 - bean bags
- **Balance Board**
- **Headband**



All programs in the Focus Series:

- Each session is one hour,
 - comprised of four 15-minute tracks
- Listening sessions:
 - three or four 60-minute sessions, or
 - five or six 30-minute sessions per week
- Sessions can be divided into:
 - 30-minute sessions, once or twice per day
 - 15-minute sessions, if necessary

Interactive Language Module

(optional add-on)

Exercises designed to **improve**
auditory **processing** skills:

- Auditory **memory**
- Phonemic **awareness**
(decoding of sounds)
- Auditory processing **speed**
- Left and right ear **perception**
and processing
- Concentration/listening **skills**
- Auditory **figure ground**
(language amidst background
noise)



Learning Difficulties

- **29 children with APD** (Harper, J. & Weiner, A., PhD, Advance OT Magazine, Jan. 4, 2010)
 - pre-testing 0 of 29 intact auditory or vestibular processing skills
 - post-intervention 22 of 29 all areas normal range auditory processing skills 29 of 29 intact vestibular skills
- **Public school pilot study** 20 children with learning difficulties; teachers reported significant improvement in 19 of 20 (Denver Public School Pilot Study 2009)
- **3-month private clinic program** of 30 subjects showed average 78% improvement in auditory processing skills (Fraval, M., DO & Armytage, H. 2007)

Literacy

- **64 K-2 at-risk students** controlled study (Calhoon, A., PhD, University of New Mexico)
 - significant improvement shown in all areas of literacy
 - 2 year average reading improvement over 3-month iLS program

See the Research pages of www.integratedlistening.com

Summary

- iLs is a **natural** and **safe** therapy which **complements** the cognitive-based **tools** used by educators and behavioral therapists.
- iLs provides a uniquely **effective** means of **improving** auditory **processing** skills.
- iLs programs have a **global effect on the brain**; that is, they affect **sub-cortical** areas of the brain involved in **regulation** and **motor** skills as well as higher order functions such as **language** and **cognitive** skills, helping the brain to function **optimally**.
- iLs also influences **self-confidence**, perhaps the most consistently reported change by educators and therapists.
- iLs is **fun**, children and adults typically enjoy their sessions!