

# Implementing Yogic Techniques into Speech-Language Pathology

## Implementing Yogic Techniques into Speech-Language Pathology

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### Course Objectives

At the end of the session participants will be able to:

- Discuss causes and effects of stress & anxiety
- Demonstrate 3 learning styles
- Discuss the benefits of movement
- Teach at least 10 yoga poses including 2 breath techniques
- Implement yoga & learning into a daily practice

### Disclaimer

- No pain, no gain
- Listen to your body
- Don't do anything that will aggravate pre-existing injury
- Balance issues: Keep eyes open



The World Today Is Moving at a Fast Pace...

Every SLP Faces Many Challenges in This Fast, Moving World.



Increased Demands in Life and the Workplace Create Stress!



Stress Management and Job Satisfaction Are Within Reach With Simple, Easy to Use Yogic Techniques.



Solution: Incorporate Yogic Practices Into Your Life and Your Therapy




What Steps Did You Take to Get Here on Time?

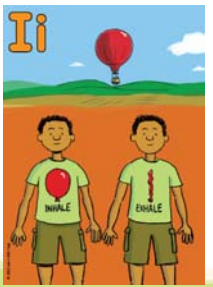
Take a minute to write down how you feel right now.



Tune In to Your Breath



Breathe in and belly expands out like a balloon, breath in and belly deflates.




Tune in As a Group

We are going to chant the word:


**“SPEECH”**

in unison to unify ourselves as a group.



How Did It Feel to Practice Long Deep Breathing?


Long, deep breathing calms the mind and soothes the nervous system.





What is Yoga?



What is stress?



Pretend you are walking in a forest on a beautiful, sunny day. Suddenly you see this.....





### “Fight or Flight”

- Response to threat
- Can be positive for short emergencies
- Is negative when in a chronic state.
- Response is the body preparing itself to deal with emergencies

### Physiological Response to “Fight or Flight”

### The Autonomic Nervous System Has Many Functions

### Autonomic Nervous System Stimulates Either the “Fight or Flight” or “Relaxation Response”

### What Causes Stress?

### Stress Can Be Caused by Attempting to Do Two Things Simultaneously


### When Every Moment is filled with mental stimulation: Left Brain Thinking Results.

|                            |                             |
|----------------------------|-----------------------------|
| <b>Left Brain Thinking</b> | <b>Right Brain Thinking</b> |
| Fast                       | Intuitive                   |
| Logical                    | Creative                    |
| Linear                     | Non-linear                  |
| Analytical                 |                             |

### Our Kids Are Filled With CONSTANT Mental Stimulation

### Stress


- Can be short term or chronic
- Can come from any situation or thought that makes you feel: frustrated, angry, nervous or anxious



### Different Types of Stress

|   |  |
|---|--|
| <p>Positive Stress (Eustress)</p> <ul style="list-style-type: none"> <li>• Weddings</li> <li>• Celebrations</li> <li>• Winning</li> </ul> | <p>Negative Stress (Chronic Stress)</p> <ul style="list-style-type: none"> <li>• Stress without restoration</li> <li>• Constant stimulation leads to constant “fight or flight”</li> <li>• Trauma</li> </ul> |
|---|--|


### Sympathetic Nervous System



### Physical Symptoms of Stress

- Irregular breathing
- Sweaty Palms
- Racing heartbeat
- Digestive issues – stomach ache, nausea
- Attention issues
- Tired
- Sick often

### Parasympathetic Nervous System



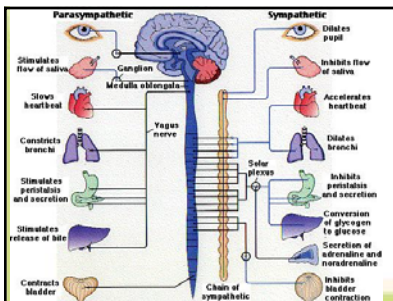


### “Rest and Digest”


Physiological Response to Parasympathetic Nervous System



### What Activates the Parasympathetic Nervous System?

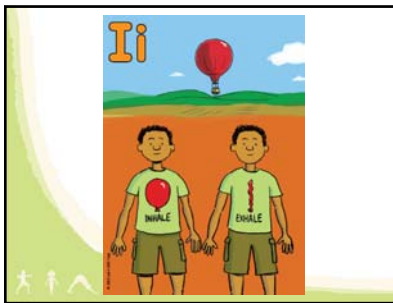





### The purpose of the Autonomic Nervous System




Let's Take Time for Some Long, Deep Breathing.

Tune in to your breath




Speech and Its Relationship to Breathing

- Speech and Yoga: the link is breath.
- You need breath to produce speech.  
(Sumar,2000)




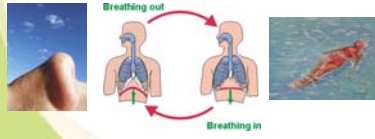


Breathing Can Affect Stress Levels

- Upper chest breathing
- Shallow breathing
- Breath holding
- Reverse breathing




Practicing Yogic Breathing: Coherent Breathing




Yoga: Breathing Incoherent Breathing

- Rapid and shallow
- Live in a sympathetic dominant state
- Constant state of stress: "Fight or Flight"
- Counterpart to state of the mind. If you are stressed, you are holding your breath.




Look for Sign of Incoherent Breathing With Your Students

Contra-indicated breathing can add to the anxiety of your students or may even be a MAJOR contributor of the anxiety.




Breathing Reflects the State of Your Mind




If you are *relaxed*, your breath is *slow and deep*.

If you are *stressed*, breath is *shallow* and you may even be unconsciously holding your breath.





### There Are Various Types of Breathing Practices



- Normal breathing
- Nostril breathing
- Deep Breathing – Slows respiration and autonomic functions
- Conscious (purposeful) breathing
- Ujjaii breathing



### Yoga: Breathing Alternate Nostril



### Yoga: Breathing Diaphragmatic Breathing




### What are the Ways to Deal with Stress?



### What Causes You to Feel Anxious?



What is Anxiety for you?



### The Definition of Anxiety

A feeling of fear/apprehension.

The source of the uneasiness is not always known or recognized, which can add to the distress felt.




### Kids Have Stress Too



### Kids Have Stress Too





### People Think Creatively When Relaxed.



### Stress Can Affect Learning

Restricts the number of newly generated neurons in the Hippocampus (short term storage of memory for new information).



### Stress/ Anxiety and its Relationship to SLI Kids

Children with Speech Language Impairments (SLI), including expressive language disorders, were rated as more withdrawn and anxious than peers.




(Benner, 2002)




### Fact About Stress/Anxiety and SLI Kids

Children with SLI problems are 3 x more likely to suffer from social anxiety (social phobia) than children without problems.


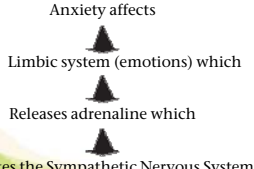


(Benner, 2002)




### Anxiety Affects Emotions

Anxiety affects  
Limbic system (emotions) which  
Releases adrenaline which  
Activates the Sympathetic Nervous System




### People Need an Outlet to Relieve Their Stress

Stress is increased if there is no outlet for frustration.




(Louise Goldberg, 2004)



### Brain Development & Stress Long-Term Consequence

When under physical or emotional **stress**, the Sympathetic Nervous System releases **cortisol** which under high levels can **cause brain cells to die** and reduced the connections between cells in certain parts of the brain.




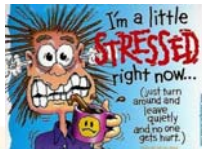
### We Expect Our Anxious Speech Kids to Perform in Therapy

If we don't teach them to relax, who will?





### We Tell Anxious Kids to Relax Without Teaching Them

Most of the time we aren't relaxed ourselves.



### Journal about What Causes Stress in You Life.



Although It Appears As Though Everything Is Going Fine With the Students,



We Have a Serious Problem That Needs to Be Addressed

What does Yoga Have to do with Speech Therapy?

Studies have shown that many speech-language kids have:

- Motor-skill deficiencies
- Language delays
- Anxiety
- Social skill immaturity
- Some have aggressive behavioral tendencies


What does Yoga Have to do with Speech Therapy?



Ocean Breath



Incorporate Yogic Practices Into Your Life and Your Therapy



It will help you and your anxious speech kids relax.


What Is Your Impression and Experience of Yoga?

Yoga Consists of Physical and Mental Relaxation Exercises

- Exercise – postures
- Breathing – purposeful
- Calming –
- Peaceful –
- Restorative –

Why use Yoga in Speech?

Yoga teaches children relaxation strategies that they can use at school and throughout their entire lives.



Yoga Incorporates Visual, Auditory and Kinesthetic Learning Styles

- Incorporates multiple intelligences (body, mind and spirit) and learning styles
- Breath and exercise
- Keeps nervous system elastic and able to deal with stress



### Types of Learners

**Visual Learner:**  
Learns best by seeing

**Auditory Learner:**  
Learns best by hearing

**Kinesthetic Learner:**  
Learns best by feeling or experiencing

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### What Do You Do When You First Get an Object?

- Did you start pressing buttons?
- Did you read the manual?
- Did someone explain it to you?

### Types of Learners: Visual/ Auditory/ Tactile

- Most people are more receptive to 1 or a combination of 2 types of learning styles.
- The predominant learning method taught in schools is visual/auditory learning.

### Tactile/Kinetic Learners

- Kids are naturally tactile learners
- Born scientists
- Adults force them to conform

### Using Tactile/Kinetic Learning

- Using the body to learn has powerful research behind it.
- Language acquisition (ESL)
- Prepositions (spatial concepts)

### Different Disabilities Have Various Learning Styles.

Autistic

Visual

Learning disabled/ attention issues:

### Not Teaching by Dominant Learning Style

- Creates artificial stress
- Impedes learning because dominant receptive learning style is underutilized
- Does not engage gross motor movements
- Not maximizing receptive/retention ability

### What Learning Style Is Your Most Dominant?

What's Your Learning Style?

Visual      Auditory      Tactile

### Yoga Incorporates Body Awareness & Coordination.

Children with SLI experience a broader range of impairments, including a higher incidence of motor incoordination and soft neurological issues such as anxiety and social phobia.

(Hill, 2001; Cemak et al, 1986; Arehart, 2006)

### Articulation Disordered Children May Have Motor Coordination Difficulties.

There is a relationship between articulation disordered children and motor coordination and soft neurological signs.

(Murata, 2004; Cemak et al, 1986)



### The Benefits of Practicing Yoga As a Form of Exercise



### There Is a Build-up of Muscle Tension When Under Stress.

- The tense muscles send signals to the body that there is danger which releases adrenaline or cortisol.

- Irritated or tight muscles are the most vulnerable.

(Schatz, 1992)



### Yoga Stretches Helps to Relax the Mind

- Concentrating on the physical intricacies of different poses forces you to: Filter out the “endless tape loops” of chatter and fear allowing you to be present in the moment.

- This clears the mind of future and past worries.

(Kalb, 2003)



### Yoga Stretches Break the Stress Cycle

- The brain perceives muscle stretching as the opposite of muscle tension.
- The biofeedback from yoga stretches is a sense of safety and well being



### Yoga Teaches Children How to Deal With Stress and Anxiety

Yoga can simultaneously increase positive self talk, knowledge to stimulate the relaxation response, body awareness, breathing and flexibility.

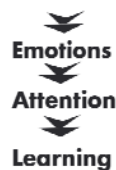


### How Yoga Can Affect Learning

- Anxiety & stress reliever due to calming and restorative effects
- Improves receptive language through stimulation of vestibular and cerebellum
- Uses body as a spatial guide to learn
- Improves motor deficits which may improve SLI issues



### Exercise Can Enhance the Learning Process



### Learning Is Enhanced When People Are Ready



If students are anxious then it is not an optimal learning environment.



(Jensen, 2000)



### The Optimal Learning Environment

- Alert students
- Emotionally ready to learn
- Emphasize a variety of learning styles.
- New material: Breaks every 12 minutes
- Review old material: Breaks every 20 minutes

(Jensen, 2000)





### Educational Pioneer, Edouard Sequin: On Children and Education Needs

Education needs to focus on:


- Real objects
- Sensory stimulation
- Active engagement
- Emphasis on the whole child, (which is body, mind and spirit = yoga)

(Rettig, 2005)



### Create Optimal Learning Environment




- What are the signs that the child is not ready to learn?
  - Discouraged from succeeding
  - Overwhelmed with information
- Solution is child needs a break.
- Yoga provides a break and gets the child ready to learn.



### Watch for Signs of Anxiety

- Shrugged shoulders
- Shallow breathing
- Cracking the neck
- Incessant, nervous talking

>If you see these signs STOP and work on getting student relaxed.






### The Benefits of Exercise Are Priceless





### Exercise Is Important to Learning

- Enhances oxygen flow - to brain building connections
- Emotional balance - mood altering neurotransmitters
- Stimulates creativity and expression
- Aligns with kinesthetic learning




### Exercise Is Important for Balance and Motor Skills

- Improves fine motor skills through control manipulation
- Improves gross motor skills
- Develops balance and spatial cognition




### The Benefits of Physical Education (PE) & Movement

- **Physiological** - Decrease anxiety, tension and stress.
- **Mental** - Well being, clear thinking, and builds confidence.




### Comparison of Yoga and Physical Education

| <u>PE</u>                 | <u>Yoga</u>              |
|---------------------------|--------------------------|
| - Raises heart rate       | - Raises heart rate      |
| - Improves coordination   | - Improves coordination  |
| - Can be competitive      | - Non-competitive        |
| - Involves turn taking    | - Complete participation |
| - Favors most coordinated | - Accessible by all      |
|                           | - Breath focused         |



### The Brain and Movement: Cerebellum


- Cerebellum is a small portion of the brain close to the brain stem, commonly linked to movement. (Blakemore, 2009)
- Cerebellum - critical to our attention system and coordinating movement.



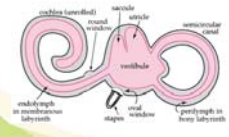
### Movement and PE Lay the Foundation for Learning

Movement and physical education (PE) activities such as jumping, swinging and rolling are valuable to stimulate the inner ear and thus lay the foundation for learning.

(Blaydes, 2001; Blakemore 2003)



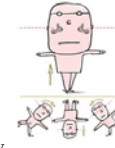
### The Vestibular System Helps Maintain Balance in the Body



### The Job of the Vestibular System

The vestibular system (inner ear) helps to:

- Maintain balance,
- Turn thinking into action
- Coordinate movement
- Detects motion and gravity




### The Vestibular System Is Related to Speech and Language Disorders.

- Major organizer of sensation, so it contributes to the acquisition of word understanding and speech.
- Anatomically joined with the cochlear system
- Has close neurological associations with the pathways for auditory processing and language.

### SLI Children May Have Issues With Sensory Integration (SI)

**Sensory Integration:** Ability to use organize, integrate and use sensory information from the body and the environment.

### Sensory Integration (SI)



Auditory

Visual

### The Vestibular System Affects the Nervous System

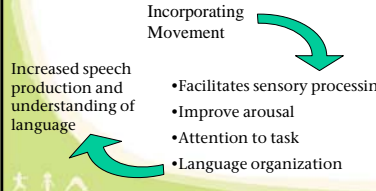
This explains why individuals may have problems **breathing** or may develop **nausea** or **irregular heart rates** when the system is **overwhelmed**.

### Sensory Integration (SI) and its Relationship to Movement

Incorporating Movement

Increased speech production and understanding of language

- Facilitates sensory processing
- Improve arousal
- Attention to task
- Language organization



### Auditory Processing Disorders May Be Linked to Sensory Integration



### Movement May Improve Auditory Processing

Use movement to stimulate the cerebellum/ vestibular systems for SLI improvement.  
(Mauer, 1999)



### Physical Indicators of Sensory Integration Difficulties

- Appear clumsy
- Fidgets
- Bouncing off walls (ADD/ ADHD)
- Slumped over desks
- Display unusual behaviors such as self-biting, throwing themselves on the floor, chewing on inappropriate items such as shirt.



### Yoga Strengthens Proprioceptive Awareness

Information about muscle tension, position and movement of joints, body position, and spatial awareness.



*Proprioception and learning.*



### Victory Pose



### Discussion About SLI Students Having SI Issues

Describe a student either on your caseload currently or previously that had signs or a diagnosis of Sensory Integration problems.



### Incorporating Yogic Practices Into Your Life and Your Therapy



### What Is Your Knowledge of Yoga?



### Yoga Consists of Physical and Mental Exercises

- Exercise - postures
- Breathing - purposeful
- Calming -
- Peaceful -
- Restorative -



### Research about Physical Education and Learning

Research suggests that mental stress and anxiety can rob the brain of adequate oxygen. Proper breathing, developed through exercise can enhance the oxygen flow, reducing heart rate and anxiety.

(Blaydes, 2001).

### Fine and Gross Motor Skills Related to Learning

- Relationship between motor skill development and speech-language skill development.
- If you improve motor skills then speech and language may improve.

(Murata 2004, Hill 2001)

### Incorporating Yoga Poses Into Speech and Language Therapy Will Help With Learning New Concepts.

**IMPLICIT Learning**, which is learning through your body is more powerful than **EXPLICIT learning** which is learning through text, facts and basic recall.

### Using ABC Yoga Cards Can Help Practice Students Goals

- Choose one goal and use the appropriate questions
- Alphabetic principal
- Phonemic awareness
  - Segmentation
  - Rhyming



### Yoga Exercise Can Help Children Learn New Concepts



Young children need to physically experience concepts in order to truly grasp them.

(Pica, 2009)

### Yoga Requires Knowledge of Spatial Concepts.



### Using Your Body to Learn Can Help With Language Acquisition

- There appears to be a link between physical domain and speech-language skills. (Murata, 2004)
- Preschoolers interact with their environment with gross and fine motor skills.

### Language Augmentation Strategies

- **Expansion:** provides a more sophisticated version of what the child said. Restating the comment.
- **Extension:** adds information to child's language.


### Let's Learn With Our Body

Stand in mountain pose and we'll play a game of Yogi says.



### Speech and Language Therapy Is Perfect for Yoga and Movement

Small groups of children (5-7 children) are ideal for using movement techniques. You can asking individual children to answer questions related to the movement.




### You Can Use Yoga Poses to Work on Receptive and Expressive Language Delays



Cat and Cow  
Want to See the World



Once upon a time, there was a cow named \_\_\_\_\_  
and a cat named \_\_\_\_\_  
and \_\_\_\_\_ and \_\_\_\_\_





### Many Yoga Poses Consist of Animals and Objects

### Using Yogic Postures to Act Out Stories

Incorporates active versus passive learning where all children can be involved in the activity.


### Yoga Can Be Used for Breaks and Energizers

- Allows time for information to settle
- Binds information (retention)
- Energizing
- Learn new concepts
- Calming
- Boosts academic achievement





### Benefits of Tactile Learning & Movement

- Increase brain cells
- Decrease stress → increases the # of neurons in the brain.
- Exercise is a good mood regulator and can positively change emotions.  
--> **Increases readiness to learn.**  
(Thayer, 1996)





### Yoga and Language Acquisition and Learning

- Spatial concepts and prepositions
- Vocabulary
- Wh Questions
- Alphabetical Order





### Practicing Yogic Techniques at Work Will Help You to Be More Productive

Yoga does not require a lot of equipment or time. It can also be done in small or large spaces.





### How to Use Yoga for Yourself at Work

- Take real breaks that help you relax.
- How are currently using your breaks?


### What Is Being Grounded?



If a tall, strong tree could talk, what would it say about its philosophy, life and the challenges that go along with being alive?


### Achieving a State of Groundedness

Posture is the key to being grounded. The position of the body affects the mind and the mind affects the body



(Schatz, 1992)

### Our Feet Are the Foundation for Our Entire Body and Help Us Achieve Stability



### What Are the Characteristics of Educators Not Being Grounded?

- Excessive checking of e-mail, v-mail, text, etc.
- Not organized
- Not prepared (mentally, physically)
- Not meeting own needs
- Not taking breaks.

### These are some of the Causes of Children Not Being Grounded?

- Unstable home
- Lack of a history of success
- Not having the basic building blocks of educational success (i.e. reading)
- Too much energy
- Too distracted (i.e. texting, electronic devices)
- Hunger/poor diet
- Stress at home

### Start Your S.P.E.E.C.H. Session by Grounding the Students

- Shoulders up to ears and back
- Posture: Ears in line with shoulders
- Easily inhale/ Exhale
- Chest open
- Heart lifted

### Creating a Yogic Environment



### Creating a Relaxed State of Mind for your students

Getting centered by tuning in and long, deep breathing before beginning a therapy session prepares the students for learning.



### Beginning Your Sessions With Yoga Is Stabilizing for Your Students

- Breathing
- Exercises (especially grounding poses)
- Warm-ups
- Routine



### Yoga Poses Are Designed to Achieve Various Emotional Effects

Depending upon the type of yoga pose practiced, the individual can achieve a desired state of mind.



### There Are Many Types of Yoga Postures



### Grounding and Standing Yogic Poses



### Chair Poses



### Seated or Floor Yoga Poses



### Yoga Basics: Goals

- Have a specific goal in mind.
- What do you hope to get out of this activity?
- How can you integrate to enhance and enrich experience for the child?

### Using Predictable Activity Will Add Stability

Start every session out the same to add familiarity for the students.



### Yoga Warm-ups

- Cat/Cow: Links breath with movement
- Ocean breath
- Neck rolls
- Shoulder shrugs
- Inhale/Exhale breathing
- Kite pose to stretch legs
- Gate pose: Stretch side body
- Sun Salutations





### Choose 1-2 New Poses to Practice Each Therapy Session



It is important for the students to be proficient with past poses before introducing new poses.



**Provide a Visual Demonstration for the Poses Every Session**

The students will need a visual and auditory cues for each of the poses.


**Doing Yoga While Waiting for a Speech Turn in a Group Setting**

Set up a yoga mat or chair in the corner of the speech room and put one pose on it. The kids can practice their target speech sound silently while doing the pose.


**R. E. L. A. X.**

- Relax body-tense and release exercise
- Exhale/inhale
- Let thoughts go by
- Abdomen in on inhale and out on exhale
- eXpress a sigh with mouth closed.





**Yoga: Relaxation Progressive Relaxation**

- Bring awareness to each muscle and organ
- Guided visualization
- Send breath to each body part to relax





**Quiet Pose**

- Calming
- Resting pose
- Helps to decrease frustration
- Can be done at a desk or on floor



**Many Yoga Poses Consist of Animal and Objects That Can Make Noises**

Practice the poses silently for 6 weeks. If students appear Grounded in the session, slowly incorporate noises.

**Use Noises of the Poses If You Are Working on Expressive Language**

If you student is non-verbal, then using the appropriate noises for each of the poses can help stimulate talking.


**Using Sign Language to Represent Each of the Poses**

You can pair the signs with the verbal name of each pose to work on expressive language.




**7 Energy Centers Within the Body: Activating the Throat Chakra**

- There is one at throat area (thyroid)
- Controls communication
- Exercises: Neck stretches & shoulder shrugs



## Moving/Doing a Pose While Practicing Articulation

The students can choose a yoga pose and say their target sound on their speech turn.



## Using Mantra Can Help to Warm up the Vocal Folds

Mantra helps the body relax by stimulating the upper palate thus activating the hypothalamus in the brain stem.

## These Techniques are Essential for Success

- Clear easy to understand directions
- Model (provide visual cues)
- Know how to do the poses yourself (practice)
- Easy movements
- New ideas: Max 12 mins to absorb information. With new info. give liberal breaks.

## Yogic Principal Can Be Used As a Theme for Speech Sessions

- Non-violence to yourselves and other
- Compassion for all
- Honest communication
- Not stealing – Appreciating what you have
  - Don't "steal" another person's turn
  - Don't interrupt
- Not holding on to things – Do your best!

## Yogic Principals

- Purity/cleanliness: Respect self and space. Be responsible for own space--clean-up.
- Contentment: Be at peace with own circumstances
- Disciplined use of energy: Working with enthusiasm/directing energy. "Be present" Don't think about after class/future

## Yogic Principals

- Self-study: Commitment to get better. Work toward goals
- Skillful Mentor: Someone to help you. Be the mentor to your students.
- Slow down and take time for yourself.

## Yogic Principles Activity

With your neighbor discuss one principal and tell how you will implement it into your practice.

Take one minute per person.



## Typical Yoga class Sequence

- Tune in
- Share yogic theme of the day
- Warm-up
- Exercises/postures
- Cool-down (optional)
- Rest

## Journal and Discuss How You Could Incorporate Yogic Principles Into Your Speech Sessions



### You Can Use Visualization or Relaxation to End Speech Sessions

Students can rest their heads on the table or just close their eyes in a chair while you guide them through progressive relaxation.



### Guided Relaxation Exercise Helps the Mind and Body to Relax

### Involving Parents in Using Yogic Techniques Can Provide a More Positive and Less Stressful Household



### How Will You Integrate This Information?

- Break into groups – max 10 to a group.
- Each group gets 4 yoga posture cards (ABC)
- Each group must:
  - Define population (students) served
  - Practice the postures
  - Integrate the 4 postures into a learning exercise for the students
  - Demonstrate 2-3 mins. how you will implement.

### Final Activity

- Each group will have 15 minutes to discuss, organize and rehearse.
- Each group must:
  - Demonstrate a learning scenario
  - Define population
  - State goals and action plan
  - Demonstrate activity

### Review: How to Incorporate Yoga into Speech Therapy

- Take Breaks – allow brain to rest
- Teach how to breath
- Use movement of cerebellum to activate learning.
- Use the body to learn- spatial concepts, stories, following directions.

### Bibliography & Questions

[www.sayitright.org/yogaandspeech.html](http://www.sayitright.org/yogaandspeech.html)