

# Implementing Yogic Techniques into Speech-Language Pathology

Christine Ristuccia  
M.S., SLP-CCC  
RYT-200



# 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 pain
- Listen to your body
- Don't do anything that will aggravate pre-existing injury
- Balance issues: Keep eyes open

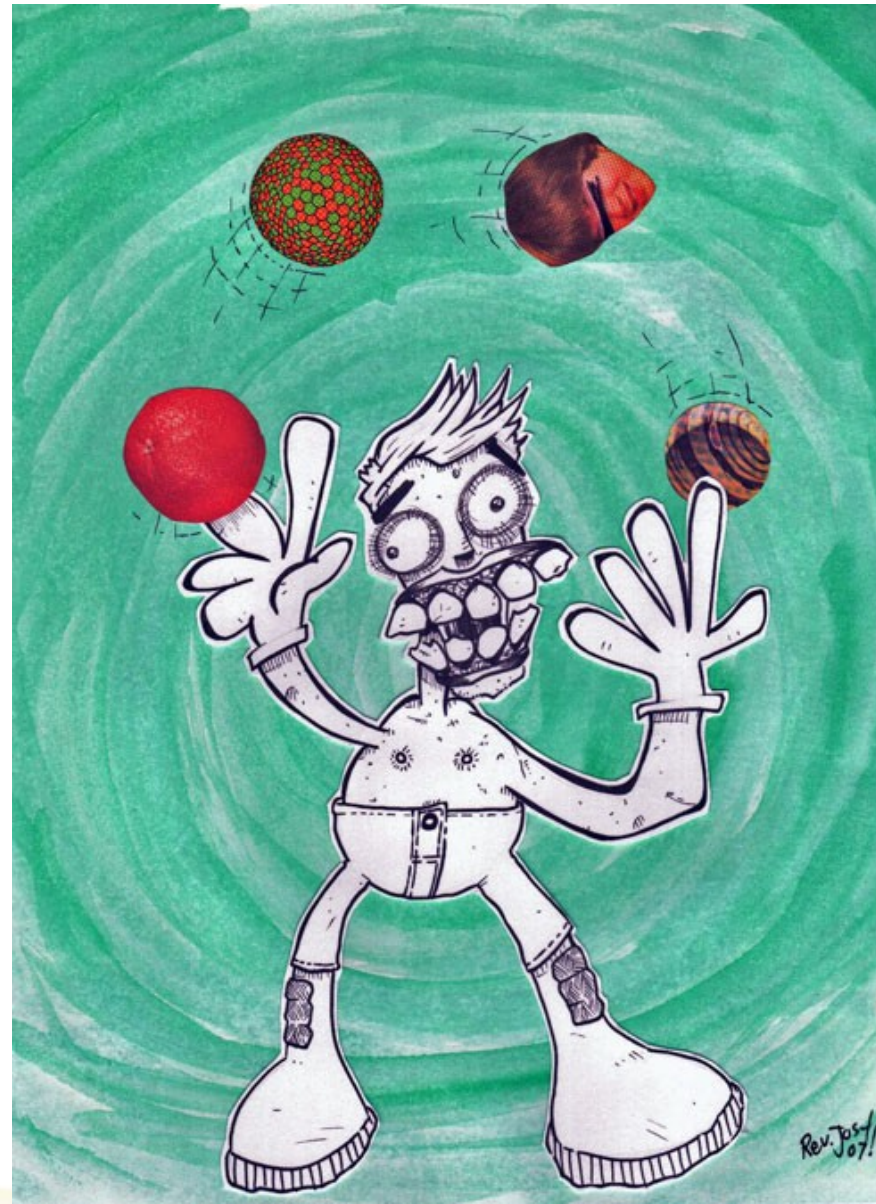




The World  
Today Is  
Moving at a  
Fast Pace...



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.

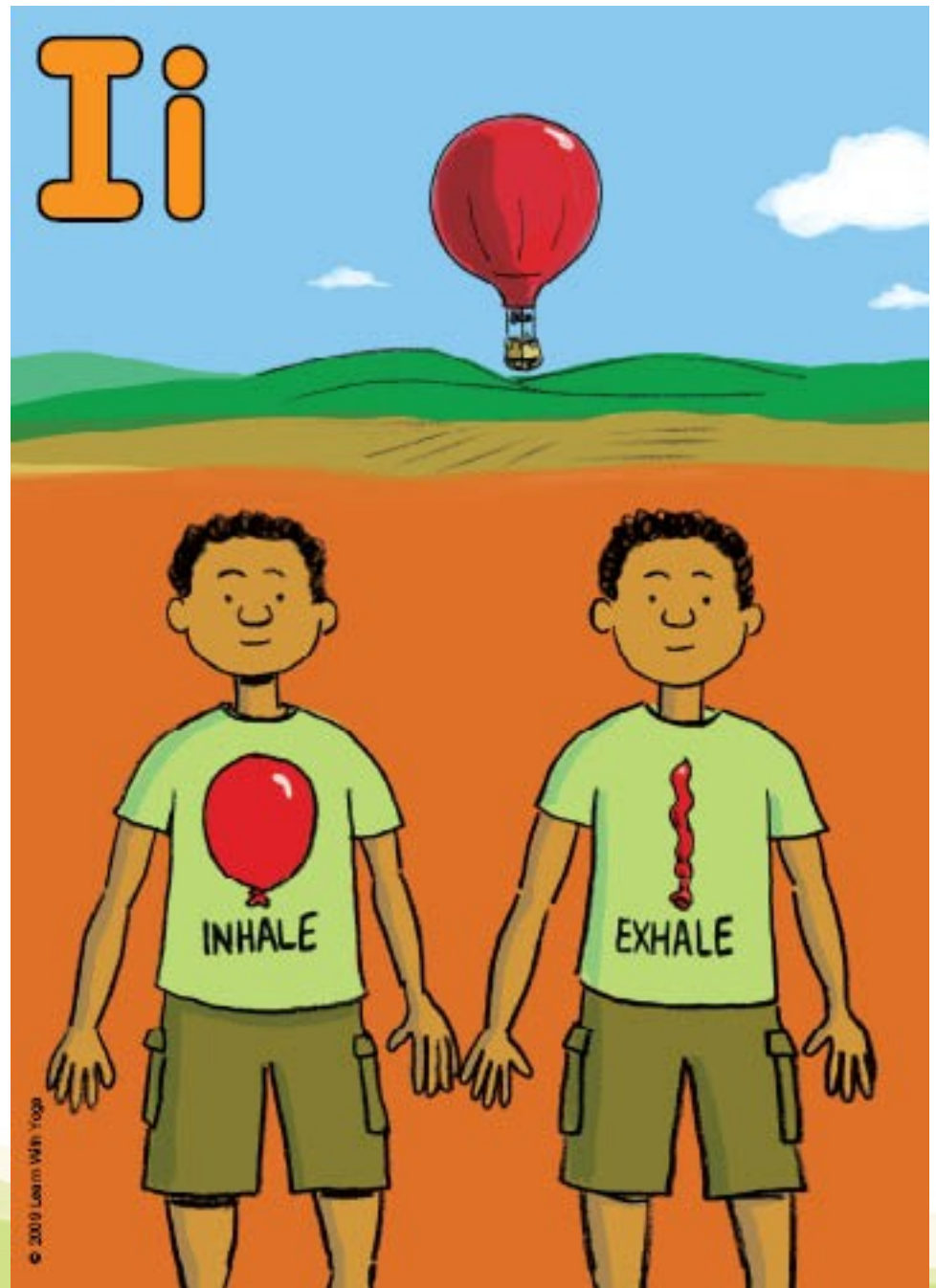


# Solution: Incorporate Yogic Practices Into Your Life and Your Therapy





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



# 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.



# 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 Your Knowledge of Yoga?



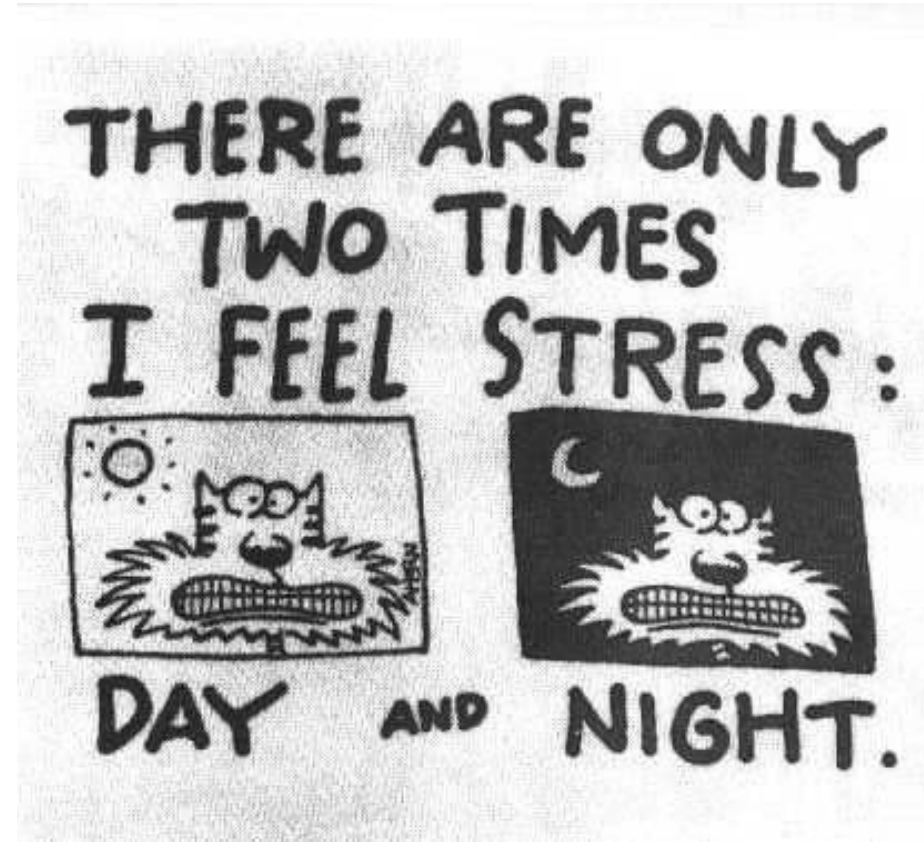
# Yoga Consists of Physical and Mental Relaxation Exercises

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



# Stress

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





# Different Types of Stress

## Positive Stress (Eustress)

- weddings
- celebrations
- winning

## Negative Stress (Chronic Stress)

- stress without restoration
- constant stimulation leads to constant “fight or flight”
- trauma



# What Causes Stress?



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



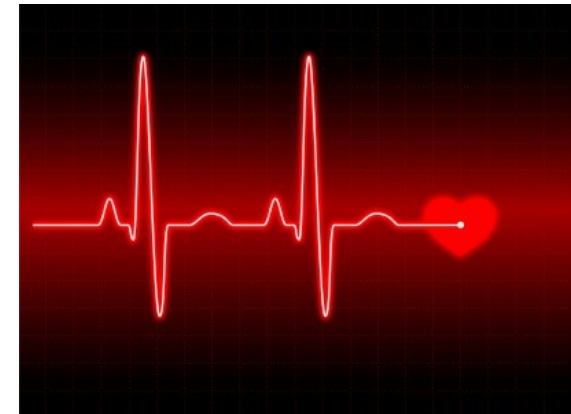
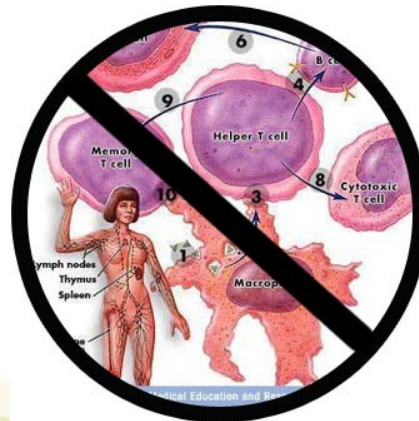
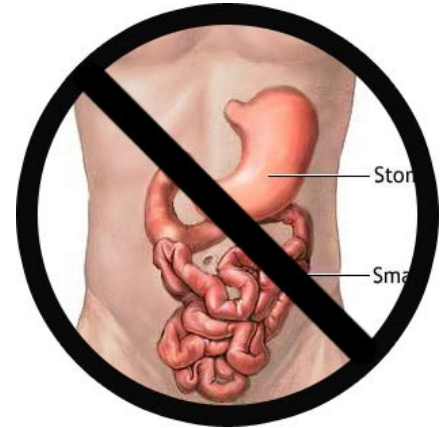
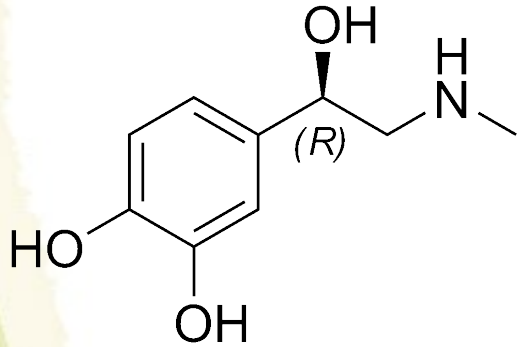


# “Fight or Flight”

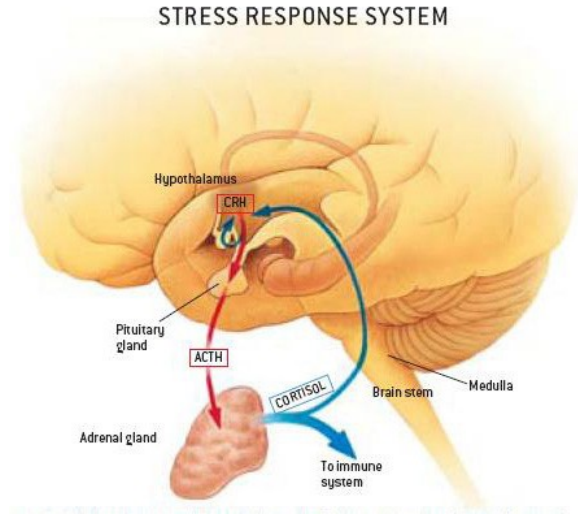
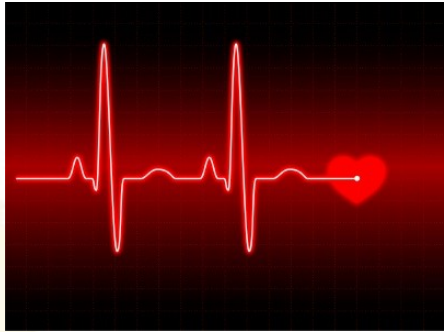
- Response to threat
- Can be positive for short emergencies
- Is negative when in a chronic state.
- Response is the body preparing itself to deal with emergencies



# Physiological Response to “Fight or Flight”



# The Autonomic Nervous System Controls our Body's Response to Stress



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





# Sympathetic Nervous System

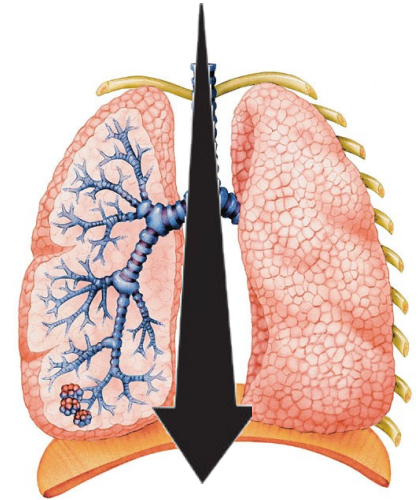
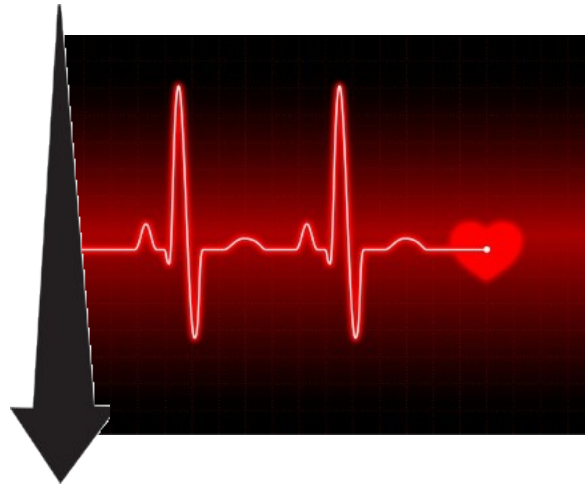
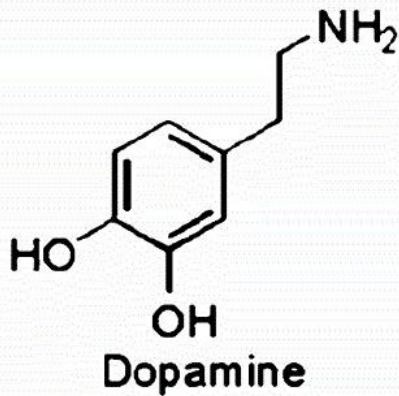


# Parasympathetic Nervous System



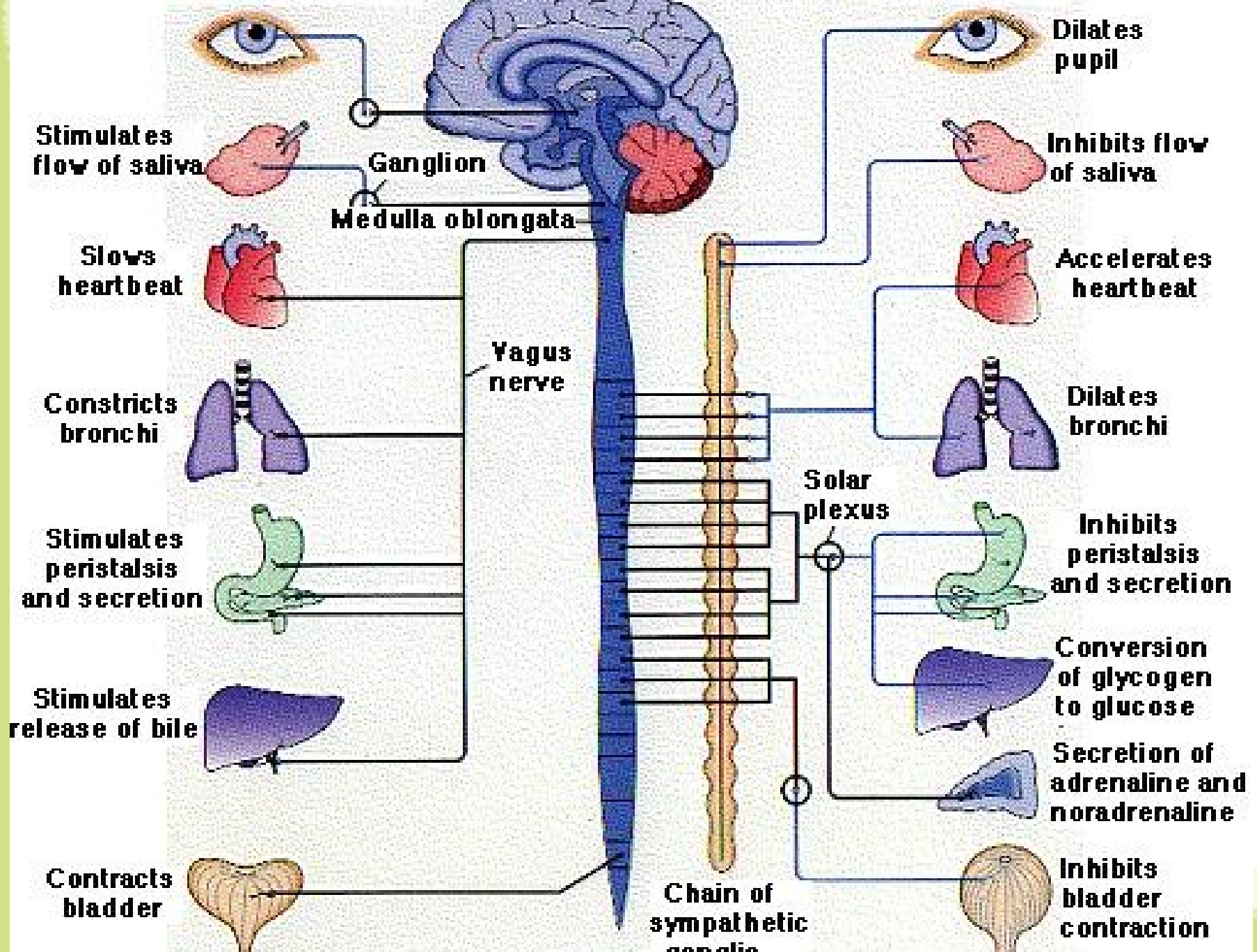
# “Rest and Digest”

## Physiological Response to Parasympathetic Nervous System



# Parasympathetic

# Sympathetic



# Yoga Consists of Physical and Mental Exercises

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



# The Benefits of Yoga

- Encourages breathing
- Relaxes the muscles in the body.
- Breaks the stress cycle.
- Teaches us healthy ways to deal with stress.
- Strengthens proprioceptive awareness.
- Incorporates a variety of learning styles.



# Speech and Its Relationship to Breathing

- Speech and Yoga: the link is breath.
- You need breath to produce speech.

(Sumar,2000)



# 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.

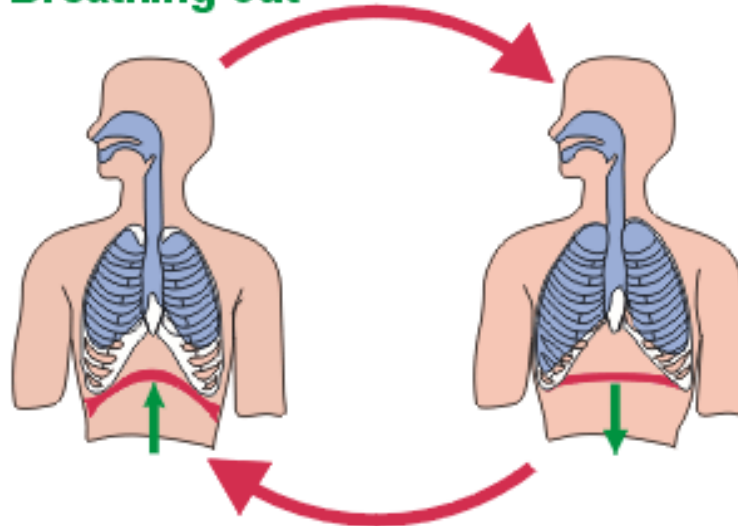




# Practicing Yogic Breathing: Coherent Breathing



Breathing out



Breathing in



# Yoga: Breathing

## Diaphragmatic Breathing

INHALE  
through the nose



EXHALE  
through the nose



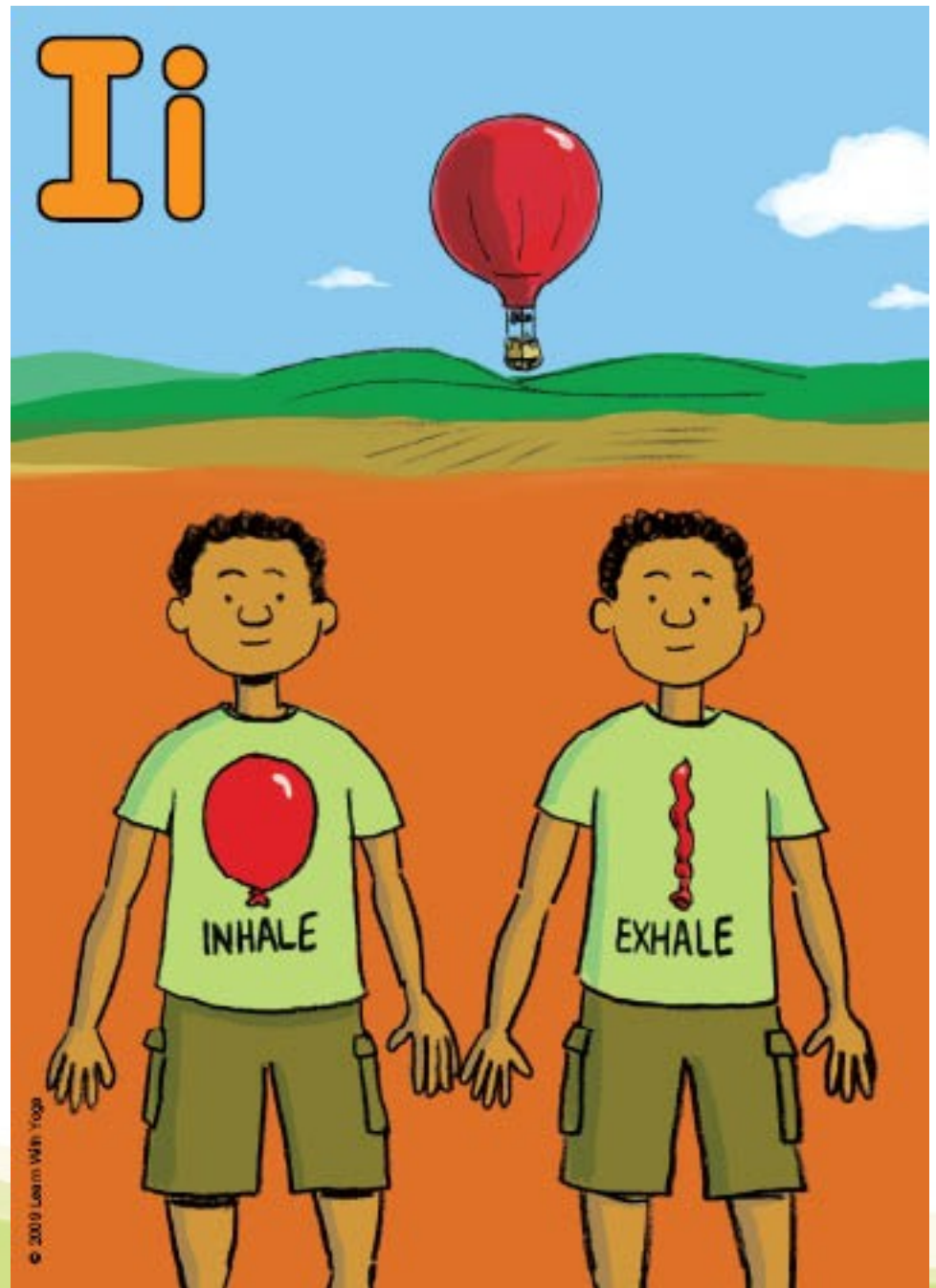
INHALE  
Stomach Pushes  
Out



EXHALE  
Stomach  
Pulls In



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



# Signs of 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.



# 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)



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# Yoga Stretches and Breathing Techniques Help 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 with Breathing

## 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





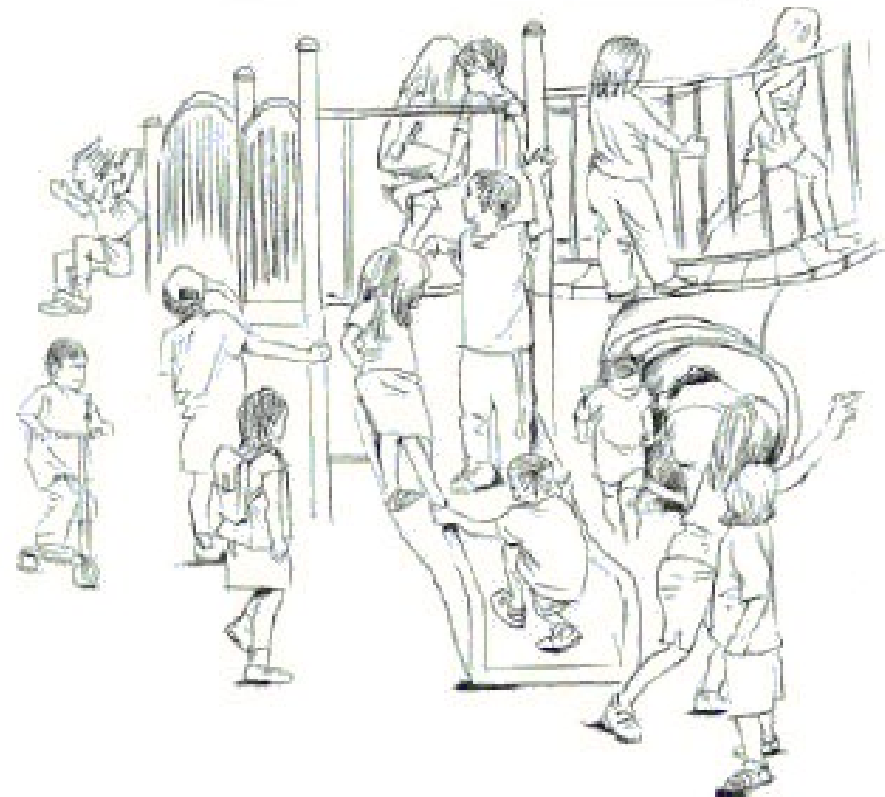
# Yoga Incorporates Visual, Auditory and Kinesthetic Learning Styles

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



# Yoga Strengthens Proprioceptive Awareness

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



*Proprioception and learning.*



# 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)



# Yoga Balances the Autonomic Nervous System



# 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



# 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)



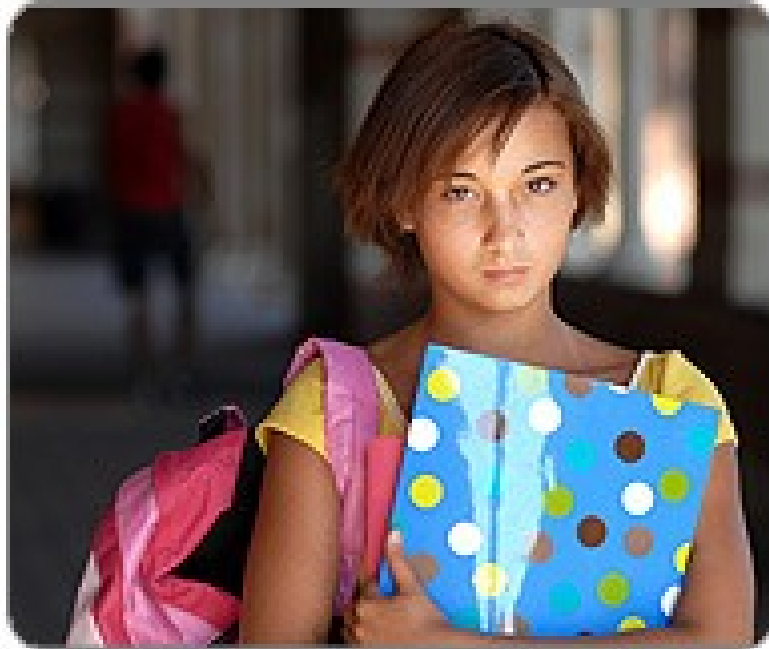
# Brain Development & Stress

## 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.



# 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.

(Brenner, 2002)





# 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.



# Brain Development & Stress

## Long-Term Consequence

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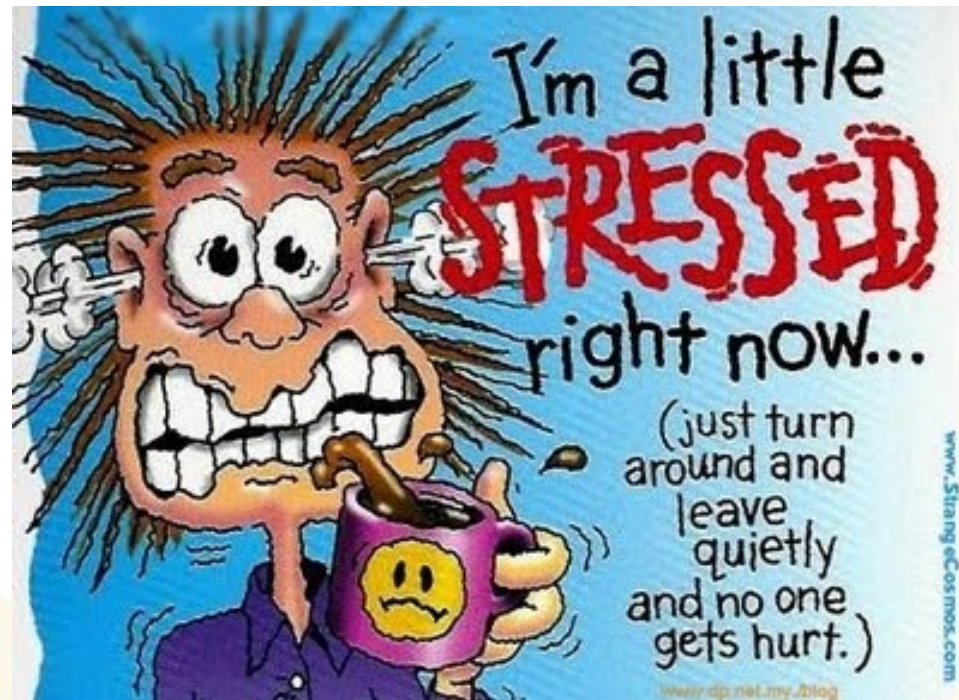


# Stress Can Affect Learning

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



# We Tell Anxious Kids to Relax Without Teaching Them



Most of the time we aren't relaxed ourselves.



# We Expect Our Anxious Speech Kids to Perform in Therapy

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



# Anxiety Affects Emotions

Anxiety affects



Limbic system (emotions) which



Releases adrenaline which



Activates the Sympathetic Nervous System



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



We Have a Serious Problem  
That Needs to Be Addressed



# The Importance of Yogic Practices and the Vestibular System



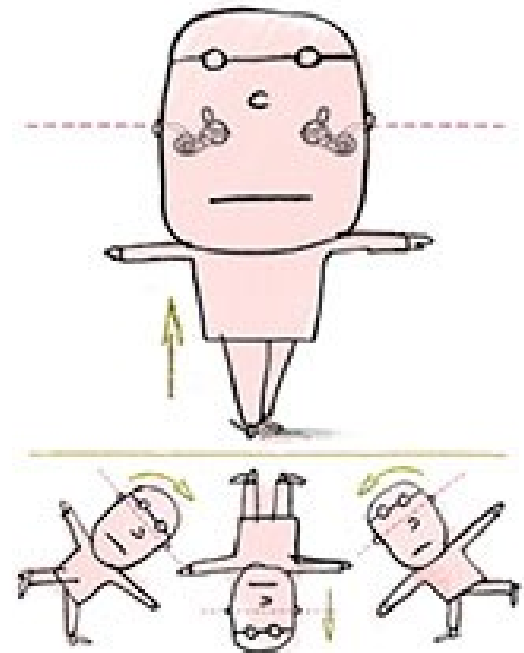
It will help you and your anxious speech kids relax.



# 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 Affects the Autonomic Nervous System

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



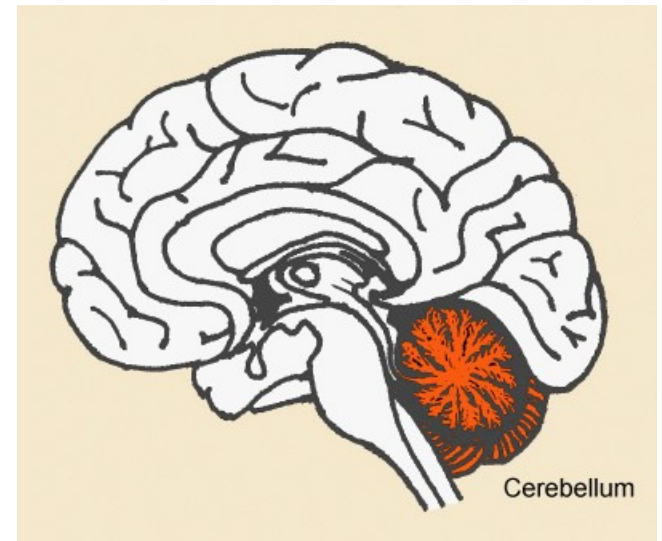
# The Vestibular System Is Related to Speech and Language Disorders.

- 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.



# 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)



# Movement May Improve Auditory Processing of Information

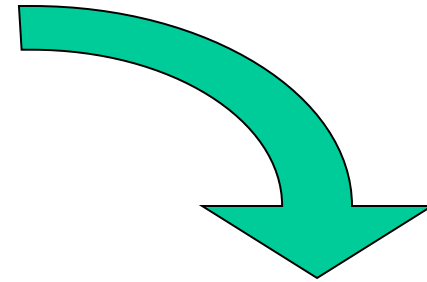
Use movement to stimulate the cerebellum/ vestibular systems for SLI improvement.

(Mauer, 1999)



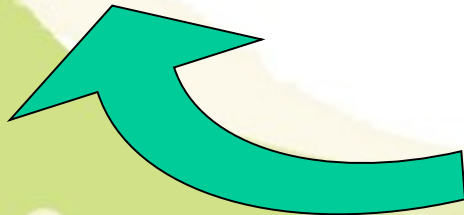
# Sensory Integration (SI) and its Relationship to Movement

Incorporating  
Movement



Increased speech  
production and  
understanding of  
language

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



# 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)





# Physical Indicators of Sensory Integration Difficulties in Children

- 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.



# Learning Is Enhanced When People Are Ready



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

(Jensen, 2000)



# Creating an Optimal Learning Environment for your students

Getting centered  
before beginning  
work optimizes  
the learning  
experience.



# 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.



# Exercise Can Enhance the Learning Process



**Emotions**



**Attention**



**Learning**



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

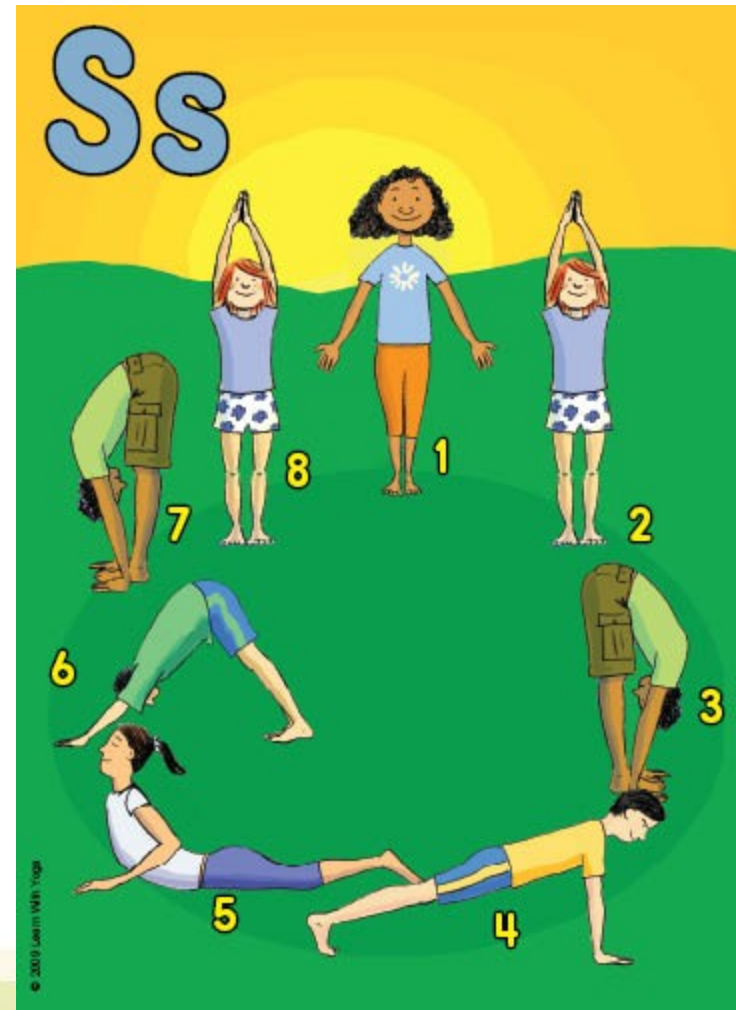
- Shoulders up to ears and back
- Posture: ears in line with shoulders
- Easily inhale/Exhale
- Chest open
- Heart lifted





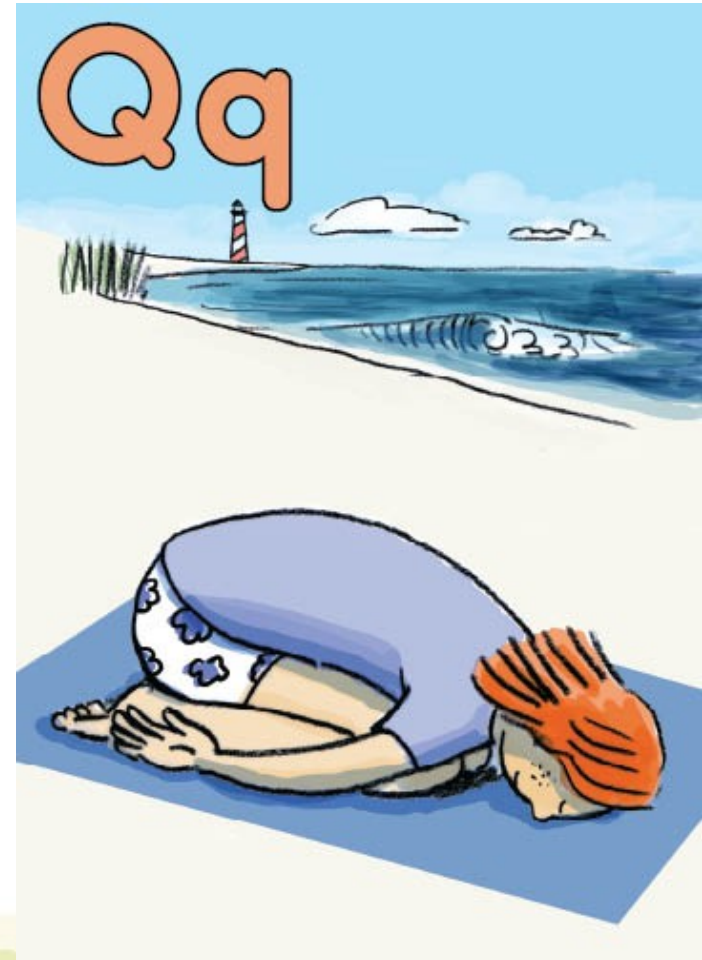
# Yoga Warm-ups

- 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



# Quiet Pose

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



# Yoga: Relaxation

## Progressive Relaxation

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



# 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.



# Using Predictable Activity Will Add Stability

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



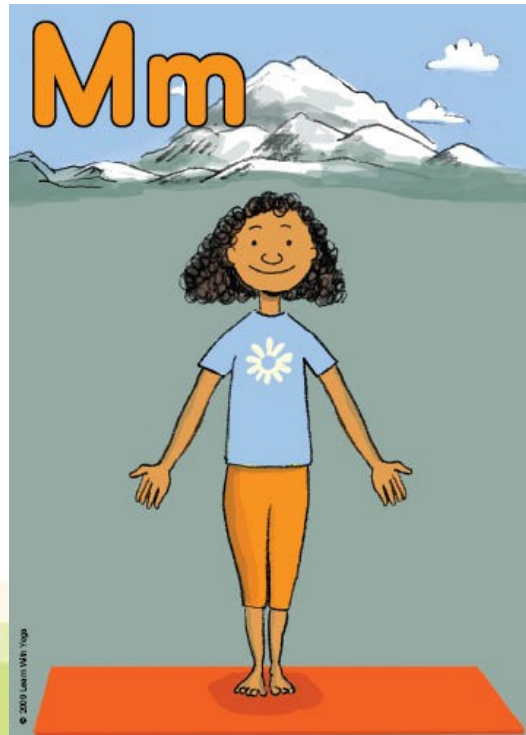
# Yoga Can Be Used for Breaks and Energizers

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



# Let's Learn With Our Body

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



# 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.





# Using Tactile/Kinetic Learning

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



# Tactile/Kinetic Learners

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



# 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



# Yoga Exercise Can Helps Children Learn New Concepts



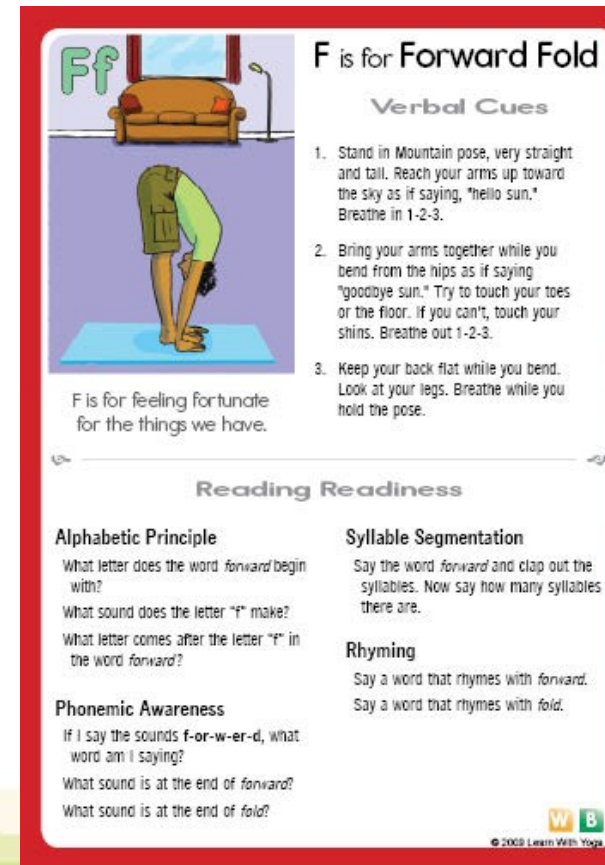
Young children need to physically experience concepts in order to truly grasp them.

(Pica, 2009)



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

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



**Ff**

**F is for Forward Fold**

**Verbal Cues**

1. Stand in Mountain pose, very straight and tall. Reach your arms up toward the sky as if saying, "hello sun." Breathe in 1-2-3.
2. Bring your arms together while you bend from the hips as if saying "goodbye sun." Try to touch your toes or the floor. If you can't, touch your shins. Breathe out 1-2-3.
3. Keep your back flat while you bend. Look at your legs. Breathe while you hold the pose.

F is for feeling fortunate for the things we have.

**Reading Readiness**

<b>Alphabetic Principle</b> What letter does the word <i>forward</i> begin with? What sound does the letter "f" make? What letter comes after the letter "f" in the word <i>forward</i> ?	<b>Syllable Segmentation</b> Say the word <i>forward</i> and clap out the syllables. Now say how many syllables there are.
<b>Phonemic Awareness</b> If I say the sounds <i>f-or-w-er-d</i> , what word am I saying? What sound is at the end of <i>forward</i> ? What sound is at the end of <i>fold</i> ?	<b>Rhyming</b> Say a word that rhymes with <i>forward</i> . Say a word that rhymes with <i>fold</i> .

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# 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.



# Yoga and Language Acquisition and Learning

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



# 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 \_\_\_\_\_





# Moving/Doing a Pose While Practicing Articulation



# Ocean Breath



# Victory Pose



# 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)



# What Is Being Grounded?



If a tall, strong tree could talk, what would it say about its life?



# 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.
- Long, deep breathing.



# What Activities are Not Grounding for People?

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





# 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)

