 S P E E C H I N C

Neuroscience applied to the classics.

A follow up.

By Katie Pengilly MA,CCC,SLP

Last issue we looked at book reading to young children who are not interested in story time, despite parents’ repeated efforts. Parents voice their frustrations to me when they find themselves in this situation. My suggestion is this: let’s apply modern principles of neuroscience to maximize the age old story time experience.

Last issue we looked at the role of the neurotransmitters serotonin and dopamine, and considered how we may orchestrate story time to optimize these brain chemical levels. Now lets take a look at 2 additional neurotransmitters involved in successful book reading

Norepinephrine is important for maintaining attention, a key factor in story time both at home and at preschool. The hope is to create a window of simultaneous calmness and alertness during which the book activity can take place. And the key is to stop before they exit that zone. We know that norepinephrine production is increased with movement, so lets include some movement before and during book reading. Stretching and lifting before can increase focus and engagement. Movements such as hand and whole body gestures, marching, dancing, or clapping during the story can boost norepinephrine. For some young children, the traditional reading before bed is a great choice to optimize attention. For others, it is the worst possible time. Some busy toddlers prefer to stand or move around while interacting with or listening to a book. One of my favorite strategies is to pair short periods of book reading with light snack time while your toddler is in the highchair. Another scenario which can enhance attention is a short book in the bath.

Cortisol is a neurotransmitter which has been shown to elevate (or in some cases lower) in response to stress. Elevated (or depressed) cortisol has been shown to impair various aspects of learning. Stress can be due to outside factors, or due to past attempts to listen to stories perceived as failures. How to reduce stress associated with book reading: start easy. This can look like short duration (think 90 seconds!) Read the first page, middle page and last page only at first. Simplify the text (think sound effects, or key words only at first). Humor diffuses a stressful situation. Throw in some funny voices, big gestures or exaggerated facial expressions.

Freedom to choose can reduce stress. Put out 3 or 4 books and ask the child to pick one. Praise the selection and read it, even if it’s the same book every night for a while. Let the toddler help

turn the pages. Freedom to fidget can decrease stress, so experiment with keeping their hands occupied with a favorite little toy while you read.

I hope we are all on our way to positive story time experiences, even for the little ones who may not like books, which enhance young children’s curiosity about words and the magic of language.

*Katie Pengilly is a Speech and Language Pathologist, and the owner of SPEECH Inc., a pediatric private practice specializing in speech, language reading and writing support. She can be reached at kathryn.pengilly@speechinc.com. More information can be found at www.speechinc.com.*