An Editorial on Grade One Readiness
By Susan R. Johnson, MD, FAAP

I am responding to the front page article in The Sacramento Bee from December 12, 2002 entitled *Preschool push: The learning curve may begin soon after diapers.* I am a single mother of a 9 year old son and a behavioral and developmental pediatrician. I can understand the need to have a reliable, safe, and loving environment for preschool children outside of the home, but I have great concerns about teaching preschool as well as kindergarten children to read and write. Developmentally and neurologically it doesn't make sense.

There is a developmental progression of sensory-motor skills that a young child needs to master in the first 7 years of life. Despite what we think, learning is not "all from our head." It is the movements of our body in utero, through infancy and childhood, and even adulthood that form the pathways in our mind that we later use to read, write, and think in an imaginative and creative way.

My 15 years of experience as a Developmental and Behavioural Pediatrician have shown me that children who have difficulties reading and writing usually have a poorly developed sense of balance, have difficulty making eye contact, have difficulty tracking or following with their eyes, can't easily distinguish the right side of the body from the left, have difficulty sitting still in a chair, and have difficulty locating their body in space. Many of these children with difficulties in reading and writing also have poor muscle tone exemplified by a slumped posture, a tense or fisted pencil grip, and "flat feet" (collapsed arches). Sometimes these children are overly sensitive to touch and have difficulties in their peer relationships because they are using their mind and eyes to help their body navigate in space and miss the social cues from their playmates.

Children who are ready to read and write should be able to pay attention and sit still in a chair for 20 minutes (without needing to wiggle or sit on their feet or wrap their feet around the legs of the chair). They should easily be able to balance on one foot with their arms stretched out in front of them (palms facing up) with both eyes open and then closed for 10 seconds and not lose their balance. They should be able to easily walk heel to toe on a balance beam. They should be able to reproduce patterns of abstract lines and curves (e.g. numbers and letters) on a piece of paper with a pencil when someone draws these numbers and letters on their backs with a finger.

If children can't do these tasks easily then they haven't integrated their vestibular and proprioceptive (sensory-motor) systems, and they will have difficulty sitting still, listening, focusing their eyes, focusing their attention, and remembering their numbers and letters in the classroom. Children integrate their sensory-motor system by body movements and not flash cards or electronic games. Physical movements such as skipping, hopping, rolling down hills, playing catch with a ball, jumping rope, running, walking, clapping games, and circle games as well as doing lots of fine motor activities with their fingers like cutting with scissors, stirring, kneading bread dough, gardening, pulling weeds, painting, beading, drawing, sewing, etc. In contrast, watching television or videos and playing computer games are extremely poor sources of stimulation for their sensory-motor development.

Finally, the ability to print and match a particular sound to a specific letter (phonics) in children is predominately a left-sided (analytic) brain activity. Developmentally, the left side of the brain doesn't fully start to develop or myelinate until ages 7 to 9 years. When we teach children to read or write at an earlier age, we stress their mind and their body. I see countless children in my practice with headaches and stomachaches that miraculously disappear when they are taken out of an "academic" kindergarten or given an extra year in a developmental kindergarten that emphasizes movement. When we teach our children to read or write too early we force them to use the right side (hemisphere) of their brain. The right hemisphere is more intuitive and looks at the whole of things so the child usually has to guess at what the word could be without being able to easily sound it out. Some children can quickly switch from their right hemisphere to their left as they get older but many children (especially the ones who can't skip) haven't developed the pathway to quickly travel from the right side of their brain to the left side and end up being stuck trying to read with their right hemisphere. These children often write letters backwards and can't seem to remember what sounds go with which letters.

In addition to our American diet which is too high in simple sugars and particularly hydrogenated ("bad") fats, I wonder if much of our current epidemic of learning problems comes from our children watching too much television, playing too many video games, spending too much time in front of a computer screen, and being pushed to read and write too early.

So I support preschools and kindergartens that emphasize healthy movements, promote daily living skills (e.g. sweeping), as well as encourage creative "pretend" play. If preschools and kindergartens support these healthy movement activities and stop trying to teach children to read and write, then I believe we will start seeing healthier 8 and 9 year olds who can pay attention, listen, focus, sit still, write, read and learn.

Susan R. Johnson, MD, FAAP

Raphael House
7953 California Ave.
Fair Oaks, CA 95628
(916) 967-8250