

'TRACK-A-BALL' VISUAL PROCESSING, CO-ORDINATION AND CONCENTRATION DEVELOPMENT

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Children are taught a series of progressive exercises with multiple mid-line crossings and cross lateral movement. Equipment is simple and consists of sand filled bags and small balls with the use of a balance board to help to stabilise the core and focus attention if necessary. The activity is done non-verbally as the auditory rhythmic pace provides the reinforcement through a calming sound. Rhythm, balance, control and stability are core elements of all the exercises. When a group works together satisfaction is achieved through synchronicity. Eyes track the balls (or the bags) and muscles in the eyes are strengthened so that convergence and visual control become stronger. The predictability of the movement helps the focus, concentration, confidence. Through learning a precise movement the skills develop and the mind shift is from 'I can't' to 'I can'. Perseverance and grit are intrinsic to the skills.

THE SCIENCE BEHIND THE EXERCISES

Reading is primarily a visual process and many children with good eyesight in optician's tests have weak vergence control of eyes or unstable vision (oscillopsia). Eyes have to converge for near vision when reading. Examples of weak vergence control could be if the child complains that the letters go blurry or wobble, difficulty keeping a place or the 'b's and d's getting confused or misread (was/saw). Instability of eye control and rapid refocussing and scanning of text in a class from desk to board or book requires enormous concentration, extra time and is exhausting – beyond the child's 'control'.

Research now shows that visual and auditory processing depends on the mediation of the magnocellular system which in turn projects strongly to the cerebellum – the brain's autopilot. This magnocellular sensitivity seems to be the most important determinant of overall reading ability but **this is highly encouraging because it can be improved by training**. The visual magnocellular system stabilises the eyes to avoid visual wobble. It directs visual attention and eye movements for sequencing letters.

YELLOW OR BLUE FILTERS can help. Yellow filters help where letters blur or where double vision occurs through a failure of the eyes to maintain convergence. A blue filter can help if letters move around, with headaches or poor sleep. Both can greatly help to improve reading.

RHYTHM

Teaching rhythm has been found to improve reading and phonological skills. Rhythm exercises also have been found to help auditory processing.

