A COMPARISON OF VISUAL SKILLS IN ELITE ATHLETES AND A NORMAL STUDENT POPULATION

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Vision is the most important sense in gathering information for everyday tasks as well as in the sports environment. Quite often vision is merely seen as the ability of the eye to resolve detail and present the brain with a clear image. However research now shows that the visual process is far more complex and that there are several different pathways or systems and processes involved (Milner and Goodale, 1995). It is important to understand these different processes if one wish to obtain a holistic view of the role of vision on motor learning or performance. According to Ripoll (1991) sport research tend to separate vision into, what he calls the sensorimotor and semantic processes and then study these in isolation.

At the Academy of Sports Vision at the University of Johannesburg we embarked on research in an attempt to answer three basic questions: 1.do elite athletes have better visual abilities than the general population, 2. Are these abilities trainable? 3.is this training transferable to improved motor performance on the sports field. Contrary to a popular belief in certain circles, the results showed clearly that elite athletes do not have better hardwear or information gathering systems [ex. visual acuity, depth perception focus and fusion] that the general population. The athletes only outperformed the general population significantly (p<0.05) on the softwear or information processing visual abilities [ex. visual response time, eye-hand and eye body coordination]. Most of this latter group of visual abilities are linked to tests that require a motor response to a specific stimulus. Follow up research also indicated that so called visual training is only effective if it is done in relation to the specific sport- the so called specific adaptations for imposed demands (SAFID) concept. We postulate that this is possible since these athletes have either deliberately or most often unconsciously managed to link up the preferable visual processes and behaviour.

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