



Excerpt from *SportsVision: Training for Better Performance*

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Introduction

When an athlete takes the field of play, many things go through his head. Where is the ball? Where are my teammates? Where are the opponents? What effect does the weather have on the game? Probably the last thing that enters an athlete's mind is, How is my visual system working at this particular moment in the game?

Yet athletes should be completely in tune with vision in order to perform at their best. Every sport involves the visual system in one way or another, yet very few coaches or athletes spend any time training the visual system to perform optimally during competition. Some coaches might argue that wrestling or swimming does not involve the visual system. However, as you will find out, vision is not seeing alone. Wrestlers, swimmers, and athletes in other sports thought to be nonvisual typically need to be able to visualize the next move before he performs it. The swimmer needs to visualize their stroke mechanics to achieve optimal propulsion. By "seeing with the mind's eye," the athlete is able to visualize the skill about to be performed. Visualization can be taught, as can many other visual perceptual skills. To perform at the highest level of competition, athletes have to be in tune with their visual motor and visual perceptual systems. Most athletes would never think about going into a competition without having practiced their skills and improved their sport-specific strength and conditioning before the game. The same should hold true for *SportsVision* training exercises. These activities, like any other component of the athlete's training regime, are necessary for optimal preparation for competition.

Whenever we introduce *SportsVision* training to coaches who were formally athletes, they universally respond that they wish that someone had told them about *SportsVision* when they were still competing. They are equally thankful that we have introduced it to them as coaches, giving them the opportunity to expose their players to these techniques. *SportsVision* training is rooted in exercise physiology, visual rehabilitation, and various aspects of kinesiology and biomechanics. *SportsVision* training allows athletes to improve their visual skills and thus their performance skills. The improvements from *SportsVision* training in eye movement skills, focusing skills, peripheral visual awareness, and visual perceptual skills will carry over to the field of play, helping athletes perform at their best and helping them reach the next level, no matter what level they are currently competing at. *SportsVision* gives even elite athletes an important edge over the competition. From youth leagues to professionals, any athlete's visual skills can be improved to enhance sport performance. We hope that this book helps coaches and athletes at all levels and in all sports appreciate the value of a superior visual system.

Focusing Exercises

Focusing is the ability to quickly, easily, and accurately perform near-far activities where the eyes are looking from a near point to a far point. This skill is necessary for a player to pay attention to a specific object or area in space. Training the focusing system can help the athlete perform difficult visual tasks with less visual fatigue.

Near-Far Eye Jumps

Purpose To change focus quickly and accurately from a near point to a far point

Materials Two targets (use sport-specific targets, e.g. two baseballs, two tennis balls)

Procedure

1. Place one target four inches or less away.
2. Place the second target 2 to 10 feet away.
3. The athlete looks at the near target, then the far target, and back to the near target. Be sure both eyes come into focus on the near target and diverge when looking at the far target.
4. Do 30 to 40 near-far eye jumps each day, or repeat for three to five minutes each day.

Signs of Improvement

- Ability to change from near to far target quickly and accurately
- Smooth eye movements

Pencil Push-Ups

Purpose To help the eyes work together more accurately and efficiently for sustained periods of time

Materials Pencil or pen
Tape measure

Procedure

Level 1

1. The athlete sits in a relaxed, balanced posture.
2. The athlete holds the pencil at arm's length straight out along her midline at nose level. The athlete should fixate on the pencil point. Make sure she can see it clearly and without double vision before she proceeds.
3. The athlete slowly moves the pencil closer to her nose, keeping her eyes on the pencil point. The athlete may need to be reminded to breathe. As she moves the pencil closer, the point may start to become blurry, and she may feel her eyes turning in. This is normal convergence.
4. It is important for the athlete to move the pencil slowly and to be aware of how it feels to look close. If one eye turns out or if the athlete starts to see double, stop the pencil at that point.
5. The athlete should try to regain a single, clear view of the pencil point by turning both eyes in, aimed at the point. If she can do so, she can continue moving the pencil in as close to her nose as possible without seeing double and with both eyes turned in.
6. If the athlete is unable to regain a single view of the pencil point, she may need to move the pencil farther away. She should do this until she regains one image of the pencil point and can maintain it steadily with both eyes turned in. Once she has done this, she can again move the pencil closer, as close to her nose as possible while maintaining one pencil point and both eyes turned in.
7. Pencil push-ups are best done in short work periods several times throughout the day. The goal is to bring the pencil to the nose, or within one inch of it, consistently without the pencil image becoming double or the athlete's eyes losing alignment. The goal is to be able to repeat this five times without any visual fatigue or visual discomfort.

Level 2

1. Once the basic pencil push-ups have been mastered, near-far push-ups help build eye-teaming skill and flexibility.
2. The athlete holds a pencil at arm's length, straight ahead along the midline. Make sure he can see it clearly and without double vision before he proceeds.
3. The athlete begins moving the pencil closer to his nose, keeping both eyes aligned in a few inches, then stops, looks far away across the room, holds for a count of 4, and then looks back at the pencil. The goal is to be able to look back at the pencil and have the eyes quickly align on the point and see it without double vision. The athlete repeats this several times.
4. When this becomes easy, the athlete moves the pencil in a few inches closer each time, stopping the pencil and looking away and back for several cycles.
5. The goal is to bring the pencil to the nose, or within one inch of it, consistently, doing several cycles of "jump looking" along the way.

Signs of Improvement

- Ability to maintain clear, single vision when pushing the pencil up to the nose
- Ability to focus, look off into space, and then refocus quickly and accurately

Dice Pursuits

Purpose To increase the ability to move the eyes accurately while performing a thinking task

Materials One die

Procedure

1. The coach or a partner holds the die in front of the athlete's face and moves it slowly and smoothly in a random, unpredictable motion.
2. The athlete calls out the number showing.
3. While the die is still moving, the coach calls out an arithmetic problem (addition, subtraction, multiplication, or division) and rotates the die to a new number.
4. The athlete calls out the number showing on the die, solves the arithmetic problem, and then gives the answer while keeping his eyes on the moving die.
5. The answer to the problem becomes the first number of the next problem.

Variation

- Start the exercise with relatively slow movement and easy arithmetic problems, and increase the speed and complexity as you go.

Signs of Improvement

- Ability to follow the die smoothly and accurately for longer periods of time
- Ability to perform mental arithmetic problems of increasing difficulty and increasing length without error

This exercise can be modified for sport-specific purposes. For example, use a basketball rather than a die. A numbered basketball is shown to the athlete. The athlete calls out the number showing. The coach then throws the ball up in the air and calls out "plus" or "minus." The athlete calls out the number he sees on the ball while it's in the air, solves the arithmetic problem, and gives the answer while keeping his eyes on the basketball.

