

Cameron Zaragoza, age 10, wearing prescription sports-specific eye-wear, uses the Bassin Anticipation timer, which tests reaction time, to improve his swing on the baseball field.

# Become a **Sports Vision** Specialist

You can score points with your patients and practice if you posses these four criteria.

KEVIN L. GEE, O.D., F.A.A.O., *Houston*

oughly 84.5 million people participate “frequently” in sports and fitness activities; while about 91.2 million participate “occasionally” in sports and fitness activities, according to the Sporting Goods Manufacturing Association’s *Sports Participation in America* (2008 edition) report. In addition, 63% of all six to 17-year-olds play at least one team sport, while team sports participation peaks at age 11, with 72% of children in this age group playing at least one team sport, the report reveals. Some-

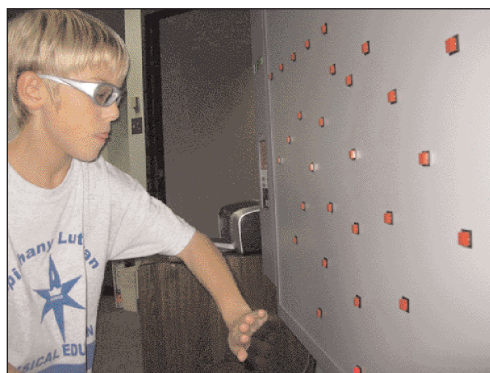
thing else to consider: According to a 2005 Vision Service Plan (VSP) survey (the most recent), one in four U.S. children wear contact lenses or glasses while participating in a sport. Add to these statistics that vision plays a significant role in sports and that every athlete — regardless of age and sport — wants to perform better than he currently does, and it becomes clear (pun intended) that we, as optometrists, are in an excellent position to help athletes improve their game via sports vision.

Here, I discuss what you need to become a sports vision specialist.

## **1. Visual system knowledge**

Sports vision requires correcting and/or improving the visual system (i.e. visual acuity, contrast sensitivity/spatial frequency, stereopsis, color discrimination, glare, ocular alignment/motility, etc.) to its most optimal degree to meet the visual needs of individual athletic activities, such as soccer, tennis, baseball, football, lacrosse, etc.

For instance, sports vision may entail fitting a baseball player who has uncorrected astigmatism (-0.50D cylinder of refractive error) in a low cylinder parameter soft contact lens, a hybrid contact lens or sports-specific eyewear — the latter of which



Cameron also uses the Dynavision Light Training Board to improve his eye-hand coordination and reaction time.

not only corrects the refractive error but protects him from ocular injuries, exposure to ultra-violet light and glare. (In sports with high velocity objects/balls, a minor astigmatic correction can make a tremendous difference.) Then again, sports vision may encompass employing therapy via special training equipment, such as the Marsden ball, to strengthen an athlete's eye-hand coordination. Or, it could include the use of both corrective eyewear and therapy, depending on your assessment of the visual system. (*Note: Before utilizing any training equipment, the patient must have a visual system that's operating to its utmost potential. For instance, if the patient doesn't have an optimum refractive correction, you won't be able to help him improve his stereopsis or contrast with therapy.*) Lastly, sports vision may entail treating sports-related eye injuries, such as a blunt injury to the eye from equipment or body parts like a finger or elbow.

The Sports Vision Section of

the American Optometric Association (AOA) has numerous resources and offers continuing education for practitioners interested in pursuing this field of optometry. (Visit: <http://www.aoa.org/x4787.xml> for more information.) The College of Optometrists in Vision Development (COVD) is another helpful source, as it includes information on developmental and behavioral optometry. (Visit: <http://www.covd.org/>.) Finally, *Sports Vision Magazine*, a quarterly publication, offers information on visual, cognitive and sensory training for athletes. (Visit [www.sportsvisionmagazine.com](http://www.sportsvisionmagazine.com)).

### 2. A passion for sports

While an in-depth knowledge of the visual system is essential to becoming a sports vision specialist, it won't garner you patients *unless* you possess a knowledge and genuine passion for sports. This knowledge must include an awareness of the current developments in sports (i.e. watching and reading about sporting events) and sports-oriented eyewear. Yes, advertising sports vision will invite potential patients to your practice, but if you can't carry a conversation with them about the sport at which they want to improve, they're not going to return to you. Their thinking:

▶ "How am I supposed to trust this person to help me improve my batting average when he doesn't even know what a breaking ball is?"

▶ "He has a poster of Tiger Woods in his office, but he doesn't know that Tiger hurt his knee and is out of commission until

next year? He must not know much about golf. And if he doesn't know much about golf, he probably won't be able to help me improve my drives."

▶ "The girl on the opposing team said she bought those sunglasses a month ago, so why doesn't this woman know anything about them? I thought she was supposed to be a sports vision expert."

### 3. Sports vision equipment

Armed with an in-depth knowledge of the visual system and a passion for sports, you're now ready to pursue the necessary equipment. Sports vision requires devices to first test the visual system, and, whether you *choose*, training devices to strengthen the patient's visual system. (Some practitioners opt to simply correct the visual system to its optimum by, for instance, prescribing sports-related contact lenses or spectacles, rather than investing in training equipment.)

Various methods exist to test the visual system's contrast, stereopsis, color discrimination and glare. Traditionally, sports vision specialists administered these tests with a chart for plotting and calculating values. For example, to test contrast sensitivity, we've shown patients a chart that contains fading letters, and we've plotted the results on a graph to determine their visual abilities. I, personally, have enjoyed using the currently available computerized systems that test acuity with random generated letters and incorporate contrast and stereopsis testing. This is because I've found that they are usually more accurate than the older tests, easier to use (they include all the necessary tests, precluding the need for different charts and equipment), and the athletes are impressed by

the technology, which makes them view me as a technologically savvy practitioner, who can, therefore, provide the best care. These computerized systems are comprised of a monitor and Central Processing Unit (CPU), which make them portable and, therefore, available to use in different locations, should you want or need to perform a sports vision therapy screening outside the office. A bonus: They can double as a Liquid Crystal Display (LCD) acuity chart during a standard eye exam, so you get even more bang for your buck.

Once you've determined what aspect(s) of the visual system require correction and/or improvement, and you believe the patient will benefit from a training device or devices, you can begin using the appropriate equipment. One caveat: Educate the athlete interested in your service that, as with perfecting a backhand in tennis, for example, the amount of time it takes for one to accomplish one's goal is relative. It's *imperative* you make this clear to the athlete, so he doesn't have any unrealistic expectations.

I've found that most of the

athletes who present for sports vision therapy decide to pursue my services after I've made this point because they've had or are currently taking lessons for their sport and, therefore, already understand that no definitive amount of sessions are guaranteed to enable them to reach their goal. In addition, they realize that a \$200 bat, for instance, won't help them if they can't accurately see the ball or their swing is too slow. Once the athlete agrees to pursue training, educate him on how, specifically, you're going to attempt to enable him to achieve his goal(s).

Training equipment can range in both cost and complexity. (See "Training Equipment Resources," left.) Your initial investment for training devices will range from \$10,000 to \$15,000. If, however, you have an in-depth knowledge of the visual system, a passion for sports and you effectively market your services (which I'll explain next), the athletes who present to your practice for training will offset this cost.

An athlete is accustomed to paying for services, such as private lessons, in sessions. A tennis player, for example, pays a private coach a set amount of money based on the duration of the lesson. As the sports vision specialist, you should follow this model as well. I usually provide the athlete with a complimentary session, in which I introduce him to the most basic training based on our initial conversation about the particular sport. During this session, we discuss the athlete's desired goals, his visual shortcomings, and then we determine an *initial* amount of sessions. I often bundle sessions, as athletes see a real value to this approach, and thus, stick with the therapy.

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### Training Equipment Resources

#### Lafayette Instrument

PO Box 5729  
Lafayette, IN 47903  
Phone: (800) 428-7545  
Fax: (765) 423-4111  
Web site: [www.lafayetteinstrument.com](http://www.lafayetteinstrument.com)  
E-mail: [info@lafayetteinstrument.com](mailto:info@lafayetteinstrument.com)

#### Performance Enterprises

76 Major Button's Drive  
Markham, Ontario Canada L3P 3G7  
Phone: (905) 472-9074  
Fax: (905) 294-6327  
Web site: <http://dynavision2000.com>  
E-mail: [info@dynavision2000.com](mailto:info@dynavision2000.com)

#### Sports Vision Pty Ltd

58 Park Rd.  
Burwood  
NSW 2134  
Australia  
Phone: 612 9747 2518  
Fax: 612 9706 4212  
Web site: [www.sportsvision.com.au](http://www.sportsvision.com.au)  
E-mail: [pelmurr@sportsvision.com.au](mailto:pelmurr@sportsvision.com.au)

#### Wayne Engineering

8242 N. Christiana Ave.  
Skokie, IL 60076  
Phone: (847) 674-7166  
Fax: (847) 674-7196  
Web site: [wayne@wayneengineering.com](mailto:wayne@wayneengineering.com)  
E-mail: [www.wayneengineering.com](http://www.wayneengineering.com)

*high peripheral eccentricity results in a comfortable edge profile.)*

### Determining parameters

To determine the best KBA diagnostic CL parameters:

1. *Attempt ideal cone clearance.* This is to protect the epithelium from CL bearing. If the trial CL exhibits excessive cone clearance, select a flatter trial CL until you achieve the ideal apical clearance. If the trial CL exhibits cone touch or bearing, select a steeper trial CL until clearance.

2. *Over-refract the trial CL.* Perform an over-refraction on the trial CL with the ideal apical clearance (15 to 20 microns of tear-film clearance on the CL designer simulated NaFl pattern). If the patient's over-refraction VA is poor, over refract the next steeper and flatter trial CL

to determine whether more or less apical clearance provides better VA. (Note: Excessive apical clearance decreases VA.)

3. *Determine ideal peripheral alignment.* The diagnostic trial CL should exhibit ideal edge lift at the CL's 3 o'clock and 9 o'clock positions. While ignoring the central fit, find the trial CL that has the best edge appearance. If the trial CL has too much edge lift, select a steeper one. If it has insufficient edge lift, select a flatter trial CL.

Enter the trial CL that has the best peripheral alignment and the trial CL that has the best apical clearance into the KBA software to view the custom base curve and eccentricity. Add the software's tear-layer compensation value to the over refraction to calculate the final power. (Note: Increasing the KBA

*CL's eccentricity requires steepening the base curve to maintain the desired apical clearance or "sag." The software helps with this.)*

We've found that patients fit in the KBA CL experience stable VA with the CL's large diameter, due to its comfort and centration. And, its aspheric front surface optics improves VA by decreasing haloes and glare. **OM**

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DR. ANDERSON PRACTICES IN AURORA, ILL., SHE SPECIALIZES IN ORTHOKERATOLOGY, KERATOCONUS, POST-SURGICAL LENS FITS AND ANTERIOR SEGMENT DISEASE. E-MAIL HER AT DIANNE.ANDERSON@COMCAST.NET.

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## sports vision

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No formula exists for establishing sports therapy fees. My suggestion: Keep in mind that time spent on sports vision is a form of "chair time," and bill accordingly.

The rapport you build with the athlete usually determines how often you test and train him. I've been able to build a rapport with my patient athletes not only by sharing a fondness for sports (i.e. talking about the "big game," for instance), but also by setting aside half a day exclusively for sports vision. This makes these patients feel valued, as they know that they are the focus. This, in turn, makes them loyal to my practice. In addition, dedicating half a day to sports vision reinforces the importance of the specialty to the patient athlete, while peeking the interest of those patients who seek to make a primary-care appointment in the afternoon. Some reactions:

▶ "Sports vision? Maybe I

should make an appointment for that. I play football. What times do you have available?"

▶ "Sports vision? That sounds like something that may help my neighbor's son, who's having trouble with T-ball. What hours does the practice do this, so I can tell her about it."

You'll usually perform testing and training in the off-season. If you establish a rapport with the patient, you'll see him routinely on an annual basis. Further, if the coach or athletic director has concerns regarding a team or teams, they may call upon you to investigate or help improve performance. There have been instances in which I've worked throughout the off-season, season and post-season with teams because the coach wanted it. In each instance, the coach saw the importance of the training and, therefore, utilized my expertise. For their part, the athletes say that they look for-

ward to the training because it breaks up the monotony of on-the-field drills.

### 4. Marketing savvy

As is the case with any service, you must market sports vision to attract patients. The three ways you can do this:

1. *Include sports-oriented materials in your practice.* Many O.D.s have current patient athletes, though they never address them this way, missing out on an opportunity to help them. Provide sports vision-oriented pamphlets regarding your services, so these patients will ask you whether you can help them make more baskets or catch the lacrosse ball faster. Also, place posters of some of your favorite athletes in both your reception area and exam rooms. Doing so will prompt your athletic patients to make conversation with you about these athletes. You can eas-

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## sports vision

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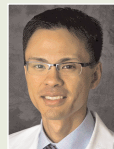
ily steer this conversation into a discussion about your abilities as a sports vision specialist. Finally, make sure your dispensary offers sports-oriented eyewear, such as sport-specific sunglasses. If you don't have the equipment, you're not a *real* sports vision specialist, patients will reason.

2. *Sponsor local teams.* Do this by supplying uniforms and participating in non-profit benefit events/fundraisers. To find out what teams need sponsorships and are holding fundraising events, call your local recreation department. I donated a pink pair of sport-specific sunglasses to a softball-team-sponsored silent auction, at which all the proceeds went to breast cancer awareness. In addition, I supplied pairs of the sunglasses to the team members. Aligning yourself with a team or teams is an excellent method of advertising.

3. *Contact your local schools' coaches and athletic trainers.* Phone or e-mail these individuals, and tell them you'd like to discuss how sports vision may improve their scores. As is the case with many patients, several coaches and athletic directors aren't aware that optometry goes beyond refraction. This is your chance to show these individuals that in addition to your refraction expertise, you have the mastery to provide visual training and effectively treat or triage sports-related ocular injuries.

Keep in mind that these three marketing methods, in addition to your in-depth knowledge of the visual system and your passion for sports won't just invite the interest of the intended parties, but their families and friends as well. For instance, several of the girls on the softball team you choose to sponsor likely have parents and siblings who also participate in athletic activities and want to better their game. Or, they may have some other ocular issue, such as dry eye, which requires the services of an eyecare practitioner. The same is true of the coaches and athletic trainers with whom you form relationships.

The statistics outlined above reveal a strong opportunity for you to use your skills as an optometrist to help this often-overlooked patient population. But to score patient athletes, you must possess the four aforementioned criteria. **OM**



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