

For Your Eyes Only?

*Addressing and analyzing the eyeguard debate,
from your home club to the world professional circuit*

By Amy Boytz



Three years ago, Robert Graham stepped on court in Santa Barbara to teach a lesson, much as he did frequently as Head Pro at the SB Athletic Club. This lesson, however, was to be different. As the student was supposed to be hitting a drive toward the front wall, instead the ball errantly shot toward the back wall, where Graham stood; the ball went directly in Graham's eye from a distance of six feet. He was not wearing eyeguards. Growing up in England, where protective eyewear was not, and still is not, commonly used, the thought didn't occur to him. "I did not used to wear [goggles] in lessons because I felt that I was always in control of the situations and...that much better than my pupil, not to put myself somewhere where I could get hit." Needless to say, after the incident his practice changed. Graham was lucky. He couldn't see for two days in that eye, but his vision returned.

THE AWFUL TRUTH:

Though the incidence of eye injury in squash is relatively low—racquet sports were listed as 10 percent of all sports-related injuries in a 1998, according to a study by Paul Vinger, M.D.—the possibility of a severe injury if struck by a ball or racquet is high. A 1981 study by Michael Easterbrook, M.D., claims that there is a 50 to 60 percent chance of hospitalization from an eye injury in squash. Vinger rates squash, and all racquet sports, as "high risk" on his assessed list of sports and recreational activities, alongside other activities such as BB gun shooting, paintball, ice hockey, and baseball. On the USSRA's website, Dr. Tom Pashby is quoted that "racquet sports are the No. 1 cause of serious eye injuries worldwide." There is an approximate 25 percent chance that one who plays squash will at some point suffer an eye injury. Factor in that the average squash ball travels at 90 mph and that a racquet can travel anywhere between 50 and 110 mph, and one can see how, if hit, the consequences could be dire—both to one's health and one's checkbook.

"If you play squash without wearing protective eyewear, you are risking an injury to your eyes, no matter what your level of experience," says Dr. Cynthia MacKay, a New York City-based ophthalmologist. Common injuries from the 40 millimeter-diameter sized ball—the perfect

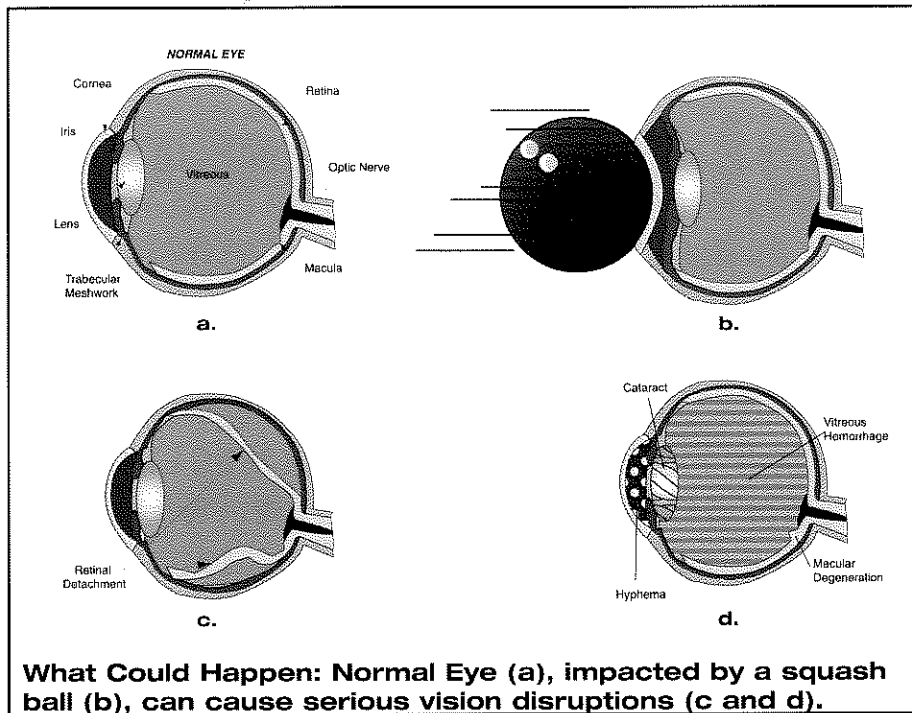
size to fit in the eye socket—are a lacerated lid or cornea, or a bruise around the eye bone. There's also a partially detached or torn retina, the "Saran Wrap" thin layer of tissue that lines the back of the eye; if this happens, the retina must be immediately glued down because a completely detached retina causes loss of vision. If not mended within a day, two at most, peripheral vision will be all that remains; the eye will be legally blind. The most common injury from a trauma to the eye region is hyphema, or bleeding into the anterior chamber in front of the iris, caused by a tear at the base of the iris. "This blood can clog the drainage system of the eye...[and] can also permanently stain the cornea, the clear curved 'window' in front of the eye," according to MacKay. This same injury often leads to glaucoma or cataracts later in life. Another pretty picture? How about bleeding into the posterior chamber (behind the iris), which takes longer to clear due to the jelly-like fluid called 'vitreous' that fills this part of the eye. If the blood doesn't clear within a few months, surgery is required—surgery that requires the use of what MacKay calls a "tiny roto-rooter device."

As an illustration, take the United States' own Will Carlin. In 1992 Carlin, then the No. 1 ranked player in the country, had a freak occurrence on the squash court. His left-handed opponent hit a shot

that Carlin thought was going down the wall. Carlin edged over just as the opponent hit a cross-court instead—a cross-court from a body's-length away that shot straight into Carlin's eye, slamming him to the ground.

The image was shocking: his eye swelled quickly, protruding past his nose. He couldn't see. Rushed to the hospital, Carlin spent two nights sleeping upright in order to drain the excess blood. Upon checkup two days after the incident, Carlin was told he had to have immediate surgery in hopes of saving the eye. His retina was torn and partially detached. His surgeon, Dr. MacKay, attached a small scrap of metal to the outside of his eye; laser surgery would then fuse the edges of the retina together by injecting a "hot needle" into the eye in a series of approximately 100 pricks. Carlin spent a week immobile: eyes shut, not able to sit, walk, read, or even watch TV. Two more months passed of virtual inactivity; after six months he was back on the court.

A year later, after noticing he was whiffing the ball in play, Carlin went back to Dr. MacKay. "Will, sit down," she said. He would have to endure the process all over again. This time, post-operative complications cast doubts that Carlin's sight could be saved, though the surgery worked in the end. Today, he suffers "floaters" in his vision. The possibility of getting glau-



What Could Happen: Normal Eye (a), impacted by a squash ball (b), can cause serious vision disruptions (c and d).

coma in the next decade is imminent. And his wallet, after two surgeries and recovery therapy, is now \$50,000 lighter.

Ironically, at the time of the incident Carlin was an advocate of protective eyewear. He'd gone through stages of not wearing them, but by 1992 Carlin was again wearing the guards frequently. During the semifinals of the NY Championships, Carlin realized he'd forgotten his protective eyewear. He asked to borrow a pair from the tournament directors, but no spares were available. He almost defaulted because of the missing equipment but changed his mind last-minute. "A terrible mistake," he says in retrospect.

A SOLUTION:

Nearly all—90 percent—of squash-related eye injuries can be prevented by slipping on a pair of certified protective eyeguards. Most of these guards cost less than \$100—inexpensive relative to the cost of post-injury medical care.

But there are, of course, going to be people who don't listen to the statistics or simply don't want to bother with wearing eyeguards while playing squash. For example, take Randy Harper, who played ice hockey for 30 years without a face shield and now plays squash without eyeguards. "My reflexes are good enough for me to avoid a squash ball. I know the dangers of playing without eye protection and I am willing to risk the danger...After all, it's me who will suffer if I get one in the eye," he says. He cites disrupting problems such as

fogging, sweat, and stinging eyes as part of the reason he's against the goggles, also noting that playing with eyewear "takes the fun out of the game" for him.

Even Robert Graham, who suffered that near-disastrous eye injury, confesses that he doesn't wear the goggles when playing other professionals: "Even though I have had this injury I have 100% faith that

another pro will not hit me. I wear my eyewear in a USSR sanctioned event because I have to, but at pro level it is used more as a way to waste time than anything else. It is a nuisance, and I would say unnecessary."

"The two main complaints against wearing eyeguards are that they fog and that you lose your peripheral vision," says Linda MacPhail, Executive Director of Squash Canada, who has done extensive research on the subject. Manufacturers and doctors alike claim all such negative effects can be fixed: wear headbands to keep the sweat from seeping into your goggles, use anti-fog spray on the goggles, and make sure the eyewear fits correctly, they suggest. Other players complain that the goggles prevent them from seeing the ball well. The counter-argument? Wear them enough and you'll become accustomed to the view from behind lenses.

So what about those who choose not to wear eyeguards on court? At least one doctor abhors this practice: "They're dumb. They are just plain dumb, and they're asking for it," says Dr. MacKay. She continues: "One of the scary things [is] there is no difference in the incidence of eye injuries depending on level of competence. In other words, a highly competent player is just as likely to get hit as an amateur, statistically." That same statement is echoed in other reports: "The odds are no better for the expert than the novice...both

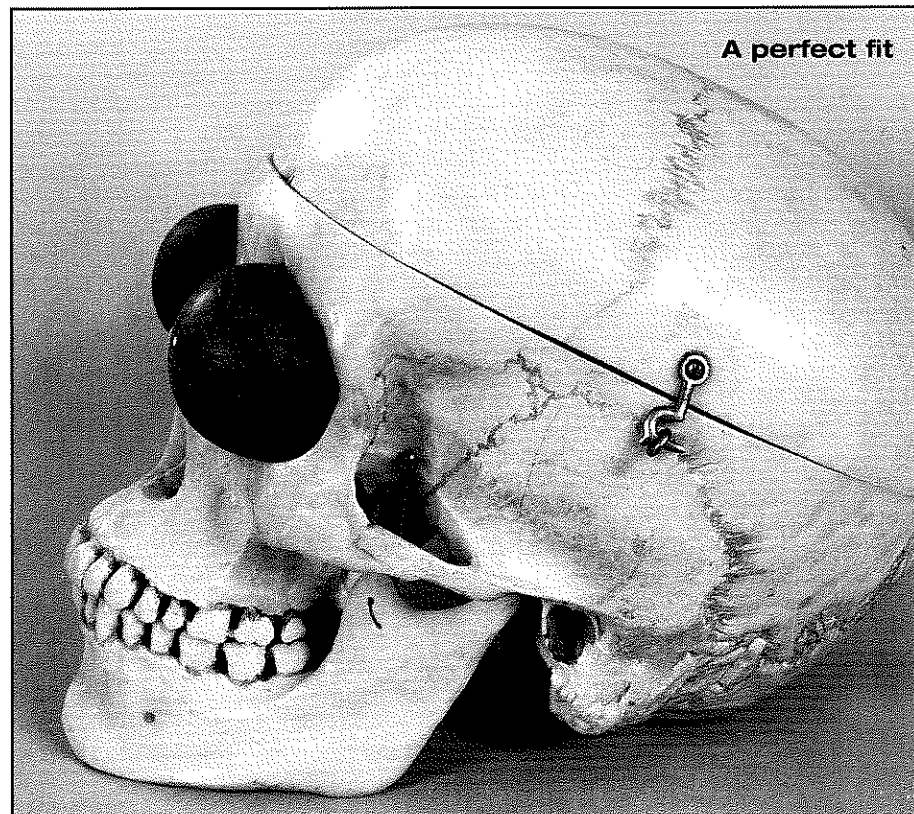


ILLUSTRATION BY TONY CHRISTOVICH SKULL PHOTO SUPPLIED BY MICHAEL EASTBROOK, MD

groups equally are damaged," claims a 1982 report; "Experience does not appear to reduce the incidence of eye injury," says one from 1981.

For those who choose to wear eye guards, there are numerous variations of protective eyewear for squash and other racquet sports, but there are certain features to look for. In the US, two organizations help determine eyewear safety standards: the American Society for Testing

ANSI sets standards for all eyewear—except those used for sports

and Materials (ASTM) and the American National Standards Institute (ANSI). Players may recognize both of these acronyms, as they are frequently stamped on to approved products. The ASTM is responsible for writing the actual standards; in the case of eyewear, the standard is ASTM F803, last updated in February of this year, and covering racquet sports, women's lacrosse, field hockey, basketball, and baseball. The gist of the standard is that eyeguards must be made of skin-safe materials, must conform to a certain fit, ability to be cleaned, ability to perform, and ability to stand up to various tests. The other organization, ANSI, sets standards for all eyewear—except those used for sports. So while guards may be noted as meeting ANSI standards, players must recognize that this standard is not designed for sports.

Most doctors and eyewear advocates recommend searching for guards made of a polycarbonate lens that fully covers the eye. Most fit over the bridge of the nose and ears just like a pair of glasses. Some protective eyewear, especially the kind popular in Australia, looks like the visor of a welder's shield and covers the entire eye region. A couple of decades ago, "lensless" guards were popular; recent criticism, however, suggests that these types of guards can actually channel the ball into the eye and warns against their use. There is debate over the use of everyday eyeglasses on the court. Some suggest that protection from glasses is better than not wearing any goggles, but others state that the material of eyeglasses has a tendency to shatter, allowing shards of the lens or frame to enter the eye. Contact lenses offer no protection.

One other disparaging fact: some people wear guards that they believe to be protecting their eyes, when in fact they aren't even made for racquet sports. MacPhail points out that the rise in popularity of rollerblading and cycling in the early 1990s can be indirectly responsible for this. She states that many types of protective eyewear came on the market designed specifically for these sports, to prevent bugs and wind flying into the eyes, for example.

Many of these glasses look like racquet-sport eyeguards, so the pro shops started to sell them, often at a price considerably lower than the typical squash eyeguard cost. "They meet some criteria, but not for racquet sports—they

meet eyeglass standards," MacPhail says. "And people don't have the information to interpret [the labels] correctly."

Despite the suggested protection that squash eyeguards provide, there can still be no guarantee. In fact, on a recent model of Wilson polycarbonate eyewear, the following disclaimer appears in the packaging:

Warning!...When worn properly, Wilson protective eyewear is designed to reduce the possibility of serious eye injury to a player's eyes when struck in that region by a ball in the normal course of play...Even when properly wearing Wilson protective eyewear, a player may still sustain injury, including severe eye injury, as racquet sports and other sports are intrinsically hazardous. Participation in such sports implies acceptance of some risk of injury.

Similar disclaimers appear on other manufacturers' eyewear as well.

One final note on eyeguard standards: An independent research committee has found that manufacturers do not always adhere to such standards, such as the ASTM's, when creating their product. The Protective Eyewear Certification Committee (PECC), of which Vinger is President and the USSRA is a member, evaluates eyeguards to ensure they meet existing standards. The PECC then affixes a seal, at the manufacturer's request and expense, stating the product is PECC-approved (and therefore ASTM adherent). "ASTM does not have an enforcement policy," says Vinger. "[ASTM] leaves policing [of] products to the community of

TIPS FOR TREATING AND PREVENTING EYE INJURIES

•If you sustain a blow to the eye, place a small bag of crushed ice gently over the eye to prevent swelling. Do not blow your nose, in case the eye socket is fractured—this may allow bacteria from your sinuses to enter the eye tissue. Do not apply pressure or rub your eye. Get to a doctor immediately, protecting the area with something hard, such as a pair of sunglasses, while in transit.

•Even if you're not in pain and your sight is fine, you should see an ophthalmologist if you've been hit. There could be damage that will present itself in the future.

•Look for protective eyewear with a minimum of 3-mm central thickness of polycarbonate in the lens.

•Remember that if you choose to wear eyewear during play, you also may want to wear it during warm-up—or anytime you step on court. You never know when an errant ball may come your way.

•Older protective glasses—those that are yellowing or cracking, for example—should be replaced. They may not withstand the strike of a racquet or ball.

•See an eye doctor regularly, regardless of injuries, for checkups. If nothing else, a new prescription in your glasses or contact lenses may help you see better and improve your game!

(Sources: Dr. Cynthia MacKay; www.willseye.org)

users and interested parties. Certification councils are an essential part of the process in assuring the consumer gets a protector that is likely to prevent injury." Similar organizations exist to regulate other sports' and industries' equipment, such as the Hockey Equipment Certification Council for hockey and Snell for helmets, to name a few.

To date, only three guards for squash are approved, all made by Leader Inc.; however, further tests are in the works, including examinations of Ektelon and Shamrock guards. The USSRA's website makes mention of protective eyewear geared for racquetball, suggesting players could use these guards for squash. But Vinger cautions against taking recommendations from the United States Racquetball Association's (USRA) website. After extensively evaluating the eyewear products listed as on the USRA's website, Vinger found the site "severely lacking" and "giv[ing] false information."

THE POLICIES:

Assuming that players have the correct information and proper equipment, there are rules in each country on who must wear the guards and when. As governing body of squash in this country, the USSRA requires that players wear protective eyewear during all USSRA-sanctioned events or those organized by its member districts, and also when representing the US in international competition. That goes for all ages and all skill levels. The USSRA takes no chances. Eyewear is required in softball and hardball, singles and doubles:

The [USSRA] policy requires players and coaches to wear eyeguards that meet or exceed the current American Society for Testing and Materials standard (ASTM F803) during all activities that take place on the court involving racquets and balls. (revised September 2000)

The rules to our north in Canada and across the pond in England are not so tight. In Canada, all juniors and all doubles players must wear eyeguards that are on Squash Canada's list of "acceptable protective eyewear." But no guards are required for adults in singles softball competition, even at national competitions. Squash Canada's MacPhail says that eyeguard use is sometimes mandated within individual provinces. Ontario, for instance, surpasses the national rule and requires that adult players also wear guards in their provincial championships. Quebec goes a step further and requires that all players wear guards at all times. There is no immediate plan for the national association to mandate that adults wear eyeguards in Canada, due to the backlash from players who oppose their use, but Squash Canada "strongly recommends" the use of protective eyewear.

England's approach is even more lackadaisical:

Although the risk of injury in Squash is very low it is recommended that when the avoidance of eye injury is of particular importance to a player, protective eyeguards manufactured to an appropriate National Standard are worn

properly over the eyes at all times during play. It is the responsibility of the player to ensure that the quality of the product worn is satisfactory for the purpose. (bold added for emphasis)

Also, the English SRA says the risk is low, contradicting what Vinger and others have stated. The English policy leaves everything up to the player. And according to one former English player, most UK squash players don't even take this recommendation into consideration. Graham says he never saw anyone wear eyeguards while growing up and competing around the UK. "The first time I saw [people wearing eyeguards] was when I first played an event in the US, and I thought it was ridiculous," Graham says.

Neither professional organization, PSA or WISPA, require the use of eyeguards, unless the guards are mandatory for a particular tournament that the players have entered. And, for that matter, rarely do WISPA and PSA players wear them. WISPA Director Andrew Shelley comments that "it is important to be aware that most countries do not have the same North American enthusiasm for imposing stringent personal safety rules on players; instead encouraging their usage but leaving adults (not juniors) to make their own decisions in relation to their own health and safety." PSA Executive Director Gawain Briars adds: "The PSA position is that the Association has no plans in the near future to mandate the wearing of eyeguards by professional players, who are

The Masked Marvel

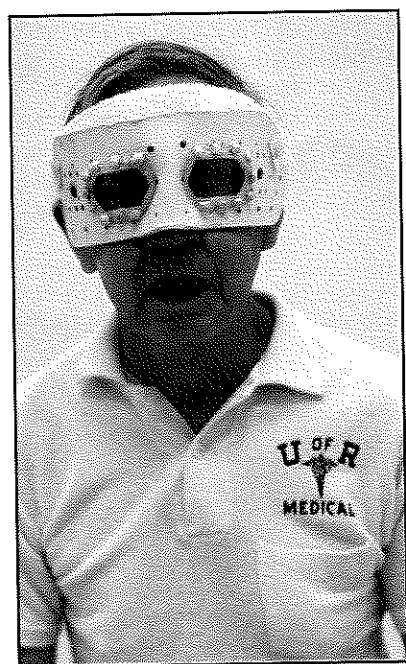
Dr. Taft Toribara, a Rochester player with six National titles under his belt, takes a unique pair of eyeguards on court with him: his own creation of guards, which earned him the nickname "The Masked Marvel."

Toribara, now playing in the 80+ division, was hit in the face with a racquet more than two decades ago, giving him stitches under his eye and also concern about his safety. "I'm small," he says, "and my face is about the level of where the taller people swing the racquet." Toribara knew regular eyeglasses were not good because they can shatter, so he decided to do something about it.

He fashioned a mold of his face out of a plastic that can be sculpted when placed in hot water. He started by cutting narrow slits in the plastic to see out. Recently, though, the USSRA and eyeguard standards began requiring the use of polycarbonate lenses—so Toribara ordered some of the lenses and attached them to his mask. The mask wraps around the sides of his face and covers his nose. The guard rests atop a terry cloth band to keep the sweat out of his eyes and closes with Velcro.

"They call me the Masked Marvel," he says, chuckling. "Maybe I scare the people when I get on court!"

—A.B.



quite at liberty to wear them individually if they so wish, but we are monitoring the position with an objective and responsible view." Current USSRA President Kevin Jernigan, however, disagrees:

"I think the PSA and WISPA are irresponsible for not requiring their players to wear eye protection...The professional organizations' refusal to mandate eye protection in their tournaments makes it seem like it's safe to play without it, when in fact the statistics show that to be untrue."

(Please note that Kevin Jernigan's comments do not represent the official statement of the USSRA; rather, they are his opinions.)

It may or may not be realistic to expect the World Squash Federation (WSF), or at least the National Governing Bodies of squash, to require eyeguards in all squash-playing countries. One approach, however, could be to "grandfather in" the rule; for instance, requiring all new players to wear the guards starting in January 2002 and from thereafter. The existing players would not be required to wear the goggles, but over time everyone would wear them. This is just what the National Hockey League did with helmets leading into the 1979-80 season and now there are no players remaining in the league that don't wear them. Craig MacTavish, who spent most of his career playing for the Edmonton Oilers and New York Rangers, was the last remaining helmetless player, and he retired in 1997.

Most countries acknowledge that juniors are less skilled with the ball and racquet and in more danger of injury; therefore, they are almost always required to wear eyeguards at all times. What is interesting, though, is that when these juniors graduate to the senior ranks, they toss the guards. "They have spent their entire career wearing guards and then they stop, sadly," says MacPhail about the trend in Canada. However, Canada, following the lead of Australia, hopes to have a solution: at the Canadian Junior Open in December 2000, the distributor of a product called "i-MASK" handed out a pair of the shield-like guard to the winner of each division. "They were excited, and lots of kids bought them at the tournament," MacPhail says. "Now it's cool!" Australia embarked on a similar project a few years earlier, taking the same i-MASK guard and emblazoning it with the name of various squash organizations around the country, enticing younger players to wear the guards as a mark of prestige. i-MASK is also the official

A few years ago, Australia embarked on a project. They took the i-MASK guard and emblazoned it with the name of various squash organizations around the country, enticing younger players to wear the guards as a mark of prestige. i-MASK is also the official sponsor of Australia's Commonwealth Games 2002 and World Junior Men's and Women's teams.



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(One issue that should be addressed: the media's role in this debate. Some readers believe that photos showing players not wearing eyeguards actually validate this practice and that all photos published in this magazine, for instance, should show players wearing guards. This presents a conundrum, as it is impossible to cover the entire sport and its events without including, for example, the professional game. We have recently adopted a disclaimer, printed at the front of each issue, addressing this issue: "photographs of players without eyeguards were not taken at USSRA events." But the debate continues.)

Taking the policy a step further in the US, should eyeguards be required in the US in everyday, non-competitive play, starting with the clubs? Some clubs already do this. The Multnomah Athletic Club (MAC) in Portland, OR, and The Union Boat Club in Boston, MA, for example, post signs on the doors of all courts stating that eyeguard use is mandatory. "[At our club], injuries haven't happened at the higher level. But the club says it doesn't matter. A to Z, everyone wears them," says Khalid Mir, Head Squash Pro at the MAC. The rule at Mir's club was imposed for insurance purposes—the insurance companies recognized the risk of eye injury associated with racquet sports and therefore put a condition on the contract. In

addition, all members must sign a waiver when they join the club, saying that they will not hold the club responsible if they get hurt. One main concern with requiring guards at the club level is the issue of regulating their use—a job typically left to the club pro. Mir, for example, checks the courts at least twice each evening to ensure all players are wearing protective eyewear, and he has help from members of the squash committee. Many clubs keep spare sets of guards on hand as well.

The rules and attitudes toward eyeguard use appear to be changing, slowly but surely. The WSF's Ted Wallbuton, in a Letter to the Editor in *SQUASH MAGAZINE* (*Clearing Things Up*, June/July 2001) points out that the WSF "recommends that all squash players wear protective eye guards at all times during play," a statement resulting, he says, directly from Ben Harris' (USSRA referee) and Jernigan's actions at the WSF Annual General Meeting in late 2000. Not all agree that it will be so simple, though: "It is good self-protection for the USSRA, but I think they are fighting a losing battle to make it compulsory and common across the country. This will never happen," says Graham.

Whatever the decision by each individual nation, club, or player, it is obvious that squash equipment can have a serious impact on the eyes, given the right circumstances. Maybe you should stash a pair of guards in your bag, just in case? ■