## Chuck Cooley

Archery Fitness

# Shooting in Glasses

In my first two articles I've discussed the advantages of shooting glasses and what to expect from an eye exam. Now I am making the leap that you've got that out of the way and I am going to assume further that glasses or at least some form of corrective device is part of what you have to consider. Let's look at some of the pros and cons of the whole thing.

The Number One Thing to Remember is that glasses are almost never a "perfect answer." In virtually every instance there is some kind of tradeoff or balance that must be struck with your form and the wearing of glasses to shoot. These can be minimized with specific frames, lenses, or other options that when combined can do a very good job at performing excellently.

Even with what I just said above, it is still my opinion that it's almost universally better to try to shoot with contact lenses. They correct more naturally and allow freedom of movement of the eye in it's fully corrected state. Fit and lens fogging issues are gone as

well as are any lens design questions. Most importantly, though, contact lenses typically allow for a better threedimensional view of the world at large. Glasses, especially when

stronger prescriptions, tend to "flatten" one's depth of field making judging yardages most difficult. If you are a new wearer of glasses this is one aspect of your game that will need the most work.

No matter what you do-glasses or contacts-consistency is the key. You must practice and compete using the same correction. Changing back and forth will change your mental image of the target and affect your score in a negative way.

#### Glasses

Keep in mind that these are glasses for shooting, not the ones you're going to use for everyday things. Shooting glasses are a tool for archery and the shooting sports, not the

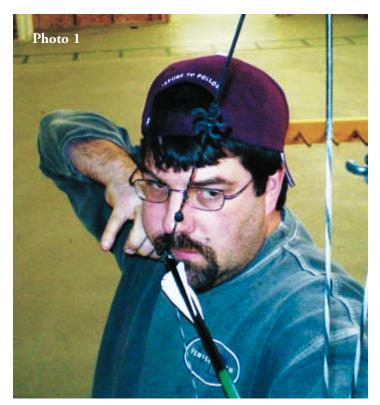
Get a good set of reliable frames; larger in size is best. Pilot or modified pilot shapes are ideal as long as the bridge fits very close to the nose (not the style I have on in the photos, I borrowed them for illustration only). The goal here is to get the lens as close

as possible to the side of your nose so there is no or space real gap between them and your nose when you are in shooting position and looking over the bridge of the nose. To facilitate

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this you may need to rotate your head position

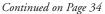
slightly. Photo 1 is probably the most common position I see people shooting with glasses in; Photo 2 is where you need to be. The chin goes farther towards the bow arm shoulder. You may need to open your stance just a tad as well. Try moving your back foot about one half to one inch out. That is if they were both side by side as they would be in a square stance, slide the back (in this instance the right) foot forward so the left big toe is next to the instep of the right foot, spread your legs shoulder with apart. This position allows the hips to rotate just a touch and will allow your head and shoulders to operate in something a little more like a triangle than in a line. It changes the overall feel of the draw and anchor (notice the string position) but it is ultimately better. Optically the best thing it does is remove the huge stress placed on the ocular musculature to move and hold the eyeballs at a severe angle. Try it . . . look hard up and out at a 45 degree angle and you can actually feel the strain.

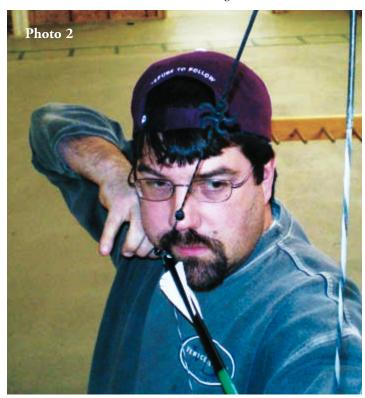
#### Lens Design

Progressive or "no-line" bifocals are not

designed for shooting. The design of the lens allows for "prism" to be built into the design thus allowing literally thousands of focal points in each lens depending on head position and eye position. This becomes a real issue if you can't perfectly and precisely place your head and eye in the same exact spot at full draw every single time. If you have an uphill or downhill shot you can guarantee a different focal power than a flat shot.

If you have to get bifocals get a line style or ask for a round segment (it looks like a bifocal lens in the shape and about the size of a quarter). In either event the bifocal line should be no less than 10mm below the lower eyelid. This keeps it low enough to stay out of the way yet high enough to use to write a score or set a sight mark. Do not compromise on this. To have it made properly your optician will have to select this lens design specifically and might charge a tad more, but not much. Round segment bifocals might cost a bit more than a standard line style but perform much better for shooting. They are my favorite option. In single vision





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lenses I always try to get the aspheric design because it allows for the truest optical image farther away from the center of the lens. There are newer optical processes utilizing specific curves and some specialized computer generations but they are quite expensive and I'm not yet convinced that for the average user the cost will be justified by the result.

#### Lens Material Choices

You should choose optical plastic or glass, never polycarbonate (except for gun shooters, the impact protection outweighs the poorer optical performance). Polycarbonate material has a high incidence of distortion in strong prescriptions and when viewed at steep angles or far from center. Glass is twice as heavy as plastic, costs are a touch higher usually and options are more limited. Plastic is the current material of choice industry wide so more options, easier solutions, and faster service prevail.

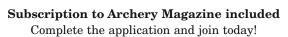
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National Field Archery Association 31407 Outer I-10 Redlands, CA 92373 As for being scratch resistant, most of the newer materials and coatings are on par with the durability and resiliency of glass. In strong prescriptions stick with high index materials for better optical clarity.

#### **Coatings**

Always get a scratch protective coating (not needed on glass) and whenever possible I use a high quality antireflective coating as well. The better ones in the marketplace are very durable, very easy to clean, and provide far superior light transmission to lesser coatings. The idea of this coating process is to allow light to pass more directly through the lens and thus provide a brighter, sharper, clearer image.

#### Tint

Clear is the most universal choice, with a second choice being a high contrast amber or persimmon color depending on your target choice and background. I don't usually recommend photochromatic (color changers) lenses since they can be somewhat unpredictable depending on weather and temperature situations. For sunglasses or bright conditions I go with grey to keep all perceived colors neutral, polarized if at all possible to cut the glare. Don't overdo it here. You can literally come up with dozens of options for shooting. Simple seems to be better in this regard.

Chuck Cooley is a NYS Licensed Optician with almost 20 years in the industry. He is also a Fellow Member of the OAA and NAO. He holds National Certification in Opticianry from the ABO. In archery he is the Vicepresident and co-Founder of Feather Visions. He has ten years of competitive archery to his background as is now a NFAA Tour-



ing Pro sponsored by Bowtech, Carbon Express, Spot Hogg, CR Scopes, Copper John, Stanislawski, Nealy's, BCY Fibers, Lancaster Archery Supply, Archers' Advantage, and Oakley. He is coached by Gary Neal.