
Protection of the Eyes in Sports: Baseball

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Produced by: The Optical Group

Written by: Jacob Martin

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Ontario Opticians Association – Course #: 4080 - 1 PG

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- You will need to score a 70% or higher mark.
- You will receive your certificate after a few days of completion. They are sent manually.
 - The quiz is on Page 1 and Page 16. Click the link and you will be sent to the quiz.
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Introduction: Post Covid sports and how it has changed the way we play

In this educational written piece, we will be discussing why eyewear protection in recreational sports is more important now than it ever has been in the history of indoor and outdoor activities.

This first educational write up will cover baseball and how it has rapidly changed from the lead up to and during the pandemic.

With COVID-19 restrictions lifting we're seeing more and more people, especially younger kids deciding to return to recreational sports whether that's baseball, hockey, or soccer. One of the most important parts however is that while the game itself has mostly stayed the same the human element behind it has changed extensively.

Baseball and how it has rapidly changed.

In 2015 according to Stat Tracker which tracks and collects extensive data behind baseball and was first introduced in 2015 in all 30 Major League Baseball stadiums, the hardest hit ball by a batter, which is tracked as exit velocity, in the Major Leagues was 119 miles per hour (MPH) and it occurred once that year. Now compare that to 2021 where the hardest hit ball was 122.2 miles per hour and the high of 119 miles per hour that we saw in 2015 now occurred 13 separate times in 2021, by 4 different people. We have seen a gradual increase in exit velocity since it was first being tracked.

The question now becomes, what does this have to do with eyewear and safety? Well imagine that you are an infielder, for some positions you are standing approximately 90 feet away from where the batter is going to be swinging and hitting the ball, usually in youth sports you are even closer, this means a fielder must react to balls being hit at them at a rate that has never been seen in the history of the sport, not only do you have just a 12 inch glove to protect you from a ball being hit in your direction, we now have what are called 'shifts' in the sport and this is where fielders will align in the field with the location that the batter is most known to hit the ball. So instead of a short stop standing between 3rd base and 2nd base it is now not uncommon to see a short stop standing between 1st and 2nd base, this means that we now have not only players being able to hit the ball harder than ever recorded but we also have people standing in a position with the highest probability of a ball being hit at them.

This 'shift' works so well with putting players in the line of hit balls that Major League Baseball is moving to actively ban this ability on the field.

What is the one body part, that is not routinely covered on your body when playing the game of baseball on the field? Your face. Protecting your vision is now more important in sports than it ever has been. A helmet is used to protect your head when you are batting, but when you are playing a position on the field, you are usually wearing a typical baseball cap. There have been modifications done on a batter's helmet over the last decade or so, including adding a lower part to the helmet to protect your jaw area, but we still have batters going up and facing 100+ miles per hour pitches from the pitcher while wearing glasses or contacts.

You can simply Google 'line drive hitting player in the head' and you will be able to find countless videos and articles showing this happening. It's no longer an unimaginable occurrence for even the best players in the world to get hit. Imagine people who are joining the sport for the first time in their lives or joining a fun league for the first time in years. Not only will first time players be put in a position where they need to have guidance to learn to protect themselves, but the sport has changed so rapidly that returning players will need to learn about all of the new playstyles and changes to equipment.

Let's go over the importance of eye protection for youth or casual baseball players. This education will be presented in a way that makes it easy for people who don't know the sport the way veteran fans do, a chance to have a basic understanding of why this topic is important and how eye protection is more important now than it ever has been. Included will be diagrams showing positioning and important details that we will be covering.

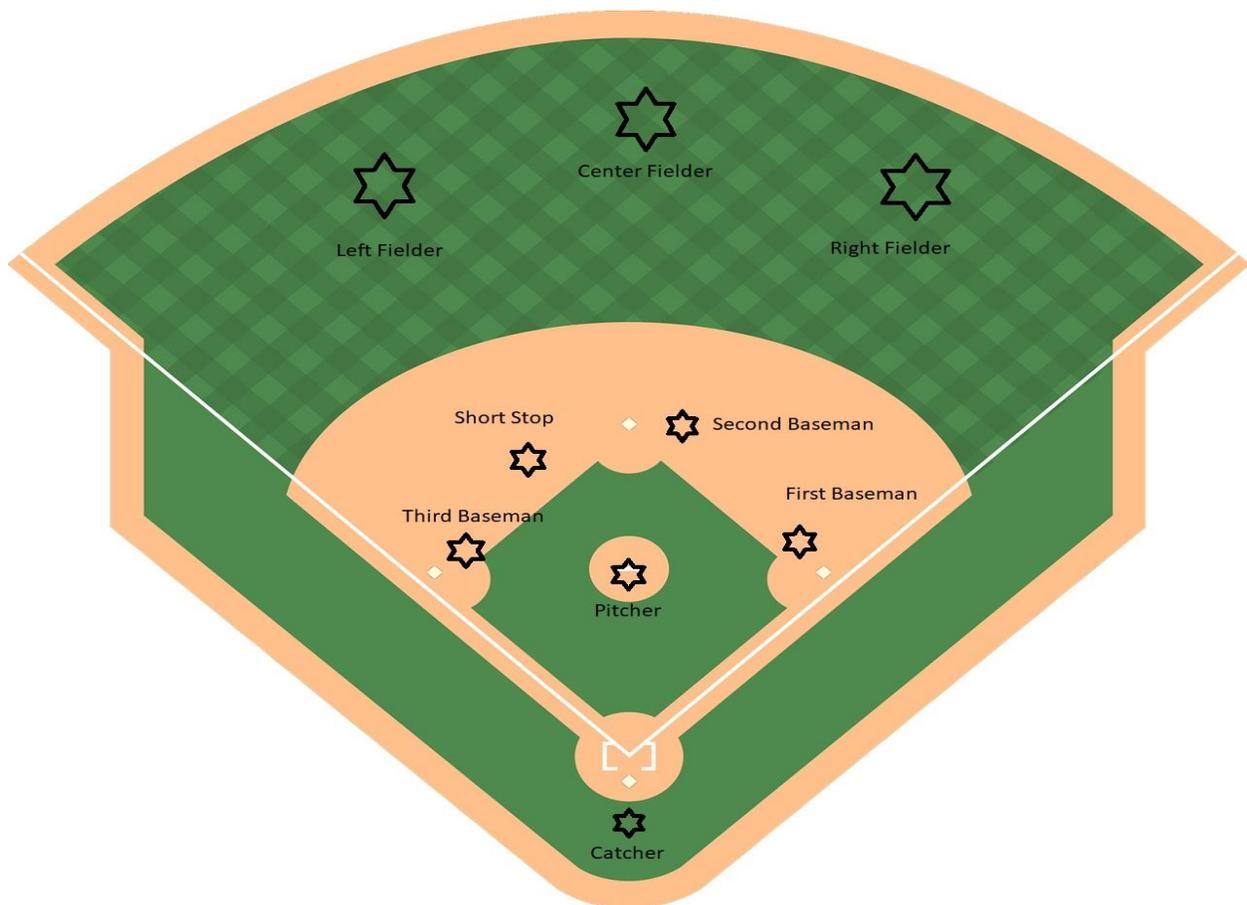


Protection and understanding the changes.

The everyday baseball fan knows about the changes that have been made to the sport over the last few years that have been affected by Covid, but the first timers or people who are re-entering the sport may not have any idea that positional alignment on the field of play has changed or that there are now more options for facial protection with helmets. The first change we will cover is the changes that have been made to fielding positioning, coaches will see a player and begin to understand the opposing players hitting style for example, if they are a left-handed hitter, and they tend to pull the ball, this meaning a player at bat is more likely to hit the ball between the first basemen and the second basemen, the coach will ask the short stop, who traditionally stands between second and third to move over to stand between the first baseman and second baseman, the third baseman will now stand in the location the short stop once stood.

In the following pictures, we will view where traditionally baseball players stand and where they stand with the shift.

Traditional:



The above picture shows the location of the nine fielders in their traditional positions.

This next diagram will show where players will now stand when shifted.

Shift Example:



The question then becomes why don't players just learn to counter the shift in baseball?

The answer is complex. New positioning for players based on analytics of putting yourself in front of a hard-hit baseball is easy, you just stand there. But as a batter trying to hit the ball in a

non positioned location is extremely hard to do, the quote “Baseball is the only field of endeavor where a man can succeed three times out of ten and be considered a good performer.” Was said by the legendary Ted Williams. One of the greatest hitters in the history of the sport. So, when you are standing in a location that, analytics say, has the highest chance for the ball to end up, yet the person swinging the bat can’t fully the location of where they will hit the ball an increase in velocity of hits balls over the past years with no sign of decreasing, that can lead to danger. So, the question now becomes, how does the average person protect themselves?

On a diamond full of dirt, with people constantly sliding and running around. The first problem for people with glasses is them getting dirty and causing blind spots, with a ball so small and being hit hard, a little smudge or a build up of dirt, can cause danger to even the most experienced players. So, what is recommended? Bring cleaner and a wipe that can easily fit in a baseball bag, that way the player can clean their glasses and have it on hand for other players who need it as well. In sports, it is always important to be looking out for each other, and helping others stay safe is the right thing to do.

Another potentially dangerous occurrence is a collision, either from a ball or another person. Getting hit by a pitch thrown by the pitcher is part of the game of baseball, you can ask anyone who has played, and they will tell you that they have been hit before. Sometimes, this is used as a strategy as well, you are awarded first base if you are hit by the ball thrown by the pitcher. With less experienced pitchers who lack control, the ball can easily slip and not hit the intended location; this can lead to the ball hitting the facial area. Baseballs hitting someone near or on the eyes, can not only destroy glasses but cause serious damage to a person’s vision. With inexperienced players picking up the game every day, people need to be better informed about protecting their eyes.

Even the most experienced players have had damage done to their facial region, with the increase in pitching velocity, modifications have been made to batting helmets adding an additional part of protection near the jaw line for players who wish to add it.

As you can see this causes such a limited amount of added protection to the eyes, but what else can be done? You need to be able to see the ball to hit it or get out of the way. Is an invention needed? Hockey has helmet cages and visors to protect the players eyes, but in Baseball a visor can break upon impact of a ball hitting it, which could end up causing more damage to the facial region, but could a cage work? Or would this cause restricted view of the baseball.

Pitching speed can now be seen in Major League games reaching over 100 MPH on a fairly regular basis, what once was a rarity has now become an occurrence that frequently occurs on a nightly basis. But with increased speed, comes unpredictability. As Opticians you understand the difference of what 10 MPH can do to the human body and how much damage it can have on the facial region.

Pitchers have to deal with their own issues during the play of game. They stand just 60 feet 6 inches from where the batters hit the ball making their reaction time even more important during play. Comebackers from the ball being hit do happen, though uncommon there are examples of major league pitchers being hit in the head.

But what about the young players? Younger players see their favourite players in the Major Leagues throwing harder and they are going to want to do the same thing, the issue then becomes accuracy. Next, we will cover what can be done to best ensure the safety during recreational sports.

With the ability to throw harder the one known trade off is that those players have a harder time hitting their targets. What does that lead to? More injuries from players being hit by pitches. With the baseballs generally being hit harder and with players standing in the line of hit balls more frequently, what does that lead to? More players being hit with line drives with a chance to cause substantial injury.

We will now cover what Opticians can do to help keep everyone safe during recreational sports.

Cleaning materials - As covered before, making sure you have the appropriate cleaning supplies is a good first step. A clean cloth and cleaning spray can simply fit into any baseball bag. These bags are common, players carry their bats, helmets, gloves, hats, and water bottles with them inside it, so we should inform players that eyewear cleanliness is important not only for you, but your fellow teammates. Even dedicating one specific player or coach to always have it on them can work as well. One bad bounce in a blind spot can lead to catastrophic long-term damage, so it's better to play it safe and be prepared.

Properly fitted – Making sure the persons glasses are fitted appropriately on them and not causing discomfort or distraction is a key to not becoming distracted while playing a sport. Distraction can be one of the easiest ways of becoming injured during a live event so the last thing a person will want is something as important as their glasses, which are supposed to be helping them, become a distraction.

Correct prescriptions - Informing people who play recreational sports about the importance of keeping up to date with their prescriptions is a great way of not only making sure each person who steps inside your business is kept safe and up to date, but they can then spread the knowledge to others and help keep them safe as well.

When to wear sunglasses – Informing a person on when to wear sunglasses instead of their typical glasses is important in all outdoor activities, protecting their eyes and keeping their vision clear from distraction from the sun so they have a clear line of sight.

The Scientific Advancements of Eyewear Protection

A way to better protect your customers eyes is showing them the best brands that offer the needed protection while engaging in sporting activities, like Oakley, Wiley X and Under Armour.

Before we get into the reasoning why these are some of the top brands on the market, lets best understand some of the key technology advancements that are keeping athletes eyes safe. Customers are going to be looking for affordability and style. But it is also important to inform them on why the top brands offer more than just those two things.

Impact Resistant frames and lenses are one most important traits of athletic glasses. Durability needs to be strong, if a player during the middle of the match collides with another person and it causes the frames to fall apart or lens to shatter, not only will the player not have these glasses for the duration of the sporting event but the chances of them trusting the store who sold it to them and the brand that supplied them decreases. Resilience is key and the top brands know that. One of the most impressive advancements are what Wiley X offers, which is Shatterproof Selenite Polycarbonate lenses that meet ballistic standards.

Water and Smudge resistant lenses are also important to keep grime off of the lenses while playing in a sporting event and not blocking a players field of view. One small blind spot by anything foreign could cause someone to not have a clear line of sight to the ball and with the speed at which athletes play now, it's only a matter of time before you need to adjust your glasses and you may accidentally swipe your hands on the lenses. Also, if there is contact involved in a sport, someone else might accidentally get their hands on your face and could leave a smudge on your glasses that way as well.

Athletes play in all types of weather conditions so the more resistant to the elements, such as rain, the better. Just because it is not currently raining, does not mean puddles won't be part of the field of play, or if you need a quick drink of water and it splashes on your face you shouldn't have to worry that it may impair vision for a prolonged time period.

The proper Nose Pads to prevent glasses from slipping off the persons face are another important factor. In all sports having the proper grip around the nose to prevent slippage is key, including accidental collision which occurs frequently during play. One of the more scientifically interesting Nose Pads are what Under Armour offers, which are laser engraved nose pads that offer stability and comfort.

Inform your potential customer about which sunglasses offer the best protection against ultraviolet rays (UV rays) including both UVA and UVB. Also inform them about the damage that UV rays can cause and how even your eyelid skin is affected, a part of your ocular structure that your potential customer may not be very knowledgeable about.

The advancements that the optical industry has made deserve to be shared with every potential customer, so they know that they are being taken care of by the best. There is so much new information constantly entering the optical world that staying up to date has become more important than ever.



Some of the Industry Leaders and What They Offer

Three of the current industry leaders in sunglasses and protection during sporting activities are Oakley, Wiley X and Under Armour.

Oakley is currently one of the relied upon sunglasses in baseball, and for good reason, they are known for their signature style and durability, along with their constantly evolving technologies they offer some of the safest and securest sunglasses on the sporting market. Available for all ages and offering customizable frames to best fit your customers physical lifestyle, Oakley is relied on by the best athletic performers in the world.

Oakley offers customizable options such as Frame color, Lens Type which include Polarized, Prizm and Photochromatic. You also have the ability for Customizable Icons, Ear Socks, Leash and Lens Etching.

Wiley X is Veteran owned and a family run company, offering almost every type of resistance imaginable for sunglasses. Wiley X offers the Climate Control Series, which protects against allergens, sweat, dangerous airborne particles, weather, and debris. Wiley X also states all of their eyewear has the ability to “protect the eyes in the event of contact with high-mass and high-velocity objects.”

Under Armour is not just a clothing brand, releasing some of the industry leading sunglasses as well. Under Armour offers sunglasses with Lens Vents which “keep air flowing across your lenses, eliminating fog & moisture build-up.” Along with Mirror Coating offering improved sun protection.

You can find professional athletes across all sports representing these brands, and for good reason. Each one offers its own unique style and protection against elements while outdoors or indoors. Customers now have the opportunity to truly fine pick not only what style they feel best suits them but also what they feel their protection needs are. Whether its high contact sports, outdoor hiking or indoor volleyball, the optical industry is constantly evolving and creating new stylish ways to play safe and protect your eyes.

Keep everyone informed and spread the knowledge

This education has been created to inform you, as an Optician about the most up to date information about the changes made to baseball.

Baseball is one of the largest sports in Canada, it is an easy game to pick up and play. Whether it's in your backyard or at your local park playing at a diamond. It's a game that everyone can enjoy and is well known across the world.

Major League teams now employ analytic departments, filled with the most advanced statistical minds that the world has to offer. Baseball is a billion-dollar industry, so of course they are going to use as much money as possible to have an advantage over their opponents. Thus, comes new strategies such as the shift, and learning new techniques for how to hit the ball harder and at what launch angle to increase the chance of victory.

All of this has a trickle-down effect, sometimes at the risk of injury for players who may not fully understand that you end up sacrificing certain abilities such as control to increase how hard a player can throw the ball. So spread the knowledge.

Physical activity is wonderful for the human body and the social element can create friendships that can last a lifetime. But understanding that safety should never be ignored is key, especially when it comes to protecting your vision.

Education is the key to growing as a person and as a professional. Whether it's written, video, or presentation form, the Optical industry is constantly growing, and new ideas are being brought in at such a fast pace that it can be difficult to keep up with everything, that is why it is important to spread the knowledge and allow others to benefit from what you have learned.

Thank you for reading and I hope you learned something new today!

Quiz and how to connect with us

Please allow up to one week to receive your certificates as they are manually created for each completion.

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Sources

<https://www.mlb.com/>

<https://pixabay.com/>

<https://www.theopticalgroup.ca/>

https://baseballsavant.mlb.com/statcast_leaderboard

<https://uihc.org/health-topics/what-difference-between-uva-and-uvb-rays>

<https://www.hopkinsmedicine.org/news/articles/how-to-protect-your-eyes-from-uv-damage#:~:text=UV%20light%20ages%20all%20structures,ultimately%20lead%20to%20decreased%20vision.>

https://www.underarmour.ca/en-ca/p/sunglasses/unisex_ua_force_2_mirror_sunglasses/1364819.html?dwvar_1364819_color=014&start=undefined&breadCrumbLast=undefined

<https://www.wileyx.com/>

https://www.underarmour.ca/en-ca/c/accessories/sunglasses/?cid=PS_DG_CA_10418_1CXXWY1QIB_under+armour+glasses_p53147228348&gclid=CjwKCAjw8JKbBhBYEiwAs3sxN3O2lQKQ_Z5UA9gYl5OA2V3e-Fj7yQB3v4APFzliufuNwWfnlxdSzRoCjPEQAvD_BwE&gclsrc=aw.ds