



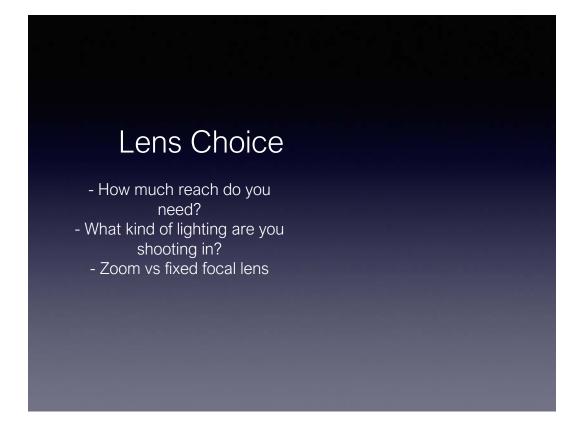
Disclaimer* that what I'm going to present to you is my opinion and others may differ from what I'm going to say.

These are the areas that I will cover tonight. I'll answer any questions I can but if possible try to hold them off until the section that it applies too.



So what camera or lens should you purchase to photograph sports??? Well like many things in photography, it depends Gear will depend a lot on what sport you are shooting and whether you are shooting it outside in the middle of the day or at night under lights or inside.

One thing I can tell you is that photographing sports can get expensive



Lens - There are two big considerations when it comes to Lens. Focal length and maximum aperture. Those considerations will vary based on the sport you are photographing and whether it is inside or outside.

Focal Length considerations

How close are you to the athletes?

- Larger fields like football and soccer will require longer focal lengths (Soccer, football 300-500mm)
- Sports like basketball, tennis, or even baseball may allow you to get away with shorter focal lengths (24-70, 70-200)
- (Shorter focal lengths usually = less expensive)

Maximum Aperture considerations

Are you photographing during the day? At night under lights? Inside gym or arena?

- Outside during the day is the most forgiving. Aperture mostly used to blur background than increase shutter speed.
- Inside or outside under lights both pose issues as both are generally poorly lit (even if your eyes are telling you otherwise).

Zoom vs fixed

Zoom lens will offer you more flexibility but fixed will remove another thing to think about. Plus fixed focal length lens are typically cheaper for larger aperture lens offerings.



What do I mean by sensor size..The notion of full frame, vs crop like APS-C micro 4/3

- Added focal length when shooting with less than full frame. - Obviously when you are shooting action a faster frame rate will make it easier to capture peak action. 3-4 fps vs 8-10fps is a big difference. Don't feel you can't take good sports photos because of slow frame rate. Remember that film shooters had very low fps rate and still captured great photos. Nothing replaces knowing the sport and anticipating action.

Just as important as FPS (and harder to determine) is the cameras ability to clear the buffer. Typically this is not a spec the manufactures provide and you have to determine how good it is by watching reviews. Buffer size and speed will determine how quickly the FPS will translate into pictures on the card. Memory card speed will also determine how quickly buffer is cleared. The faster the card can write the faster it can clear the buffer.

- ISO performance will come into play when in bad lighting situations. The higher you can push your ISO the faster you can get your shutter speed.



I personally never use flash for sports but as I had said earlier in presentation everyone is different. Some will use it as a kicker to light up the athletes face.

- I don't because I don't want to risk distracting athlete
- It will slow up FPS of camera



Support Gear

- In my opinion the only time tripods should be used is if you are safely behind a fence. Unless you are on a gimbal head it will limit your movement. Would be a safety issue on a sideline.
- Monopod. You will typically see these on the side of sporting events underneath very large lens. Much safer to use than tripods and offer more flexibility.
- Handheld. Greatest flexibility but run risk of getting tired.

Other useful gear to bring along

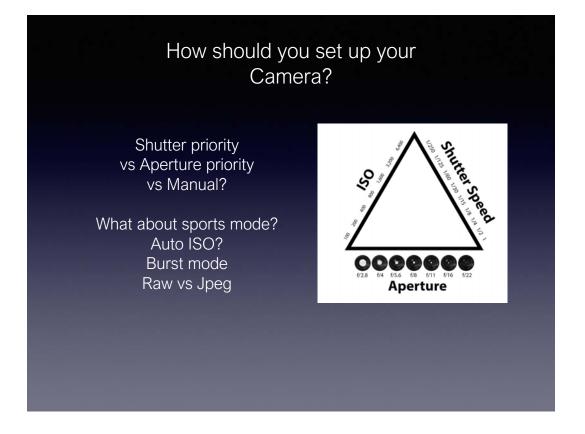
- Knee pads.
- Bad weather gear.
- Water bottle.



- Extra memory cards and batteries.
- A second camera with different focal length lens.

Other useful gear to have

- Knee pads
- Bad Weather gear
- Water bottle
- Extra memory cards
- Extra camera with different focal length lens



Does everyone want to know the magic setting? Basic overview of each A, S and M.

- Why S? Logical choice right? When you want to make sure your shutter value does not go below a specific speed. May also have to adjust ISO once you hit limit of your aperture.
- Why A? I maximize my aperture value (smallest number) and flex my ISO to make sure shutter speed is high enough
- Why M? Don't want shutter and aperture values to change or have camera be tricked by lighting. Would adjust ISO to make sure exposure is correct.

Bottom line is that you generally want to make sure your shutter speed is high enough to freeze motion. What speed you need will depend on age of athlete.

Can I use sports mode? Camera's sports mode will give priority to shutter speed in order to capture motion. Much better than simply using auto or P.

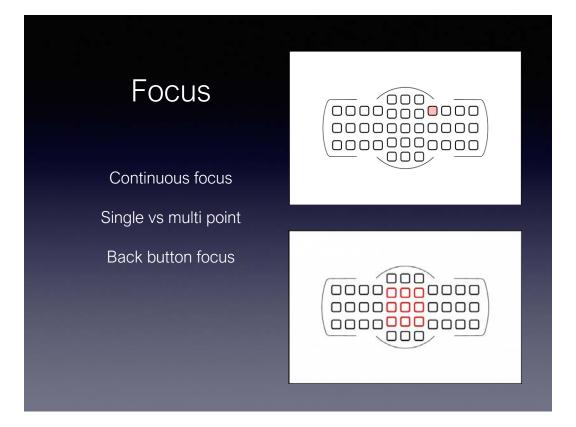
Auto ISO

- Can be used in conjunction with other camera modes to make sure exposure is accurate for scene. I would suggest setting a minimum ISO when using auto ISO to make sure that shutter speed doesn't drop below desirable level.
- Remember very few people will notice "grainy" pictures but everyone will notice blurry ones.

Burst mode - Camera will continue to take pictures as long as you hold your button on shutter or when the buffer files up.

Shooting Raw vs Jpeg.

- I highly suggest you shoot in Raw any opportunity you get. With that said it may not be practical when Photographing sports
- Raw will give you more options in post including pulling out shadows and setting the white balance (which could be very important indoors)
 - but it will also fill up your buffer and memory card a lot faster.
 - If you do shoot raw and have option of 12 bit vs 14 bit go with 12 bit
- Jpeg will help with camera buffer and allow for more pictures on a memory card
 - but will "bake in" some setting such white balance, contrast and sharpening.



There are a couple of things to talk about here.

- First you want to be sure your camera is set to continuous focus. This will allow your camera to continuously track your subject as they move past you. If your camera beeps when you focus on something you are't in continuous and that will cause blurry pictures.

- Single vs multi point points. This is really a personal preference and could vary depending on what you are photographing. If you want to be specific on what you want camera to focus on choose single point. Multi point focus will allow camera to decide what it focus's on although you generally can set how many points it uses in that group. This gives you greater chance of getting focus since it is looking at a larger area for contrast.

- helpful hint is to preset focus point as it will help line up the shot.

- Back button focus is the act of decoupling your focus and shutter functions and assigning them to two different buttons. Many sports photographers use this as it gives them more lee way as to when the camera tries to re-acquire focus.

Putting yourself in best position to "get the photo"

- Get to know the sport you are photographing.
 - You WILL get better the more you photograph a sport.
 - Review your photos in between games.
- Get to know the team.
 - Just like in the pros, teams will have tendencies.
- Don't be a fan while photographing

Get to know the sport

- Like many other things the more you photograph a sport the better you will get at it.
- Reviewing photos in between games will let you know what worked and what didn't

- This will allow you to anticipate action before it happens (Hold off a split second to click shutter next time or shoot through the action)

Getting to know a specific team

- Teams will have tendencies, and you may not notice them until you review pictures of a few games.
- You may find that you actually take less photos but have more keepers

Don't be a fan while photographing

- Stay neutral and don't show your emotions toward either team

Learn from Portrait Photographers

- Make sure the athletes eyes are sharp and in focus.
- Watch your back grounds.
- Reposition often if possible to photograph from different angles.
- Be careful how you crop in relation to limbs.

Things you can learn from portrait photography

Make sure eyes are sharp

Watch your back grounds

- Especially true if you aren't using a very wide aperture.
- This isn't always easy on some fields but try and position yourself to minimize it. Next slide will provide a tip for this.

Reposition yourself often

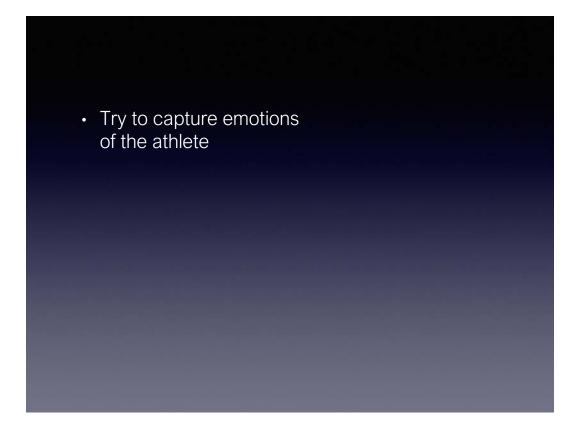
- You don't want all of your photos to look the same
- Obviously easy for some sports than others

If you need to crop arms or legs off don't do it at the joints as it looks awkward



Photographing from a low position will make the athletes look larger than they are.

Do yourself a favor and use knee pads





You will more than likely come away from the event with a LOT of photos. Because of this you are not going to want to do a lot of edits to the photos otherwise it will take you a long time.

- I will make a few adjustments such as Highlights and shadows and maybe a little bit of clarity then I will sync those to the rest of the photos
- From what I found, I will only have to make a few edits to other photos at that point.
- Cropping in and leveling are what I spend most of my time doing.
- Be honest in your culling. If a photo is out of focus or of the back of everyone delete it.
- White balance can be tricky if you are photographing under artificial light. (although cameras are really getting better at it)

How to feel good when many of yours photos don't come out?

- Don't let your "keeper" ratio bother you, it will get better.
- Share photos with athletes and parents.
- Only show your best photos.



- Your keeper ratio or those that come out good, better, best verse deleted will get better the more you photograph a sport. Make sure you review the last game before you photograph another one to make sure you aren't making the same mistakes.
- Share photos with athletes or parents of athletes
 - They will become your biggest fans and will provide you with the most compliments
- Show your best work
 - Don't just dump the card and send/share every photo
 - Crop, level and edit every photo that you intend to share
 - If all you show are good photos, people will believe that is all you take

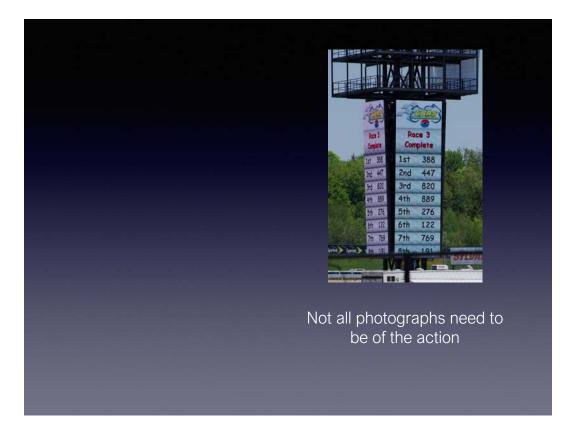
Getting Access

- Start with teams for which you know the coach or parent and ask if its okay.
- Share photos with school/team/parents/athletes.
- Work your way up the ladder.
- Try sports that are not photographed as much.
- Work with local newspaper.

Access requirements will depend on the age of the athletes and the type of sport you are photographing

Best way to get access is to ask coach or work with a local newspaper to get credentials.

- Start with teams where you know the coach or parent
 - Always best to ask first before showing up
 - Don't be the creep that just shows up.
 - Even if you have every right to be there you are still photographing someone's child
- Provide team/parents with copies of the photos
 - This will let them know you aren't hiding behind camera and you are giving back
 - This may open other doors of opportunity in other sports or at higher level of current one.
- Work your way up the ladder.. Youth, high school, college, pros.
- Try your hand at lesser photographed sports (softball, volleyball, soccer, swimming, tennis)
 - Use that opportunity to move into harder to gain access sports
 - Human nature is that people will be more than likely to help you if you have already helped them.
 - Good for practice either way
- Contact local newspaper



Often times we forget that other things happen during a game. I am very guilty of this.

Other things to consider photographing

- Coaches, Parents, score board, spectators, and even referees are all things that will help to tell the story of the entire game
- You can photograph the celebration a big win or the agony after a tough loss.
- Or just kids being kids

Slowing it down

- Reasons or times you don't want a fast shutter speed.
 - Object you are photographing has moving parts.
 - You want to imply motion in your photo.

So what happens if the object you are photographing has moving parts like a car, bike, or plane? This is a reason why you would want to slow your shutter speed down.



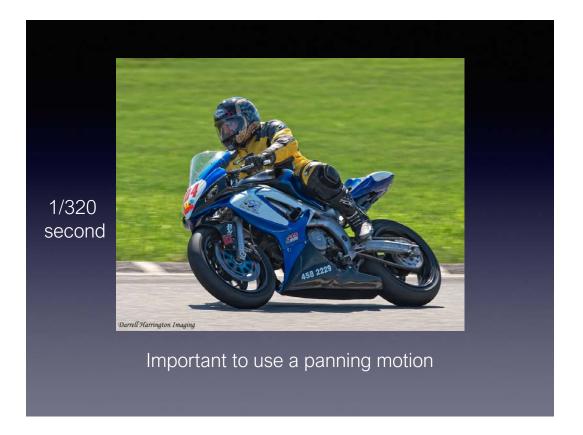
These are examples of why you would want to slow down your shutter. In both cases the shutter speed was too fast for the subject and a similar shot could be taken with them standing still.



Examples of using a slow shutter speed. If these were taken higher they would look like models floating in the air.

How slow do you need to shoot? Well that depends on how fast the parts of the object are moving. Best way is to experiment and chimp to see if you are slowing it down enough.

The problem you introduce when slowing down the shutter is that the entire object is moving and you need to avoid them being blurred. This is actually when I prefer using shutter priority mode



You accomplish this by panning with your subject.

Panning takes a ton of practice to get right and even seasoned pros fail more than they nail it.

Panning motion needs to be smooth and at same rate as object you are photographing.



Goes without saying that safety is #1 important thing to keep in mind when photographing sports.

You do not want to be the cause of injury to them or yourself