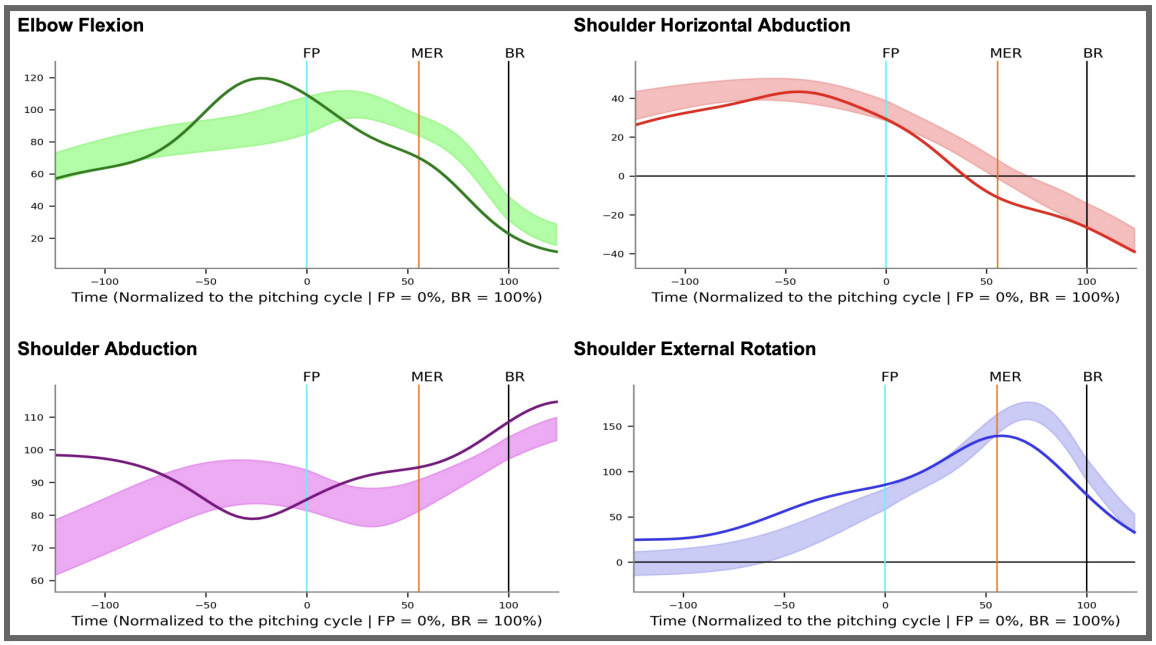
Brendon Pate, Age: 16
Ht: 5’8”, Wt: 152 lbs
Beimel Elite Athletics Biomechanics Assessment
Date of Pitch AI session: 7/24/2023
Date of Assessment: 8/12/2023
Written by Ethan Wang

1. Hand Separation/Pre-Stride Phase

Trunk Stack:

- He is fully upright at leg lift almost closer to leaning towards the plate than tilting backwards
- This means he has essentially no trunk stack at all and it will cause major problems
- Later in the delivery this will catch up to him and his upper body will be transition early
- Not only will it transition early but it will also rotate early
- Everything is happening out of sync after he is unable to trunk stack
- Work on cues that will get him to tilt the pelvis backwards without shoulders leaning
- The next section will explain why this lack of trunk stack is extremely detrimental

2. Beginning of Stride and Foot Plant Phase



Arm/Shoulder Movement:

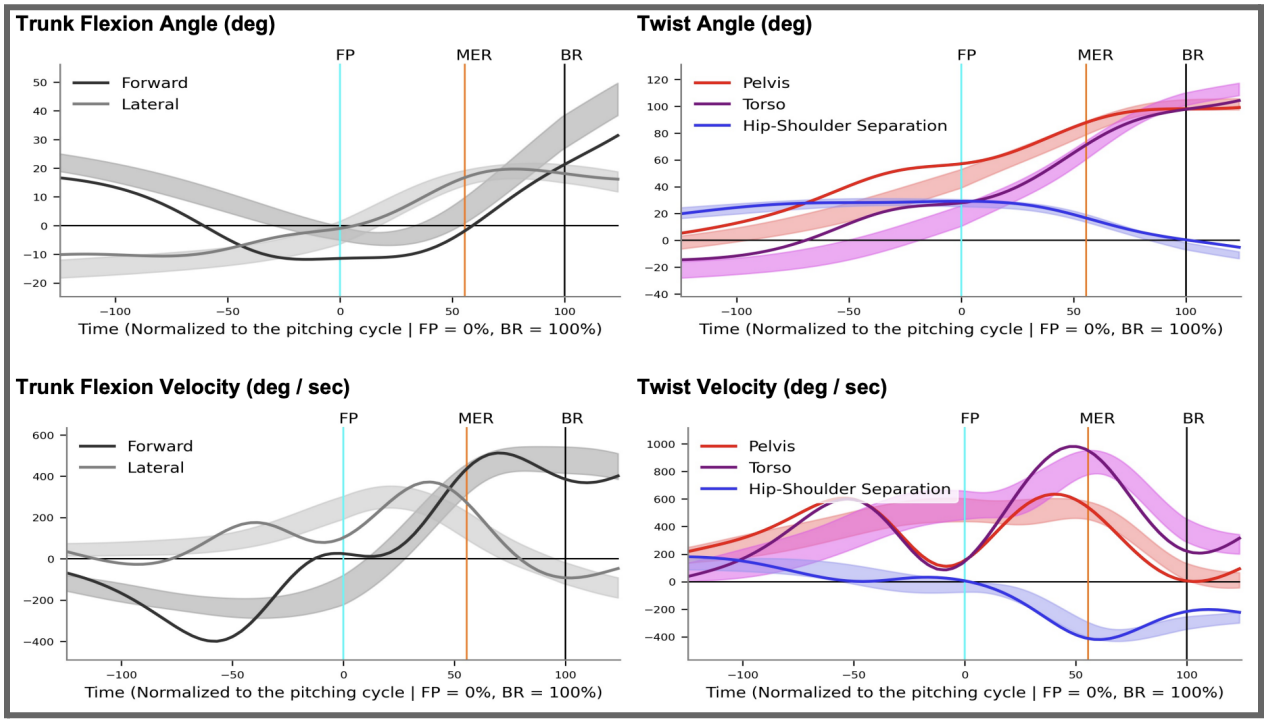
Take a look at the graph at the end of the last page. Notice that simultaneously, elbow flexion rises far above where it should be and shoulder abduction dips at that exact moment on the graph as well. Also notice that the shape of his shoulder abduction curve is the inverse of what it should be. The picture on the left is a little before foot plant and foot plant is on the right. As you can see moving from one picture to the next, his arm is fully locked meaning elbow flexion is maxed out. He is also consciously reaching outwards with his throwing arm meaning shoulder abduction is maxed out and transitions from that to below average at foot plant.

- This is a very inconsistent positioning of his arm throughout the delivery
- It has nothing to do with his arm or shoulder though
- As I said before, his lack of trunk stack means his body is ahead of where it should be at each different stage of the delivery
- Look at the foot plant picture and notice his whole torso is already rotating open towards the plate when it should still be perpendicular to the plate
- This means that instead of his whole upper body staying stacked and loaded, only his arm is staying back and loaded to compensate
- That causes the inconsistencies we see on the graph

Arm/Shoulder Positioning:

Interestingly, his arm and shoulder positioning is great despite all that. Both scapulas are retracted, his chest is out, and he has a strong center of gravity. He recovers from that arm inconsistency and gets in a good position. However, the lack of velocity stems from the trunk area and not the things mentioned above. This will be shown on the next page during the next phase of his delivery.

3. Max External Rotation to Ball Release Phase



Trunk Positioning/Tilt: Notice how forward trunk tilt is 17 degrees below where it needs to be at max external rotation (left picture) and 23 degrees below where it needs to be at ball release. This is because he doesn't trunk stack so his body gets no forceful movement towards the plate and it just slowly shifts towards the plate too early. It almost looks like when he is releasing the ball he is still leaning backwards. There is a huge velocity jump to be made from making this correction.