

## Virtual Learning

Jump/Landing variables in relation to injuries

# Biomechanics of Sports

5/8/2020



Lesson: 5/8/2020

## Objective/Learning Target:

1. The student will learn about the jumping and landing variables in relation to injuries.

# Uncommon and Common variables in Jump/Landing

Sports Specific - Each sport has dynamic factors that affect the players environment for continued healthy participation in sports.

We will examine a few sport specific examples, some are obvious factors while others are not so obvious but still potentially dangerous for an athlete.

# Running

You wouldn't expect running form to be a decisive factor in lower leg injuries but not only does it affect performance but also has potential to increase injury in athletes.

This runner is an elite marathon runner. How does landing in this position negatively affect the athlete's performance? Why is the athlete at high risk of injury that others?



## Baseball - Pitching

A number of variables can negatively affect the health of a pitcher in a career of baseball. How might lower leg landing negatively affect upper body injuries?



# Basketball

Jumping, Landing, Cutting, Lateral movement to cross over an opponent. The application of speed along with environmental factors of playing surface in a contact sport that is constantly moving.

How might this player be compromising her lower legs to perform this offensive move?



## Track - Triple Jump

Athletes here jump and land while maximizing speed built up from a sprint down the hard runway in order to produce distance from their initial takeoff. What does body positioning have to do with each of three landings in the Triple Jump event?



# Real World Application

Kevin Ware suffered a catastrophic leg injury after landing in a Basketball game during his playing career at Louisville University.

Use individual research skills via the internet to learn more about Kevin's injury.

What factors possibly influenced Kevin's injury?

