

## Virtual Learning

Sagittal Angles during single leg landing in sports

# Biomechanics of Sports

5/12/2020



Lesson: 5/12/2020

## Objective/Learning Target:

1. The student will learn about sagittal angles of lower extremities during single leg landing in sports.

# Thinking further...

What happens over time when one lower limb of the body is significantly longer/shorter than the other limb?

How does a lower leg with a hitch or biomechanical error increase risk of injury over time?

# Sagittal Plane Activity

Stand up in front of a mirror.

Now, imagine a line drawn from the top of your forehead down the middle of your body to the your toes.

Stand on one foot for 10 seconds, then switch feet. Do you notice any difference in your body on each leg?

If yes, you may have an imbalance in your body.

# Landing on one foot versus two

In most all cases, it is easier for the athlete to land on two feet versus one foot.



# Soft versus stiff landing

The body has different ways of landing with both one foot and two feet that impact the bodies ability to stay in optimal training health.

Landing with high ankle moment and less hip and knee flexion during landing is defined as stiff landing.

# Application

One of the most dynamic sports where the imbalance of landing is the key to the success in sport is Figure Skating.

What are some of the variables that affect a skater's ability to remain balanced?

Watch an olympic final, notice how each skater lands on various jumps. What is your observation?

