

**SPORTS BIOMECHANICS
(AN INTRODUCTION)**

Meaning and Definition

By

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Meaning of Biomechanics

Biomechanics is the Science Concerned with the analysis of the mechanics of human movement.

It explains how and why human body moves.

It is the study of function and motion of the mechanical aspects of biological system.

Biomechanics tells us how our muscles, bones, tendons, and ligaments work together to produce movement.

It gives us detailed analysis of any sport movements, which helps to minimise the risk of injury and improve sports performance.

DEFINITIONS

- **Biomechanics is the Science concerned with the internal and external forces acting on a human body and the effects produced by these forces.**



DEFINITIONS

- **Biomechanics of human movement can be defined as the inter discipline which describes, analyzes and assesses human movement – Winter (Canada).**
- **Biomechanics investigates the movements of men and animals from the aspects of laws of mechanics – Hochmuth (GDR)**
- **Biomechanics is applied mechanics
- Marhold (GDR)**

Definition of Biomechanics

- When the study of mechanics is limited to living structure especially the human body, is called biomechanics.
- Biomechanics may be considered to be that aspect of the science of movement (kinesiology) which has to do the effect of force upon the state of motion or rest of living bodies.