



Coaching Para Field: Mastering the Form

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What Long Throws have in Common

- **Posture**

- Improves **balance**

- Increases **strength**

- Prevents **injury**

- Improves body **movement** and **height** of throw



Athletic Position = Athletic Posture



What Long Throws have in Common

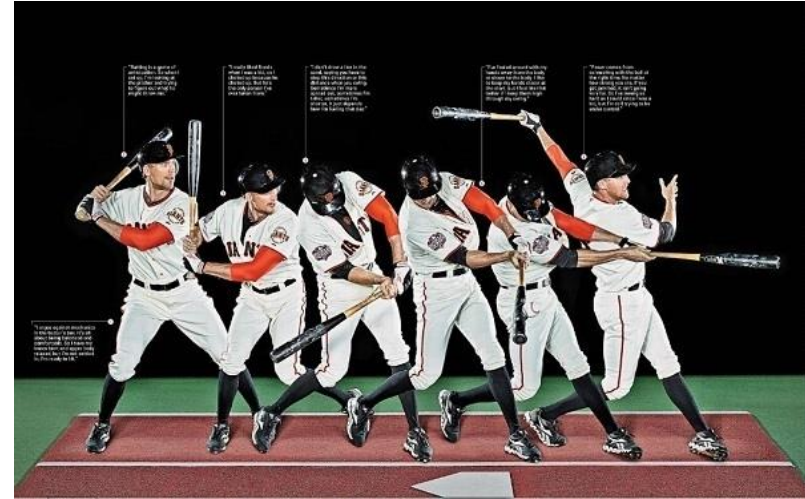
- ***Building force***

- **Large** muscles and joints (legs, hips, trunk) **start the throw**

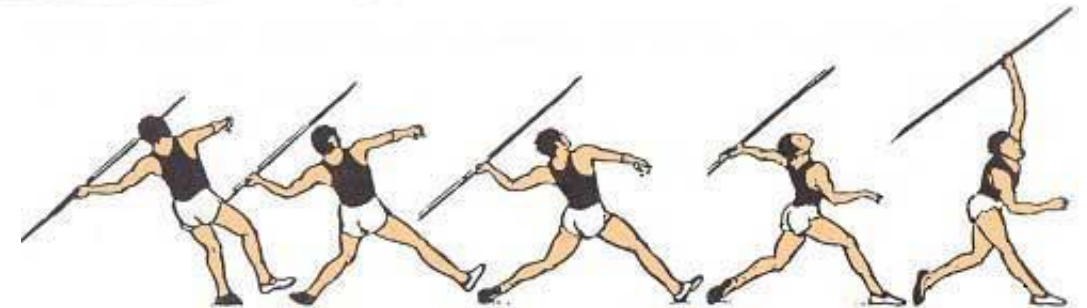
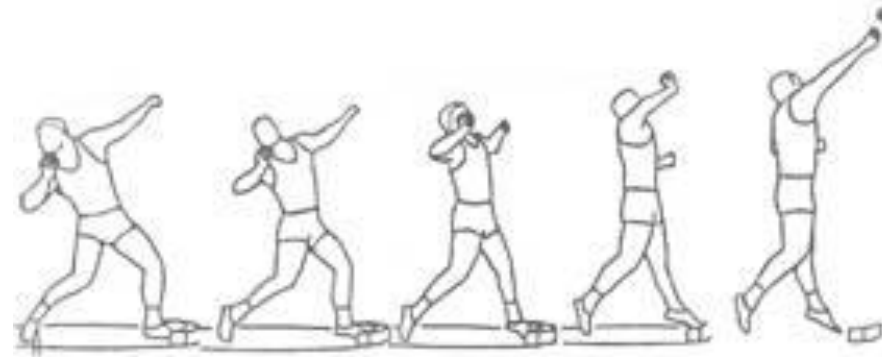
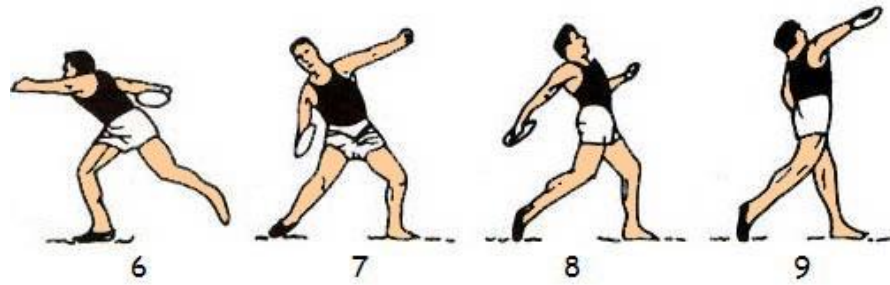
- **Smaller** muscles and joints (shoulders, arms, hands) **finish the throw**



Building Force - Moves from Bottom-Up

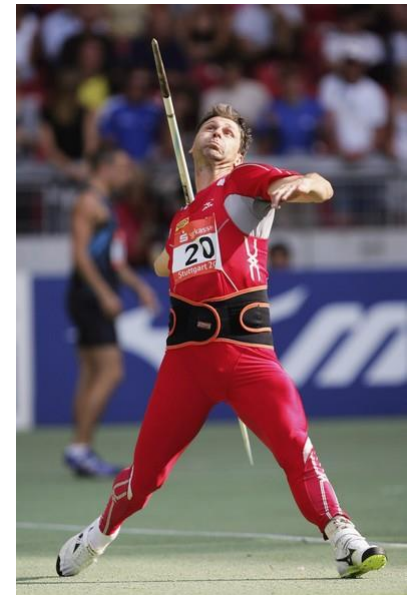


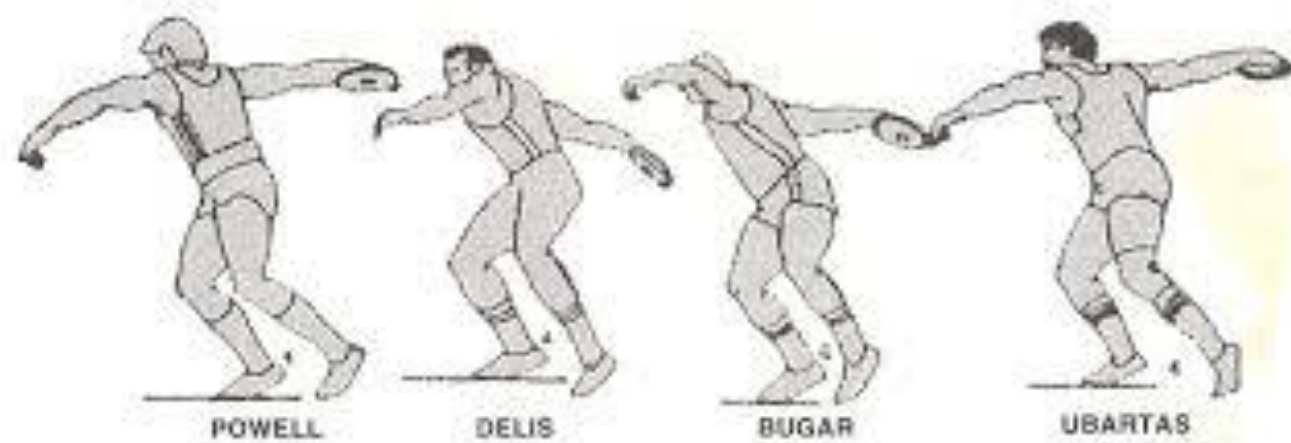
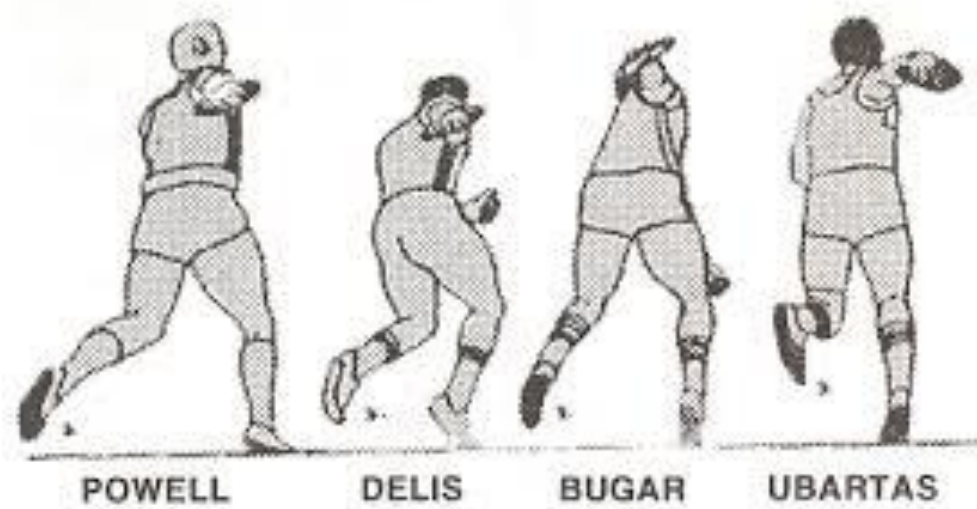
Building Force - Hips... Pits... Lips... Finger Tips



What Long Throws have in Common

- *Separation and torque*
 - Body first... **winds** and second... **un-winds**
 - **Torque** - tendency of a **force to rotate** an object about an axis



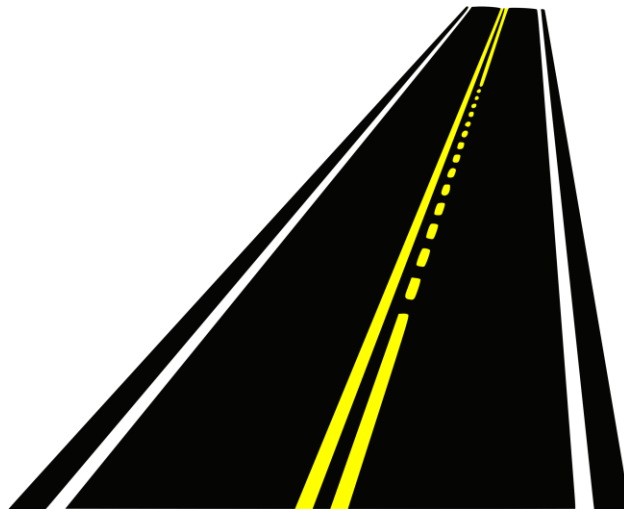


Elite throwers hitting the power position viewed from the front.

What Long Throws have in Common

- ***Acceleration***

- Stop to slow to **fast**
- Always **accelerate...** throwing **rhythm**



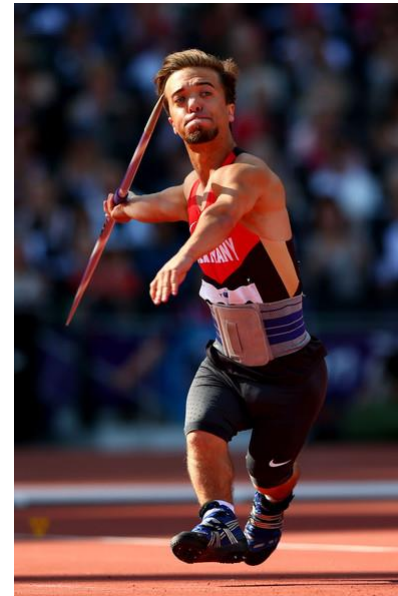
What Long Throws have in Common

- *Approach (preliminary movements)*
 - Keep **body** and **implement** on **straight path**
 - Develop **momentum, rhythm,** and **speed**



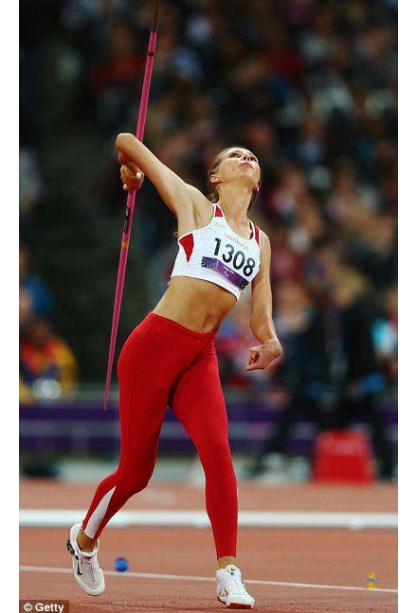
What Long Throws have in Common

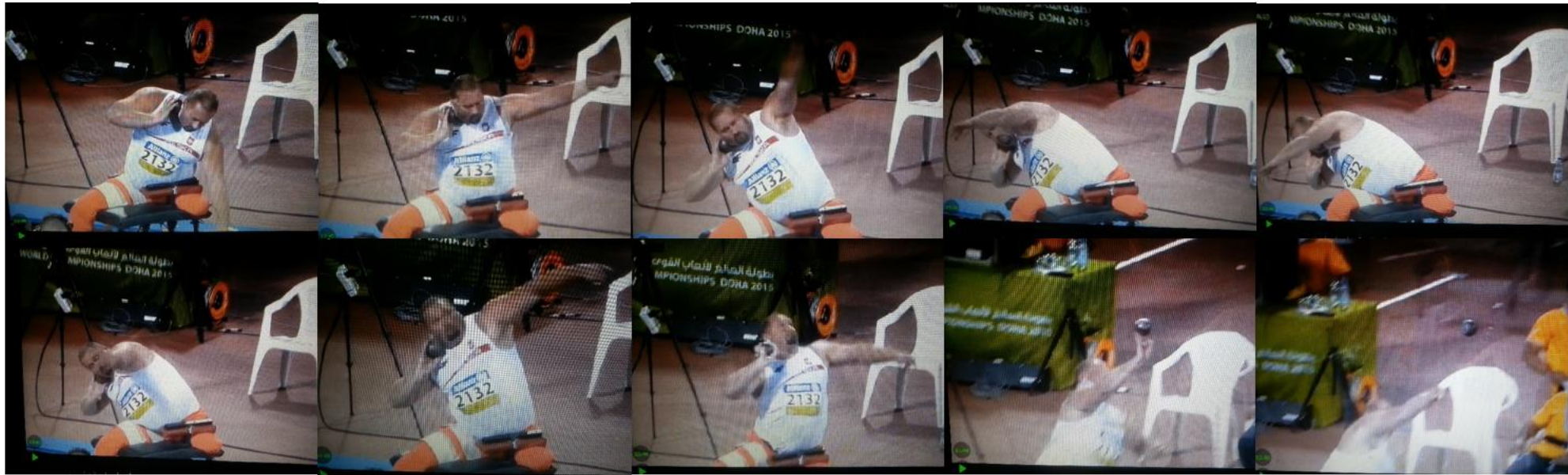
- *Increase implement path*
 - **Power position** and **wrapping up**
 - **Long** and **straight** throwing arm



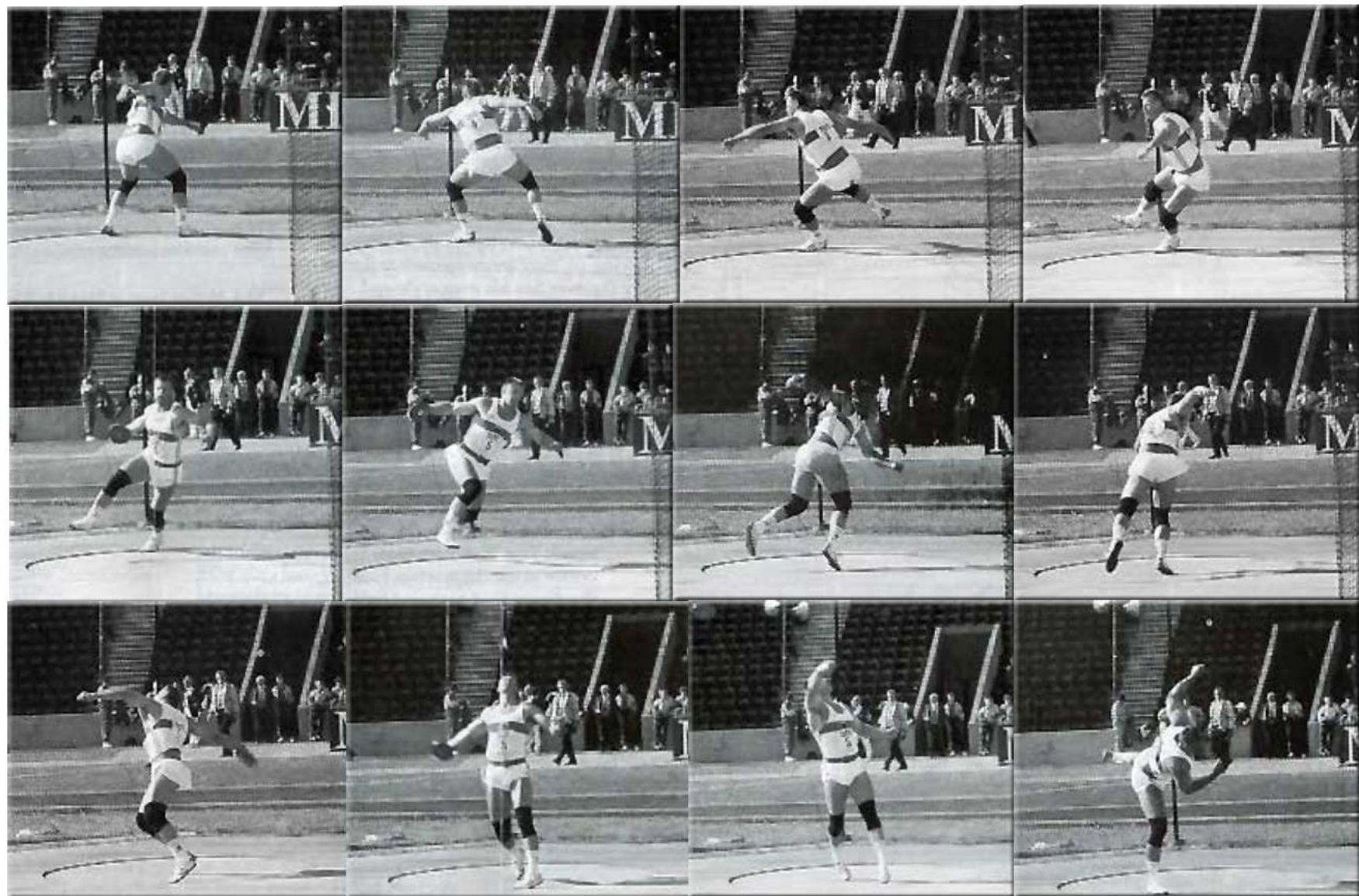
What Long Throws have in Common

- **Blocking**
 - **Stop** the non-throwing side, **increase speed** of throwing side
 - Block with **both the lower** and **upper** body











What Long Throws have in Common

- ***Release matters***

- **Height**

- **Angle**

- **Velocity (speed)**

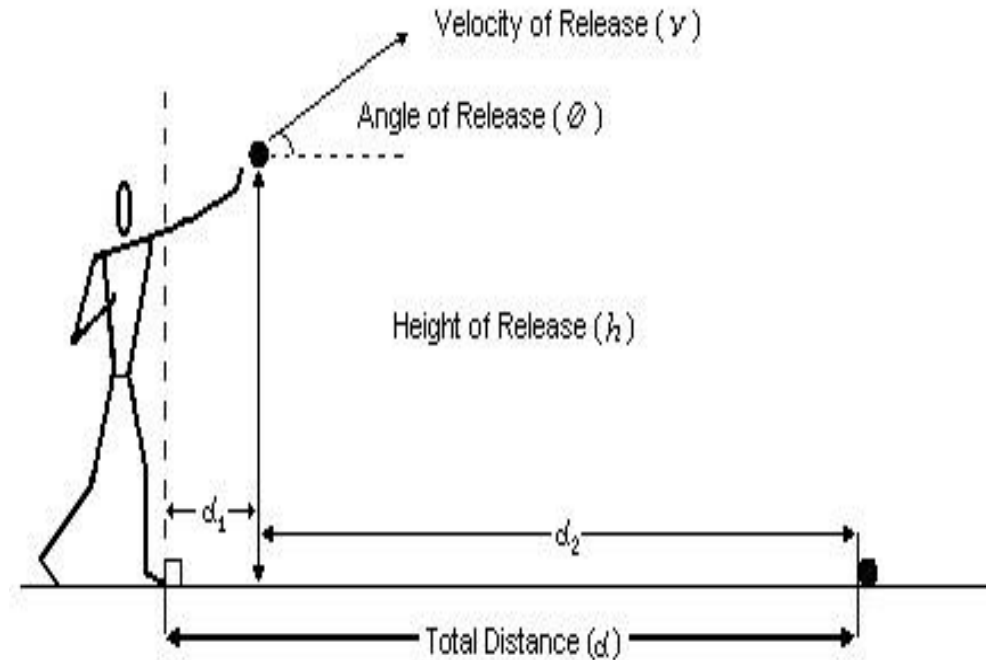
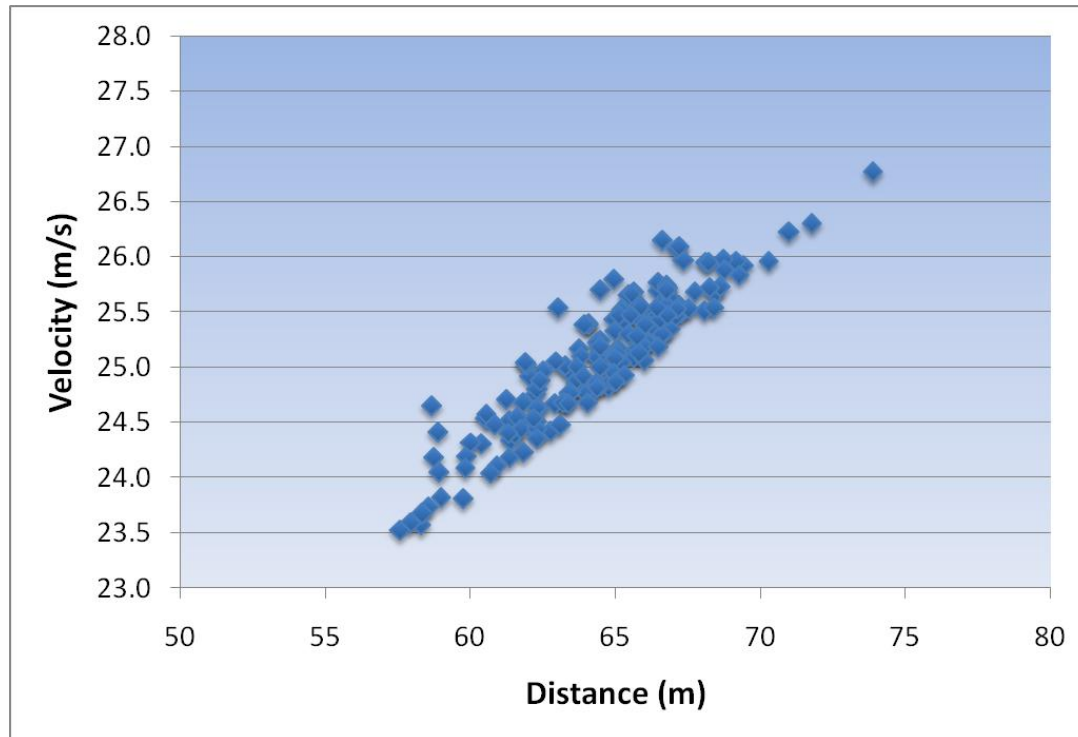


Figure 1: Diagram of release parameters affecting the total measured distance of a throw.

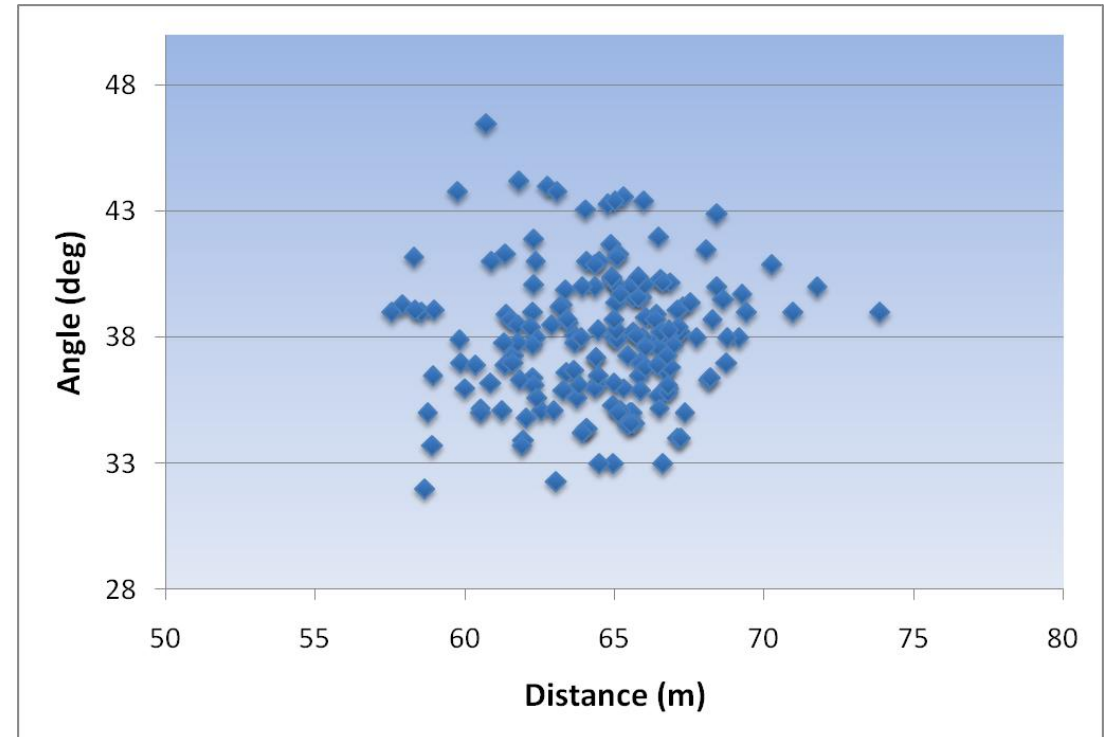
Release Matters

- 32-36 Degrees- Shot put
- 39 Degrees- Discus
- 35-41 Degrees- Javelin

Release Velocity (speed)

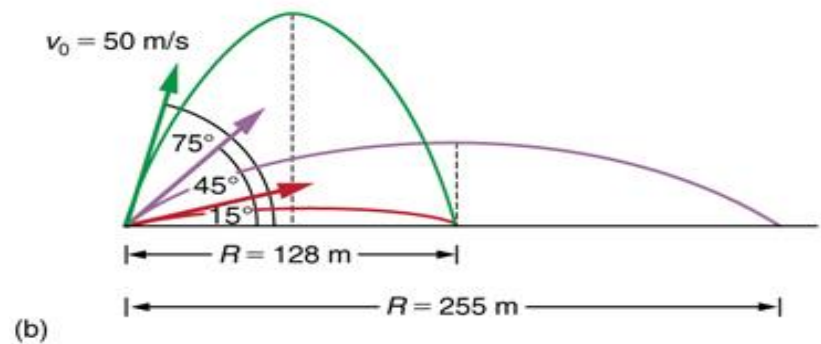
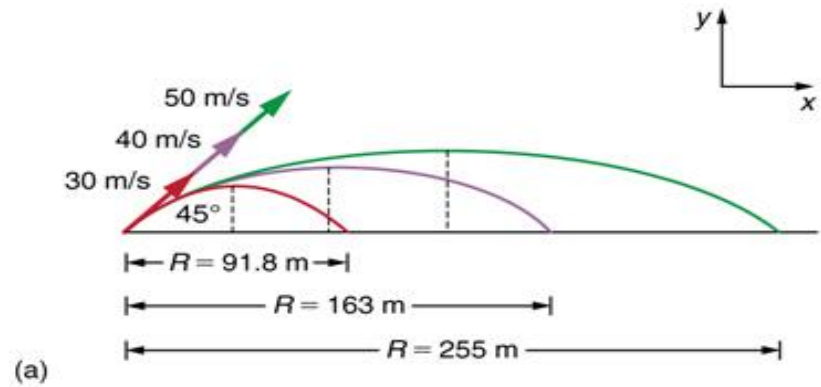


Release Angle

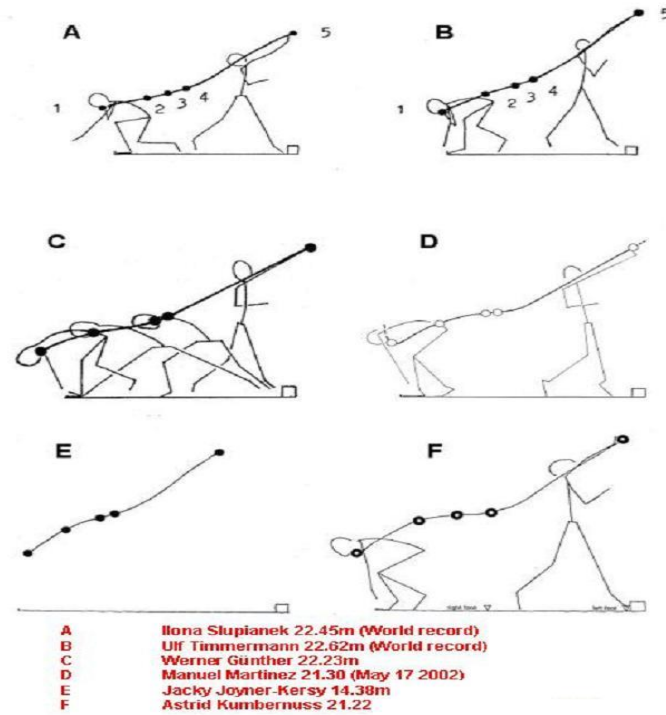


Release Matters

Release Velocity (speed)



Release Angle



all by Bartonietz

Increase Release Velocity (speed)

- Improve **balance** and **agility** – summation of forces throughout phases of throw
- Improve **flexibility** – body separation and torque
- Improve **strength** and **power** – ability to create force
- Improve throwing **technique** – optimize strength and power

Throw Far!

