

400m Dash: A Sprinter First



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Objectives of Today:

1. Discuss how Training Theory affects 400m dash athletes
2. Define and discuss Max Velocity
3. Learn multiple ways to train Max Velocity properties
4. Learn how this training works into a HS track season (early, mid, late season)

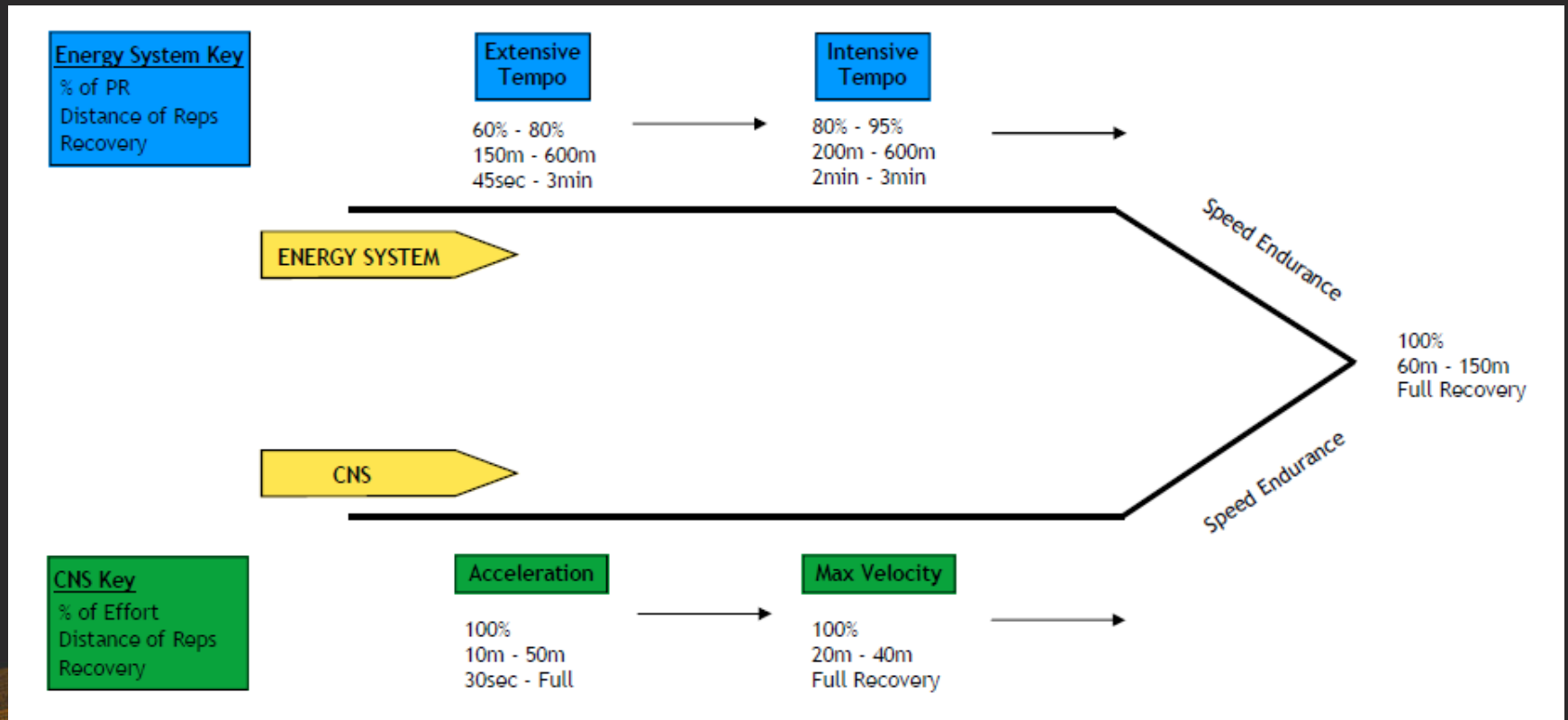


Training Theory Requirements

- When developing a 400m sprinter, you must develop attributes of the race IN ORDER
 - Acceleration before Max Speed
 - Max Speed before Speed Endurance
 - Extensive Tempo before Intensive Tempo
- **When training out of order, you handicap future development**



Training Theory Review



What is Max Velocity?

- **Physics definition:** Highest possible speed an object can travel before forces acting on it reach an equilibrium and the object is no longer able to accelerate
- **Coach definition:** The fastest your athlete can run at 100% effort.
- Vertical in nature
- The longest humans can maintain 100% velocity is between 2-4s (20-40m)
- Max Speed to deceleration transition



Types of Max Velocity Training

- Ins and Outs or Float-Sprint-Float
- Overspeed work
 - bungees
 - pulley systems
 - with the wind
 - slight downhill
- 'Fly' work

• **!! Always go with the wind!!**



Example Week for HS Track Program (early season)

- **Monday**—Extensive Tempo
- **Tuesday**—Acceleration
- **Wednesday**—Extensive Tempo
- **Thursday**—Max Velocity
- **Friday**—Extensive Tempo or Circuit training



Example Week for HS Track Program (mid season)

- **Monday**—Acceleration
- **Tuesday**—Extensive Tempo
- **Wednesday**—Max Velocity
- **Thursday**—Extensive Tempo
- **Friday**—Max Velocity



Example Week for HS Track Program (championship season)

- **Monday**—Max Velocity
- **Tuesday**—Intensive Tempo
- **Wednesday**—Max Velocity
- **Thursday**—Circuit Training
- **Friday**—Speed Endurance



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