## The Velocity Project Conceptual Model Explaining the Contributors to Track and Field Running-Related Injury



Decrease vertical displacement to reduce load on tissues



Shorten the time the foot is in contact with the ground



Use metronome training to increase cadence 5-10% Aim for >166 steps/min



High weekly mileage or number of intense training sessions leads to a greater tissue load

Vertical Displacement

**Ground Contact Time** 

Step Rate (cadence)

Training stress (volume + load)

Training History

Sleep

Strength Training

**Nutrition** 



>8 weeks of pre-season training prepares the body for stresses of in-season training Alternate training run distance, pace, intensity, and terrain



8-10 hours/night is required for growth, tissue recovery, and best athlete health



Runners should perform weight training 2-3 times per week



Eating nutrient-rich foods and an adequate amount of calories to optimize energy availability



Adapted from: Krabek et al. Youth running consensus statement: minimizing risk of injury and illness in youth runners. BJSM 2021