Physical and Physiological changes in growing athletes

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Pubertal growth spurt usually starts between 8-12 years of age.

Girls usually start 2 years ahead of boys.

In the first part of the growth spurt, girls physically more mature than boys.
Physical Changes:
Anatomy:

- Bones
- Muscles
- Heart
- Lungs
Physiology:

Cardiac Output

Hormonal Factors

Strength and Endurance

Recovery
Menstrual Cycle Timeline:

Onset of Puberty: 8-12 years of age

Maximum growth spurt: 10-14 years of age
- Usually peaks at 12
- There are some physical changes but they are not regular

End of puberty: 16-17 years of age
- Trunk and legs may grow a little for a couple of years.
- Height gain slows down once regular periods start

Regular periods: Usually within 6 months of maximum height gain
Challenges:

- Recovery
- Strength
- Endurance
- Agility
- Reach

Muscles play catch up

- Increased load
- Distraction
- Lack of rest
Opportunities:

- Agility
- Technique
- Execution
- New abilities
Common injuries attributable to growth:

- Tendonitis
- Chronic fatigue
- Stress injuries to the bone
- Overtraining
- Nutritional issues
Stay home, Stay safe
THANK YOU

A COACH WILL IMPACT MORE PEOPLE IN A YEAR THAN THE AVERAGE PERSON DOES IN A LIFETIME!