



# Understanding a Young Athlete's Physical Growth and Development



## What Parents Need To Know

1. Individuals follow a predictable pattern of physical growth but the rate at which children and youth go through this growth varies by individual.

- During the childhood phase, children grow about 2.5 in./yr. and gain about 5 Lb./yr.
- Peak velocity of growth occurs during puberty/adolescence.
- Athletes of the same chronological age can vary by as much as 5 biological years, especially during adolescence. Therefore, with two 11-year-old swimmers, one may be 10 and the other 15, biologically. Talk about competing on uneven playing fields!

**Recommendation:** Educate athletes regarding growth cycles so they understand what is happening to their bodies. Be sure that athletes have regular physical check-ups.

2. Performance can be influenced by rate of maturity, which is out of the athlete's control. Some young athletes, therefore, have a performance advantage over others.

- Initially, early maturers have a physical size advantage and often perform better than late maturers. These individuals experience more early success due to a physical growth advantage and not necessarily enhanced skills or abilities.
- Conversely, late maturers experience failure and frustration because they are physically "behind" their same-age (chronological) peers.
- Adolescent awkwardness due to rapid physical growth affects performance, especially for early maturers.

Late maturers often catch up to or exceed the performance of early maturers by the mid-teen years, but only if they have stayed with the sport. Some drop out because of a lack of

early performance success or, worse, are cut from the team.

Tracking of "outstanding" kids in elementary school found that only 25% were still outstanding in later years, suggesting that early success does not predict later success.

**Recommendation:** Help early maturers keep success in perspective, as late maturers will often catch up with them. Encourage the early maturer to develop good technique and take on new challenges. Additionally, take active steps to keep late maturers involved as they often leave sport because of low perceptions of competence due to little early success. Encourage and recognize individual improvement and avoid comparing athletic performances.

3. Gender differences in physical growth and in the timing of the growth spurt contribute to the overall difference in the height and body shapes of females and males.

- Girls reach peak growth spurts around age 12 and boys around age 14.
- Hormonal differences in males and females cause body composition changes in adolescence, changes which are out of the athlete's control but which may impact performance (positively and negatively).

**Recommendation:** Understand gender differences and make sure your child understands the basics of the developmental process. Allow time for young athletes to get comfortable (physically and emotionally) with their changed bodies. Additionally, adaptation to the growth changes lags behind so expect it to take some time for the athlete to be able to take advantage of changes. Be understanding and accepting as your child acclimates to his or her "new body."