

USA SWIMMING

Information Regarding the Growth and Development of an Athlete

Did you know?

Athletes follow a predictable pattern of physical growth but the rate at which you go through this growth varies by individual.

Consider...

- You typically grow about 2.5 in/yr and gain about 5 lb/yr.
- Your growth spurt occurs during puberty/adolescence.
- This means that someone the same age as you can vary by as much as 5 biological years, meaning with two 11-year-old swimmers, one may be 10 and the other 15, biologically.

What can you do?

Be aware of your growth cycle so you understand what is happening to your body as you develop.

Did you know?

Performance can be influenced by rate of maturity, which is out of your control! Some young athletes, therefore, may have a performance advantage over others.

Consider...

- If you are an early maturer, you may have a physical size advantage and may perform better than late maturers. Early maturers experience more early success due to a physical growth advantage and not necessarily enhanced skills or abilities.
- If you are a late maturer, you may experience frustration because of being physically "behind" someone that's the same age as you.
- Late maturers often catch up to or exceed the performance of early maturers by the mid-teen years, but only if you stay in the sport. Some athletes drop out because of a lack of early performance success.
- Early maturers can maintain early gains by develop good technique and take on new challenges.

What can you do?

Early maturers keep success in perspective as late maturers will often catch up. All athletes are encouraged to recognize individual improvement and avoid comparing athletic performances.

Did you know?

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.

Consider...

- 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 your control but which may impact performance (positively and negatively).

What can you do?

Understand gender differences and make sure you understand the basics of the developmental process. Allow time to get comfortable (physically and emotionally) with changes in your body. It's normal and YOU ARE normal! It take time to adapt to growth changes so expect it to take some time for you to be able to take advantage of changes.

SOCIOLOGICAL DEVELOPMENT: Athletes should be aware of how the social relationships associate with sport participation.

Pre-adolescents (10-13) face the challenge of developing "best friend" relationships and gaining acceptance from peers.

Pre-adolescents are figuring out how they are similar to and different from others. They go through a stage during which close relations with same-sex "best friends" are very important. They are very loyal to friends and greatly influenced by what friends think. Unfortunately, young adolescents can also be very exclusive in their peer groups such that those who are different are shunned or mocked. Being accepted and having someone to trust and confide in is of utmost importance. Pre-adolescents must have the opportunity to interact socially with same-sex peers on a regular basis. At the same time, it's important to participate in an environment of inclusions and acceptance of differences.

Adolescents (14-17 years) face the challenge of exploring who they are and how they fit into the world in which they live.

These young people try to answer the question "who am I?" They go through processes of identity testing and identity formation, often to a point that can be frustrating for the adults which often puts strains on the relationship. Adolescence is a time during which young people "try on" a variety of different identities in an attempt to discover and clarify values while exploring all the possibilities of who they might become as adults. What may seem like rebellion or acting out during this developmental stage, often may be athletes struggling to find identities that fit with their emerging sense of how they are connected to the world. It is important to "try on" different identities as long as they do not put yourself in danger or compromise too much with your core family values.

Older adolescents (16-19 years old) deal with the challenge of seeking independence and autonomy.

Older adolescents move closer to being independent, autonomous beings: connected to but separate from others, in control of one's life but aware of limitations and boundaries. While complete independence and autonomy are not possible (nor are you ready for it), it is important that the athlete be allowed to make strides. If some autonomy is not allowed and encouraged, any organized sport or activity becomes stale and stagnant rather than a place for opportunity. Feelings of independence and autonomy are derived, in part, from the sense that one has control over his or her life. Being able to have a voice in your athletic development will also make you more accountable.

PSYCHOLOGICAL DEVELOPMENT is a key component in sports performance. Here are three important factors that affect how not only how well you perform but how much you enjoy the sport.

- Perceived Competence: (Also known as self-esteem) Athletes' perceptions of their athletic competence go through predictable developmental changes:
- Athletes 7-9 years old focus on outcome and effort in judging one's competence. "I won, therefore I am a good athlete," or "I tried hard, I must be a good athlete." Winning and Losing serve as an important source of competence information for young athletes.
- With older athletes ages 8-12, there is a gradual decline in the importance of feedback from parents as a source of competence information. There is an increase in coach technical knowledge as a source of

competence information, and a gradual increase in the importance of peer comparison. "I beat Joe which means I'm a good athlete.

- Gradually through adolescence (12-18 years), is when they recognize that ability and effort impact performance. Before this, the athlete can not distinguish between the two concepts. There is a progression from focusing on peer comparison to focusing on self-comparison as a source of competence information. A "task" goal orientation increases with age while "outcome/win" goal orientation decreases with age.

It is important to understand what sources you may rely on to provide competence information. Note that coach feedback becomes an increasingly important source of competence information for athletes.

Perspective-taking: is the ability to take another's perspective and it progresses in a predictable sequence and impacts how an individual relates to others.

- At a young age (under 8), children are not able to take the perspective of others have an egocentric perspective. The young athlete's thoughts, feelings, ideas and needs are correct (as far as he is concerned) . . . and everyone else thinks and feels this same way too, right?
- Gradually through adolescence, children develop the ability to take others' perspective but still view their perspective as the correct view. The latter stage of development occurs when the individual can take and appreciate another's perspective.

Young athletes will often display behavior that is selfish and doesn't take others into account. However, they may not yet have developed the ability to understand others' feelings or points of view. As you get older it's important to consider the perspectives of your parents and coaches to learn how your actions may affect others.

Motivation: the direction and intensity of effort.

- Younger athletes (7-10) seem more externally motivated while older athletes are often more internally motivated. It appears that young athletes need external motivation, reinforcement and material rewards to maintain their enjoyment of sport. They look to coaches, parents and teammates to provide and structure their fun. Older athletes simply enjoy the sport: hard training for them is a primary source of fun. They are internally motivated and need fewer and fewer external motivators. They have more clarity about themselves as athletes and a clearer purpose behind their participation.

TRAINING PROGRESSION

Knowing what to expect through different phases of your training as you progress through the sport can help you understand how your training should be structured for optimal performance in each phase and as you move from one stage to the next. When you're very young (age 6-14) athletes are in what we call the generalized phase. In this phase, coaches are trying to build base fitness and endurance while focusing on proper technical development of strokes, starts and turns. This pre-pubescent and pubescent stage of growth and development is the aerobic and technical foundation for more intense and specialized work in the next phase.

During the generalized phase, especially for the younger athletes (6-10 years) structured play, games, establishment of rules, how practices are structured, and gaining more experience at swim meets are some of the major focuses. From age 11-14 swimmers may hit their growth spurt if they are going through puberty. This is when you may see changes in your body and when you may even feel more clumsy or uncomfortable in your own skin. You may seem sudden performance gains or just the opposite: a plateau or even see a decline. It's

especially important in this phase of training that you focus on technical development, off-events, or even other sports to enhance athleticism outside of the pool.

The second phase of training is Specialization. By the time you get to this phase you may be on the tail end of puberty or have entered adolescence. In this phase, you can start to work at higher intensities and put in higher quality workouts, if you have a strong aerobic base. You really begin to refine race strategy and take more responsibility for your own training. Because you may be more physically developed you may even begin a structured dry-land program. This is also the point where athletes choose one sport to focus on and will put more time into that sport.

The final phase of training will hopefully take you to the end of a very successful and satisfying career and where the fully mature as an athlete. Athletes in this phase are really ready to put on more muscle mass, train at top end speeds with the balance of recovery, and also realize the importance of other training factors such as sleep, nutrition and psychology. Athletes in this phase are expected to be highly motivated and take an active role in planning their training.

Although these phases are generalizations you can often see characteristics overlap into different phases. Depending on the rate of your own growth and development, you may see some characteristics occur either earlier or later. What's important is to know the progression that usually occurs and to be able to apply it to your swimming.

QUESTIONS TO PONDER

1. What type of commitment is needed for higher levels of competition?

While your performance is influenced by numerous factors, there are three that exert the greatest influence: physical, technical and mental. As you progress through the sport, a greater commitment, of both time and energy, is needed to enable you to address all of these factors.

Additionally, you will be asked to take more responsibility for and ownership of your practice and competition performance. One way of doing this is by accepting responsibility for leading a lifestyle conducive to performance, i.e., proper nutrition, adequate sleep, time management and managing extra-curricular activities.

2. What does the coach mean when he/she says that you control 80% of your own training?

At this stage it is important for the athlete to take full responsibility for your sport. Your coach is just reinforcing this concept. Having a good attitude, developing proper time management, and demonstrating a strong work ethic are important both in and out of the practice and competition. What coach is referring to is what we call "hidden training factors." You are in control of what you eat, how much sleep you get, your practice attendance, and even your effort on practice sets.

3. What do I need to reach the next level?

When you are making the transition, you need to realize that you are participating at a higher level. Improvements are in tenths and hundredths, rather than seconds, due to biological and physiological factors. Throughout your career, it's important to have a support team. While this support is still needed at this stage, it may have to be a little different than in the past. It is a good time to discuss with your coaches and parents what you need from them. Do not be afraid to ask questions and take an active role in your training. It's the time you should be taking on more ownership of her athletic career.