

In the following, I share my thoughts on the development of and critical training periods in the life of a swimmer. I have developed this document pulling from the book *Developing Swimmers* by Michael Brooks and from the expertise of USA Swimming and the content on their website.

DEVELOPMENTAL AND CRITICAL TRAINING PERIODS IN LIFE OF SWIMMER

As swimmers age and develop, their training needs change dramatically. What is proper training for a 10-year old is not appropriate for a 14-year old or a high school senior, and the level of commitment expected of an older athlete training for senior nationals cannot be expected of a novice learning the fundamentals of freestyle. The team as a whole is split into distinct training groups to meet swimmers changing needs.

All of these training groups develop on three dimensions, called the training triad:

- **Mental** - training program aims to create a team culture based on a philosophy referring to all-encompassing excellence. Kids who think like champions act - and swim - like them.
- **Technical - work** on technique at all times, even in main sets that have physiological focus. Efficiency in water matters. Beauty matters.
- **Physical** - program in the water emphasizes building an aerobic base through training all four strokes and individual medley. For out-of-water training, we include work on general athleticism (coordination, agility, quickness, core strengths, flexibility in key joints) and play.

The groups use different type of training, volumes and intensities of training, speeds of training, and levels of commitment to swimming, all of which are developmentally determined. Generally, as swimmers age and develop, the demands, skills levels, and performance levels rise gradually.

Although these phases are generalizations you can often see that characteristics overlap into different phases. The definition of these sensitive periods are general guidelines, not ironclad rules. Depending on the rate of your swimmer's 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 each swimmer. Coach's work with groups of children, usually girls and boys combined, and within a group each individual is on his own maturation timetable. **Theories describing precise critical periods for so-called normal children will be in error for most of the group. Further, the critical periods often differ for boys and girls, though they overlap significantly.**

Beyond physiology, these keystone years in a swimmer's development help form his or her competitive psychology, which is highly transferable to other areas of life. In these

years we are teaching them to be swimmers, to think like champions, to understand hard work and commitment, to think correctly about failure and success, to expect a lot from themselves and to set high standards, to build confidence in their abilities, to enjoy their strength and toughness, and so on.

Suggested Age-Group Training progression

Age(level) of swimmer	Sessions per week	Time in water per session	Time for dry land work	Average volume per session	Break between seasons
8	3	45 minutes skill	15 minutes	n/a	3 week spring 3 week fall
9-10	4	75 minutes skill, aerobic training	15-30 minutes	n/a	3 week spring 3week fall
10 (advanced)	5	90 minutes Skill, aerobic training, speed	30 minutes	3000 Y	3 week spring 2 week fall
11-12 (slower track)	5	90 minutes Skill, aerobic training, anaerobic training, speed	30 minutes	4000 Y	3 week spring 2 week fall
11-12 (advanced)	5-6	105 minutes Skill, aerobic training, anaerobic training, speed, racing strategies	30 minutes	5000 Y	2week spring 2 week fall
13-14 (slower track)	5-6	105 minutes Skill, aerobic training, anaerobic training, speed, racing strategies	30 minutes	5000 Y	2week spring 2 week fall
13-18 (advanced)	6-8	120 minutes Skill, aerobic training, anaerobic training, speed, lactate training, racing strategies	30 minutes	6000 Y	1 week spring 2 week fall

8 and Under

These are the youngest novice swimmers on the team, most of them fresh out of lessons, and they are initially only able to swim a little backstroke and freestyle. Their attention spans are brief, their energy levels are high, and their control over their bodies in the water is low. But their daily improvement is noticeable, to a good coach; they are as moldable as soft clay to a potter.

- 1) Teach them love of swimming
- 2) Teach all four strokes, starts and turns
- 3) Help them become swimmers

9 and 10 Year Olds

Most swimmers in this group began in the novice program, so they have a background in technique. They know how to do the four strokes legally. They know how to read the clock in theory, and so on. They are still high energy and low focus, but they have more control over their aquatic selves compared with the younger swimmers. At this age, girls tend to learn technique quicker and focus better than the boys.

- 1) Keep them happy
- 2) Teach team culture
- 3) Emphasize skill development as the primary focus of training
- 4) Emphasize aerobic development as the secondary focus of training
- 5) Coaches may need to increase the aerobic work for many of the girls to take advantage of their earlier critical period for aerobic development
- 6) Target certain events
- 7) With dry land, emphasize coordination, flexibility, core strength
- 8) Continue teaching them to be swimmers

11 to 14 Year Olds

These are the most important years for creating future national-level senior swimmers. With their training, swimmers are determining what level of athletes they will be later. During this time, there is a gradual and progressive buildup in the intensity and volume of training. Also, we begin to differentiate in the training groups between those swimmers who are more advanced, more committed, and higher performing (fast-track swimmers) compared with the others (the slower-track swimmers).

Puberty complicates things. As boy become men, they lose fat and gain muscle, getting bigger and stronger. As girl become women, they gain height and strength, though not nearly to the extent that boys do. And they add fat deposits. With proper nutrition (which

does not mean starvation diets or eating disorders) and proper training (lots of consistent aerobic work), any adverse effects of these biological changes on swimming can be kept to a minimum. In the process of becoming adults, all children go through the same process, but they go through it at different times and rates. Early developers get bigger and stronger earlier than the others, which mean they are more likely to win their races. However, because they can often win without having to work hard and to work on their technique, they may not develop solid work ethic, and their technique may be poor as they build through the water. However, if the coach and parents can help the late bloomers to stick it out through the lean years, and if the swimmer relies on technique and hard work to overcome the temporary physical deficit, the he or she will be in the driver seat in a few years. Late bloomers tend to be taller and leaner, and the extra work on technique and endurance development before maturation should lead to higher performance in the end.

- 1) Place greater emphasis on team culture and swimmers responsibilities
- 2) Focus on aerobic development
- 3) Target certain events for training
- 4) Continue technical improvement
- 5) Emphasize the connection between training and racing
- 6) Continue with general dry land training
- 7) Account for gender and individual differences in maturation and development

15 and Over

This phase of training is mainly 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 in swimming, where you are 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.

Key Issues in Athletic Development

Thus far we have discussed the training program, its parts, and how these parts are implemented for swimmers at varying ages. But no two swimmers are alike, and the complications of real life will always give rise to questions and concerns. Here we discuss some of the recurrent issues that arise from the application of our general training principles.

- 1) **Early Specialization** - Swimming is unique, and for that reason, an early start in swimming is highly beneficial for much-needed technical proficiency if one is to reach high levels in the sport. This does not mean that kids should participate in swimming only, but that swimming should be a major part of their physical activity from a young age.
- 2) **Participation in other Sports** - Kids will be better swimmers later if they become better athletes now, and playing helps them to do that. Swimming alone does not necessarily give a young athlete all the physical tools he will need to be a top swimmer later. This is why dry land routines focus on building flexibility, strength, core stability, shoulder stability and general athleticism. It is why much of the dry land incorporates outside games and play. Kids should be out playing different sports - you want them to develop skills, learning to coordinate their bodies, and becoming better athletes - but you do not want necessary them joining other organized teams. When a swimmer joins another team(s), a massive scheduling conflict is created, with opposing coaches protecting their turf and wrestling for the child's time and attention. All this being said, if swimmers are to reach higher level of performance, eventually they need to decide that they are swimmers and concentrate on swimming.
- 3) **Burnout and levels of interest** - Swimmers do not burnout because they are working hard, or because they swim fast. Instead, kids lose motivation and interest when they put a lot of time and effort into activity but do not seem to get any rewards. Well-designed programs that keep kids improving are the best method to lessen the burnout problem. When swimmers are improving their times, improving their skills, and getting stronger and faster, they will be motivated to swim. More children bore themselves out of sports than burn out. If a swimmer is not committed to the sport, he or she make little or no progress, falls behind his peers, never gets excited about swimming and gradually loses interest in the sport. Without consistent attendance and hard work, swimmers are not going to improve, and without that, they do not have fun. A common occasion for burnout occurs with boys at about age 12-14 due to interest in other sports, or with girls of certain age, usually 15-16. The amount and intensity of work that got a swimmer satisfactory results when she was 11-12 and built like a pencil will

not suffice when she has the body of young women. Improvements are smaller, and they take a lot of commitment and hard work.

- 4) **Late starts and missed steps** - The lack of technical skills shows in the level and consistency of training for those who missed the early aerobic focus. It is frustrating for swimmer, coach, parent to see swimmer who wants to be great but is held back by a poor foundation. This is strong argument for parents getting their kids involved in the best program they can find from the beginning so that each step is well founded.
- 5) **Meeting individual needs in training groups** - There are many ways to divide into training groups, depending on the priorities of the club. Swimmers can be grouped by age, sex, ability, training and meet performance or a mixture of all of these.
- 6) **Fast tracking swimmers** - A coach or a program should never be an obstacle in the way of a swimmer getting faster. The common method of treating everyone in a group equally by giving everyone the same practice (the same sets, send offs, and expectations) benefits only a few swimmers and offers no incentive for swimmers to strive higher. Each swimmer needs to be given challenging practices that will help them reach their goals. Accelerated move ups need to be handed carefully and wisely, because mixing younger and older kids is not always the best option; younger swimmer may miss developmental steps he needs.
- 7) **Move-ups in the training progression** - Swimmers should move through the program as they age and develop. Unfortunately, move-ups can be contentious because often parents think that their child should be moving up training groups more quickly than the coach thinks he or she should. Decisions regarding group promotions should always be in the hands of the coaches. When considering promoting a swimmer from one to another group, these factors are most important: swimmer is leading his or her current group, swimmer is consistently training in higher tier of group, and swimmer has commitment level of higher group. The other factors can be: age, psychological maturity, physiological needs, competitive maturity, independence, leadership abilities, coachability, self-reliance, and willingness to be accountable for training and racing.
- 8) **Double practice** - Double practices (two-a-days) allow more time to develop feel for the water, and when the stresses of the training week are allocated intelligently, kids get much better and still stay healthy. During the school year, doubles do not make sense for age group swimmers, but summer allows for more water time.

Working with parents

A crucial part of a swim coach's job is developing good swim parents. This is just as difficult as developing good swimmers. **Parent's attitudes toward swimming, the program, the coach, and their child's participation are keys to the child's attitude and performance.** Often the young swimmer takes parental cues negatively. On the positive side, when parents support their child's interest in swimming by showing that they value both swimming and the lessons learned while swimming, then their children are implicitly taught to enjoy the sport and are more likely to stick with it. Because of strong parental influence, it is crucial that the values and behaviors thought at the home mirror those taught at the pool. Thus, coaches must ensure a good fit between family and program before a swimmer joins the team. Once families are on the team, it is the coach's job to educate them. Most teams like ours have newsletters, web sites, blast e-mails, team handbooks to help parents.

Next comes the question of what parents need to learn. The coach must teach parent how to be good swimming parent. When parents know what to expect, they are better able to take their child's victories in stride and are less likely to overreact to each setback. By living and teaching hard work, discipline, consistency, and commitment at home, they are teaching their kids to be hardworking, disciplined, consistent, and committed swimmers. By supporting the swimming program and coach, they are teaching the child to respect and obey his or her coaches so that the lessons they are trying to teach get learned. Even when parents understand and practice all this, there is a need for day to day communication. People want to know what is going on. So we try to keep parents informed about what has happened, what is happening, what is about to happen. Parents should to communicate with the coach if they have question or concern. For our team, email is often the best place to start, by describing the issue or question and requesting a meeting if needed.

We do feel that whenever possible, it is the best to deal directly with swimmer. Sometimes there will be an issue that is obviously under the control of the parent, in these instances, discussing the matter with the parent is warranted. Attitudes - good or bad - often run in families. Swimming coaches have little control over these attitudes, even if they do their best to warn about consequences down the line. Conflict of some sort may be inevitable, but this is not necessarily a bad thing. When done politely, working through a conflict clarifies positions, gets people off the fence, and forces decisions that can lead to real progress. Remember, the coach is there to be coaching, not to be a friend.

Please, remember that:

Parents should be parenting

Swimmers should be swimming

Coaches should be coaching

Thank you,

Coach Mirko

Bibliography

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