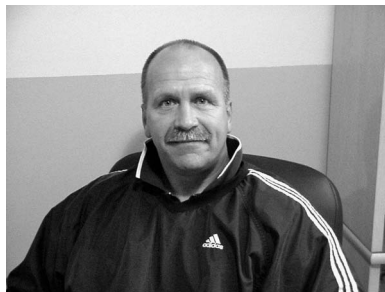


A Coaches Dozen: 12 FUNdamental Principles for Building Young and Healthy Athletes

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SUMMARY

IN ADDITION TO TEACHING THE TECHNICAL AND TACTICAL SKILLS OF A SPORT, YOUTH COACHES NEED TO APPRECIATE 12 FUNDAMENTAL PRINCIPLES THAT WILL HELP BUILD YOUNG AND HEALTHY ATHLETES WHILE SPARKING AN INTEREST IN LIFELONG PHYSICAL ACTIVITY.

Millions of school-age boys and girls in the United States participate in recreational and interscholastic sports. Under the guidance of a qualified youth coach, young athletes can learn the technical and tactical skills of a sport, gain confidence in their physical abilities, develop leadership qualities, and work toward a common goal (9). Furthermore,

youth coaches who model appropriate behaviors and develop a coaching philosophy that is consistent with the physical and psychosocial uniqueness of young athletes are able to teach positive lifelong lessons to young people they inspire. But how much confidence should parents have in a youth coach who has no basic understanding of pediatric exercise science or believes that young athletes are simply miniature adults?

With the possible exception of physical education teachers and pediatric exercise specialists, few youth coaches are educated in pedagogy, kinesiology, or exercise physiology that specifically address the training requirements of children and adolescents. And even with advanced coursework in these fields of study, it is difficult to keep up-to-date with current research in the fields of human motor development, athletic conditioning, and sport psychology. Although there is not enough space here to adequately address all of these issues, it is important to understand a few principles, which we refer to as FUNdamental (7). Rather than focus all of their efforts on technical skills and sports performance, youth coaches need to genuinely appreciate the uniqueness of childhood and adolescence while valuing the importance of having fun, learning

something new, and sparking a lifelong interest in physical activity.

So what exactly do youth coaches need to know about training, teaching, motivating, and developing young athletes? Our response is the “Coaches Dozen,” which is our list of 12 principles that youth coaches should think about. Although some of these principles are well supported by research in the fields of pediatric fitness, sports medicine, and developmental psychology (4,6,8,10,12,13), others are based on our combined 50 years of experience in teaching and coaching youth. The list is not meant to be definitive or complete, but simply a collection of principles that will help youth coaches build young and healthy athletes. For ease of discussion, the terms “youth” and “young athletes” are broadly defined in this column to include the years of childhood and adolescence.

1. *Young athletes are not miniature adults.*

No matter how big, strong, or coordinated a young athlete is, youth coaches must realize that children and adolescents are still growing, developing, and maturing. Therefore, youth require a specific approach to physical preparation for sports participation. What constitutes an appropriate training program for a young athlete is determined by an individual’s neuromuscular training, posture control, movement

mechanics, psychosocial maturity, and one's level of physical development. College programs and adult training philosophies (e.g., "no pain, no gain") should not be imposed on youth who are physically and psychologically less mature than older populations.

2. *Value preparatory conditioning.* A youngster's participation in sport should not start with competition but rather evolve out of preparatory conditioning and instructional training sessions, which address individual weaknesses and areas in need of improvement. Inadequate physical preparation or "training errors" (i.e., too much too soon) are common themes in most overuse injuries in young athletes (10). Owing to increasing levels of childhood obesity and an apparent decline in free-time physical activity (i.e., play) among youth, the supporting structures of aspiring young athletes may be ill prepared to handle the demands of sports training and competition. This concern may be particularly important for aspiring young female athletes who appear to suffer more sports-related knee injuries than men (11). Although the total elimination of sports-related injuries is an unrealistic goal, some observers suggest that both acute and overuse injuries could be reduced by 15–50% by addressing risk factors associated with youth sport injuries (10).
3. *Avoid sport specialization before adolescence.* Broad-based participation in a variety of activities during the primary school years and perceived sports competence during childhood are related more to adolescent physical activity and fitness than early sports specialization (2,3). Moreover, participating in several sport and exercise activities seems to decrease the risk of musculoskeletal disorders, which are more often associated with single sport participation (1). Young athletes should be exposed to a variety of sports and exercise activities in a variety of settings with different young people

so that they can discover what they enjoy while maximizing their physical, psychological, and social development.

4. *Enhance physical literacy.* Parents, teachers, and coaches must work together to educate "physically literate" youth with a positive and fun approach. Youth coaches should value the importance of improving motor skill competence and its role in enhancing athleticism. Fundamental locomotor skills (e.g., running, skipping, and hopping) and object control skills (e.g., throwing, catching, and striking) that require agility, balance, coordination, and speed form the foundation for more advanced sport-specific movements later in life (3). Of note, fundamental skills must be mastered before sport skills. Aspiring young athletes who become proficient in fundamental motor skills and perceive themselves to be more skilled are more likely to participate in challenging activities and find sport participation more enjoyable than youth with low motor competence (2).
5. *Better to undertrain than to overtrain.* Training young athletes of any age involves balancing the demands of "hard" training (required for adaptation) with the need for less intense training (also required for adaptation). Although any coach can make an athlete tired, successful youth coaches understand and value the importance of developing quality movement patterns and enhancing exercise technique with less intense training sessions. A well-planned and balanced schedule of practice, training, and competition will optimize development throughout an athlete's career.
6. *Focus on positive education.* Youth coaches who catch young athletes "being good" and publicly praise them for their performance on a specific drill or exercise can enhance their self-confidence as well as the quality of the practice session. Give young athletes a chance to succeed and help them understand what is expected of

them. In turn, they may be more likely to see mistakes as part of the learning process and use failure to enhance their motivation. The most important motives for youth are to develop and demonstrate physical competence, gain social acceptance and support, and have fun (14).

7. *Maximize recovery.* Youth coaches need to pay just as much attention to what is done between practice sessions as to what is done during practice sessions. Sports practice, competitions, and conditioning activities place a great amount of stress on young athletes. The importance of adequate recovery needs to be reinforced regularly because a "more is better" attitude is counterproductive and will likely result in injury, illness, or burnout (5). Recovery strategies can include an active cooldown, adequate hydration, proper nutritional interventions, appropriate relaxation strategies (such as socializing with friends), and at least 8–9 hours of sleep per night.
8. *It is not what you take, it is what you do.* Coaches and young athletes are bombarded with creative advertising from sports nutrition companies that seem to "guarantee" gains in muscle size and performance. While recognizing the importance of proper eating, sensible nutrition, and adequate recovery, young athletes should realize that the best ergogenic aid is regular participation in a periodized training program under the tutelage of a qualified youth coach.
9. *Get connected.* Successful youth coaches are good listeners and exceptional communicators who understand individual needs, abilities, and idiosyncrasies. Take the time to learn every athlete's name, address any concerns, provide encouragement, and show a genuine interest in every player. The training session should be both stimulating and challenging while providing fun and enjoyment. A young athlete who feels connected to the coach and to the team is more likely to make friends and follow instructions

and therefore less likely to disrupt practices or engage in negative behavior. “Substitute coaches” who do not form partnerships with their players will have a very difficult time motivating young athletes and inspiring them to achieve personal goals.

10. *Make a long-term commitment.*

Although some observers want immediate results and seek “quick fix” solutions to problems they may encounter, a long-term athletic development plan is needed to optimize performance, reduce the risk of sports-related injuries, lessen the likelihood of “dropout,” and produce elite-level athletes. Unfortunately, some youth coaches and parents over-emphasize competition at a young age and approach training and skill development with little or no interest in a young athlete’s long-term athletic development. There are no shortcuts to athletic success. Well-informed observers suggest that it takes 8–11 years of training for a talented athlete to reach elite levels (4,6).

11. *There are no secrets.* There is not one optimal combination of sets and repetitions or one magical grouping of exercises that will enhance athleticism in all young athletes. Rather, it is the systematic and sensible progression of program variables over time, along with qualified coaching and levelheaded support from parents that will determine the outcome of our sport programs. There are no secrets, shortcuts, or stealthy training methods of proven efficacy that can guarantee athletic success. A long-term commitment to proper training and skill development is

required to provide a pathway to produce elite athletes.

12. *Never stop learning.* Being a coach with good intentions and a willingness to work with children and adolescents is not enough. Coach education is the foundation of long-term player development. Youth coaches need to learn from their own experiences; read peer-reviewed journals; attend professional conferences; and talk with well-respected coaches, health care providers, and strength and conditioning professionals. The most successful youth coaches are willing to change old habits and be taught new skills. By learning more about the art and science of coaching school-age youth, coaches will be better prepared to help their athletes become the best they can be by adapting training sessions to each individual’s chronological, developmental, and training age.

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