THE CURRENT STATE OF LTAD—A YOUTH-FOCUSED MODEL

Long-term athletic development (LTAD) has gained acceptance as a theoretical model of positive youth development. It has been successful based on a variety of factors, such as the number of countries implementing an LTAD model, the perfect fit with physical literacy, the development of fundamental motor skills and muscle strength, and how it can be a structured alternative to early sport specialization (2,5). Most LTAD models are largely based on the work of Istvan Balyi and Canadian Sport for Life, whose model has been most replicated and adopted internationally. Balyi’s model for LTAD is based on developmental stages with a “playground to the podium” focus, meaning that from the earliest stages of development (0 – 6 years old), youngsters are groomed for elite performance with an alternate pathway of being physically active for a lifetime (5).

The American Development Model (ADM), formulated by United States of America Hockey and adopted by all United States Olympic Committee National Governing Bodies, also helps develop pathways for excellence in sport through increased general sports development of youngsters through age 12 as well as helping adolescents systematically self-select into a sport of focus (9). The National Strength and Conditioning Association (NSCA) Position Statement on Long-Term Athletic Development focuses on the health and well-being of children and adolescents, largely through sports participation and developing muscle strength and fundamental motor skills across childhood and adolescence (5).

While being physically active from childhood through adulthood is often an overarching goal of LTAD models, the primary focus is youth and their developmental stages. Every model emphasizes the concept that without proper development of fitness and skills, long-term chances of athletic success and lifelong participation are reduced.

Defining “long-term” as creating opportunities for play, fitness, and sport across the lifespan (not only short-term success), allows for the Olympic podium pathway, or for the general youth population, to ensure that the perspective is on an all-ages inclusive approach to LTAD. What has been severely lacking in current models is an emphasis on keeping active for a lifetime, using play, fitness, and sports as the interwoven components to accomplish this goal. For LTAD to be an inclusive model that develops physical literacy for all children, adolescents, and adults, the LTAD model needs to reflect this thought process. Sports, as structured play, is but one of three key types of play (non-structured and semi-structured being the other two) for positive youth development, and all three types of play need to be interwoven for youth and adults. Coaches have a huge influence on athletes, not only in sport, but in aiming toward the high-performance end of the wellness continuum. Therefore, coaches should strive to develop all components of the Wellness Wheel (physical, social, environmental, financial, spiritual, emotional, and intellectual) for all people across the lifespan (3). This article elucidates what an inclusive cradle-to-grave approach should portray.

THE NEED TO EMPHASIZE LTAD AS A “CRADLE-TO-GRAVE” CONCEPT

While the subtleties of the various models of LTAD are in the timing of the stages, or the recommendations for performance within each stage, the real potential of LTAD is as a cradle-to-grave concept. Since motor skill competence, motor skill self-efficacy, and fun are the three leading predictors of being physically active across the lifespan, an explicit model that helps all coaches understand the effects of LTAD across all populations is imperative (6).

The overall goal is for every man, woman, and child to be physically active across the lifespan—from infancy, across childhood and adolescence, through adulthood, and into old age. Since muscle strength is inexorably linked with motor skill development, coaches at all levels need to recognize that missing out on opportunities to develop motor skills and muscle strength will have negative consequences in later athletic and/or fitness pursuits. For example, Seefeldt’s “Proficiency Barrier” postulates that if children do not develop competent motor skills by age 10, they will be at a distinct disadvantage to achieve high-level performance (8). Since motor skill competence and self-efficacy are associated with adult participation in sports and physical activity, coaches of youth must ensure proper training and development of motor skills and muscle strength, and coaches of adults must be able to progress adults through the motor skill sequences to encourage them to achieve motor skill self-efficacy. When developing strength and conditioning programs for youth, practitioners must also be aware not only of chronological age (age in years), biological age (rate of maturation), and training age (prior experience with specific tasks related to the activity), but also cognitive age (ability to complete mental tasks of varying levels) (7). Ignoring any of these age-related factors can be detrimental to developmentally-appropriate strength and conditioning programs for youth and adults alike.

THE ROLE OF LTAD IN PHYSICAL LITERACY

Physical literacy has been described as both a concept and an application (4). As a concept, physical literacy has been defined as the confidence and competence to be physically active across the lifespan by engaging in a variety of activities on various surfaces under differing conditions (10). In academic terms, physical literacy has been likened to literacy in other school subjects, such as health literacy and math literacy. As a concept, this definition tells only part of the story. Physical literacy includes physical work literacy, physical activity literacy, and physical cultural literacy, which are all concepts that extend well into adulthood. The application of physical literacy across the lifespan needs to be the focus of coaching. Working with athletes of all levels, abilities, and
ages on developing and mastering fundamental movement skills, proper training sport skills, and understanding the importance of muscle strength and power for lifetime fitness is paramount to the overall goal of a healthy and fit population.

One important highlight of LTAD as a cradle-to-grave concept is that the opportunities to play and participate in organized sports and activities build skills that can be used throughout the life course. Any gap, overuse, or negative experience can diminish the skill development and enjoyment of the sport or physical activity. For example, most parents would never consider dropping off young children at the library to learn to read without primary knowledge of letters, words, sentences, etc., yet they often sign their children up for sports when the youngsters do not yet have the requisite skills to play. Adults cannot assume that youth will automatically develop skills without qualified instruction, much the same way that they will not necessarily learn to read by visiting the library.

Youth practitioners need to provide child-centered pedagogical instruction to help guide youth at their specific developmental level, as growth and development are not linear and are not the same for all children. For example, a group of eight-year-olds are biologically up to two years on either side of eight years old, so coaches are quite possibly working with a group of 6 – 10-year-olds. Adult practitioners need to provide a more adult learning-centered (andragogical) approach to play, fitness, and sports by engaging adults in the decision-making process of how to prepare to participate in sports, fitness, and physical activity and in which sports, fitness, and physical activities to take part.

THE NEEDED PARADIGM SHIFT—YOUTH IS A GREAT BEGINNING

In order to fully integrate LTAD into the concept and application of physical literacy, a cradle-to-grave model is needed. Within this model, integration of physical literacy and LTAD concepts are applied for all ages. Since coaches and youth practitioners support the notion of physical activity for all ages, the term “grave” is replaced with lifetime. Highlights of the new applied model are:

- The emphasis shifts from sports participation to sports, fitness, and play participation
- A seamless transition from youth to adult participation is recommended
- Coaches of all levels, ages, and abilities work together to provide developmentally-appropriate opportunities for participation, integration of sports, fitness, play for the population, and progressions and regressions based on abilities rather than chronological age

As youth move along the sports continuum, the opportunities to participate decline. The “athlete in each of us” should be emphasized across the lifespan. Adults are often pigeon-holed into “lifetime” fitness activities instead of the sport, game, or activity of their choosing. This is in part due to the fact that most adults did not develop movement competency at younger ages to have the ability to select their favorite pursuit. This integrated LTAD model provides those opportunities.

REFOCUS THE MODEL

Most current LTAD models do not include a framework for LTAD as a fully-integrated cradle-to-grave concept. This is why some parents will aggressively promote one sport over another and try to protect their turf. The Life Time Athletic Development model is a fully-integrated model that is organized into the following categories:

- **Motor Skill Introduction (0 – 6 and parental – lifetime):** emphasis is placed on exploration, play, and family physical activity.

- **Motor Skill Competence through Three Types of Play (6 – lifetime):** exploration and integration of physical literacy while using Tom Farrey’s definition of an athlete as “anyone with a body,” (1). This athlete is developed to the best of his or her ability within his or her given level of endowment by integrating the three sub-stages:
  - **Play Stage:** further exploration, value, and integration of play.
  - **Fitness Stage:** introduction to, value of, and continuous refinement of fitness and includes standards and guidelines established by organizations such as the Society of Health and Physical Educators (SHAPE) America, American Physical Therapy Association (APTA), National Athletic Training Association (NATA), NSCA, etc.
  - **Sport Stage:** introduction to, value of, and continuous refinement of sport skills/abilities (SHAPE America, APTA, NATA, NSCA, Aspen Institute, Changing the Game Project, etc.).

- **Intrinsic and Societal Play Stage (13 – lifetime):** as skills, value, refinement of play, fitness, and sport evolve, personal decisions as to what type(s) of play, fitness, and sport are most suitable. This stage is constantly evolving based on individual needs, skills, opportunities, interests, and confounding variables (e.g., academics, career, etc.). Seen as the norm for all ages, this stage is essential for play, fitness, and sport into adulthood.
LONG-TERM ATHLETIC DEVELOPMENT (LTAD) AS A CRADLE-TO-GRAVE MODEL

THE FUTURE STATE OF LTAD—A POPULATION-BASED MODEL

LTAD has evolved and increased in popularity to address motor skill competence, muscle strength attainment, proper amounts of sports participation based on chronological age, and reduced risk of sports injuries. To fully embrace LTAD, coaches of all levels and athletes of all ages need to work together to fully integrate the acquisition and refinement of play, fitness, and sports participation across the lifespan. They should also work to develop protocols to progress youth and adults through the progressions and regressions necessary to achieve motor skill competence, self-efficacy, proper muscle strength, and other fitness attributes, as well as a structured, fully-integrated lifetime athletic plan for the entire population.

REFERENCES


ABOUT THE AUTHOR

Rick Howard helped start the National Strength and Conditioning Association (NSCA) Youth Special Interest Group (SIG) and served this year as Immediate Past Chair. In addition, Howard serves on the NSCA Membership Committee and is the NSCA State/Provincial Program Regional Coordinator for the Mid-Atlantic Region. Howard is involved in many pursuits that advance knowledge, skills, and coaching education to help all children enjoy lifelong physical activity and sports participation.

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