



A LONG-TERM ATHLETE
DEVELOPMENT PLAN FOR THE
SPORT OF BASEBALL IN THE
UNITED STATES

DEVELOPED BY







TABLE OF CONTENTS

Foreword	1
State of the Game	3
Why Create an American Development Model?	6
ADM Statement	7
Baseball Development Pathway: Stages of the ADM	8
ADM Key Principles	
ADM Key Definitions	
Recommended Frequency of Practice and Competition by ADM Stage	10
The American Development Model	11
Stage 1: Activate	11
Stage 2: Discover	12
Stage 3: Progress	
Stage 4: Develop	
Stage 5: Apply	17
Stage 6: Excel	18
Stage 7: Inspire	
Summary	
-	

American Development Model – A multi-stage pathway for training, competition, and recovery, that guides an athlete's experience in sport and physical activity from infancy to adulthood.

A MESSAGE FROM JOSEPH MYERS

LEAD AUTHOR OF THE USA BASEBALL ADM AND DIRECTOR OF BASEBALL PERFORMANCE SCIENCE FOR THE TAMPA BAY RAYS

As the primary steward for the sport in the United States, USA Baseball recognizes and embraces the powerful impact that their organization has on players and fans across their lifespan. Given this role, USA Baseball sought to develop a American Development Model (ADM) that is rooted in scientific literature, in order to provide a roadmap for players, parents, coaches, and administrators to participate, instruct, and govern the sport of baseball. An interdisciplinary working group of leading sport scientists with expertise in coaching, strength and conditioning, neuromuscular control, biomechanics, motor learning, injury prevention, sport psychology, and clinical care of athletes was assembled to develop an evidence-based ADM.

On behalf of the working group, we feel fortunate to have had the opportunity to collaborate with leaders from all across amateur baseball, in order to provide the scientific content to this important project. This collaboration resulted in a program that provides players, coaches, parents, and fans, with a positive, fulfilling experience where talents can be maximized, healthy levels of fitness can be achieved, and ultimately the sport of baseball can be enjoyed for their entire lifetime

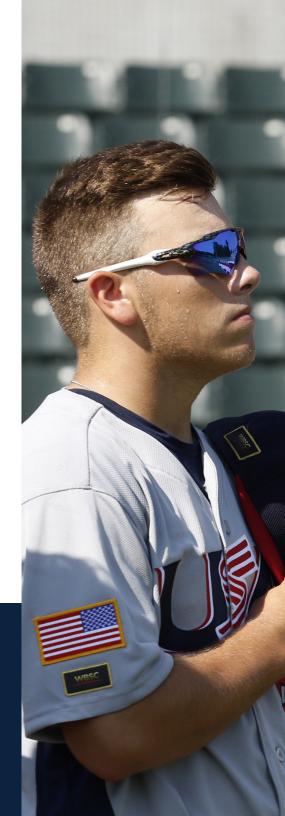
Joseph B. Myers, PhD, ATC

ADM Working Group Chair Director of Baseball Performance Science, Tampa Bay Rays Baseball

The USA Baseball ADM Working Group includes the following individuals:

- J.D. DeFreese, PhD (University of North Carolina at Chapel Hill)
- Lindsay DiStefano, PhD, ATC (University of Connecticut)
- Avery Faigenbaum, EdD, FACSM, FNSCA (The College of New Jersey)
- Elizabeth Hibberd, PhD, ATC (University of Alabama)
- Joseph B. Myers, PhD, ATC (Tampa Bay Rays Baseball)

- James Onate, PhD, ATC, FNATA (The Ohio State University)
 Brett S. Pexa, MA, ATC (University of North Carolina at Chapel Hill)
 Lauren Rhyne, Senior Director of Athlete Safety and Education (USA Baseball)



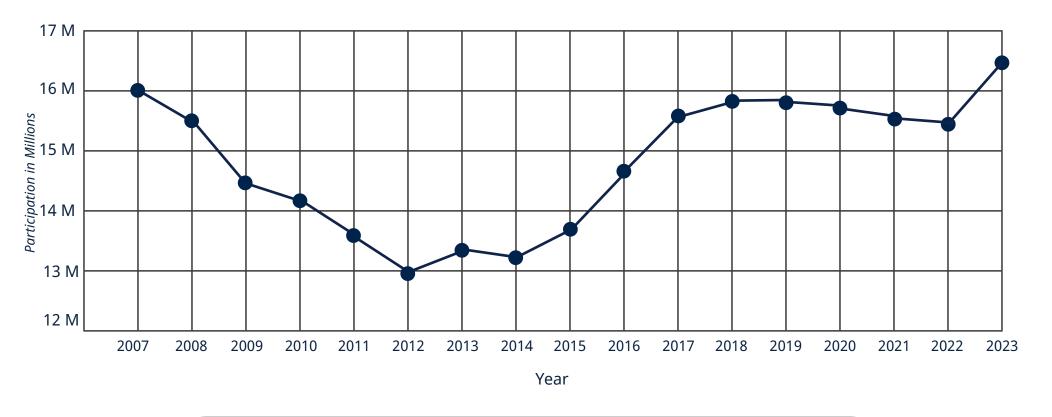


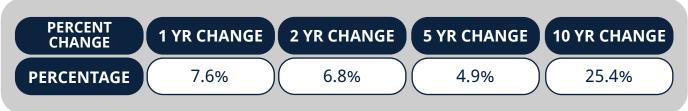


PARTICIPATION IN AMATEUR BASEBALL

YEAR	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
PARTICIPATION	16.058	15.539	14.429	14.198	13.561	12.976	13.284	13.152	13.711	14.760	15.642	15.877	15.804	15.731	15.587	15.478	16.665

Participation numbers are in millions. Statistics from the 2023 Sports, Fitness, and Leisure Activities Topline Participation Report.







WHY CREATE AN AMERICAN DEVELOPMENT MODEL?

The American Development Model (ADM) forces us to critically scrutinize the changing landscape and examines what needs to be done to better position the sport moving forward. This ADM is influenced by the work of Istvan Balyi, PhD, and is the culmination of extensive research on childhood development. We believe that the integration and implementation of this ADM into the baseball culture across the United States will help to get more youth onto the fields, and also positively impact their overall experience within the sport.

CONSIDER THIS:

- The need to rethink how we organize, operate and execute baseball activity is more relevant now than ever.
- The largest base of knowledge, experience and resources are most closely associated with elite level competition. Informing the volunteer and amateur base of coaches in key developmental stages is essential for the long-term health and proliferation of the sport.
- Better informing the athletes of today lends itself to a more educated coaching generation of tomorrow.
- A broad developmental pathway has not previously existed in baseball for parents.
- The current amateur baseball environment fosters a culture of early single sport specialization that is contrary to relevant surveys and research on the subject as it relates to long-term development.
- Most training and preparation is currently geared towards short-term outcomes associated with winning rather than a long-term process of individual development.
- By maximizing the experiences learned through baseball, the ADM aims to develop more well-rounded individuals both in sport and in life.

ADM STATEMENT

This ADM has been generated by USA Baseball, with support from Major League Baseball (MLB), to provide a multi-stage developmental pathway for an individual's life-long experience within the sport. The ADM is a culmination of evidence-based information from the principal contributor group and input from a leadership group consisting of experts from the medical safety industry, MLB league and club executives, and an advisory group inclusive of leaders from across the amateur baseball spectrum.

THE AMERICAN DEVELOPMENT MODEL AIMS TO:

- Offer solutions for the entire baseball community.
- Enhance all participants' experience within the sport.
- Promote age-appropriate physical literacy and psychosocial development.
- Underscore best practices for player health and safety.
- Encourage age-appropriate skill development progression.
- Prolong individual engagement through improved infrastructure.
- Promote life-long engagement through mentoring and recreational play.

BASEBALL DEVELOPMENT PATHWAY STAGES OF THE ADM

The ADM is a multi-stage pathway for training, competition and recovery, that guides an athlete's experience in the sport from infancy to adulthood. The ADM recognizes the need to involve all amateurs in the developmental pathway, not just the "elite," and is made up of a seven-stage framework that builds upon itself. The stages listed below and their highlighted descriptive terms identify general phases of development within a child's maturation. When appropriate, this framework advises athletes to begin an "Advanced Track" within the Develop Stage for 14 to 16 year-olds. Advanced athletes are those who show a high level of aptitude in the sport at their given age. The "Advanced Track" is a pathway of development that allows for athletes to direct more time and energy to training and competition for their high-level progress in the game.



ADM KEY PRINCIPLES

USA Baseball, as the governing body for the sport, draws on these key principles when developing initiatives such as the ADM.

- **Health and Safety** Provide the best practices to keep athletes active and on the field in order to create an opportunity for long-term development and lifelong fitness activity.
- **Education and Development** Deliver resources and best practices that empower players, parents, coaches, and umpires to make the best decisions for their careers.
- Grow the Game Create opportunities for people to play ball regardless of ability.
- **Universal Availability** Remove barriers of entry and provide playing opportunities for athletes everywhere.
- **Competition** Highlight the many positive teaching moments and life lessons fostered through domestic competition and represent the United States within the international community.

ADM KEY DEFINITIONS

The ADM utilizes common terms throughout each stage. The major components for each stage are defined as follows.

- **Physical Literacy** The ability to move with competence and confidence during different types of physical activities that promotes a long-term healthy lifestyle.
- **Physical Development** Structured and progressive approaches to develop movement skill competency and the physical fitness resources to enhance the experience of training, practicing, and playing.
- **Injury Prevention** Many injuries in baseball stem from overuse, thus monitoring athletes' fatigue and year-round involvement in sports is crucial.
- **Psychosocial Well-Being** The ability to motivate oneself, influenced by the psychological needs of autonomy (personal choice or control), competence (success or effectiveness in one's environment) or relatedness (social connection to others, acceptance, belonging).
- **Specialization** Nearly year-round (typically more than eight months per year), intensive training in a single sport, and excluding participation in other sports.
- **Periodization and Competition** The time frames that are used to schedule practice, competition, and recovery. Periodization structures the practice components into weeks, days and sessions, and is situation-specific, depending on priorities and the time available for practice and competition improvement.

RECOMMENDED FREQUENCY OF PRACTICE AND COMPETITION BY ADM STAGE

RECREATIONAL TRACK PERIODIZATION AND COMPETITION SCHEDULE

	ADM STAGE	AGE	PRACTICE	COMPETITION	DAYS PER WEEK IN SEASON	COMPETITION MONTHS PER YEAR
	ACTIVATE	Entry to 7	75%	25%	1 to 2 Days	4 Months
	DISCOVER	7 to 12	75%	25%	1 to 2 Days	4 Months
Y	PROGRESS	12 to 14	65%	35%	2 to 3 Days	4 to 8 Months
	DEVELOP	14 to 16	65%	35%	3 to 4 Days	4 to 8 Months
	APPLY	16 to 18	65%	35%	4 to 5 Days	4 to 8 Months
	INSPIRE	ANY	70%	30%	At Leisure	At Leisure

ADVANCED TRACK PERIODIZATION AND COMPETITION SCHEDULE

ADM STAGE	AGE	PRACTICE	COMPETITION	DAYS PER WEEK IN SEASON	COMPETITION MONTHS PER YEAR				
DEVELOP	14 to 16	50%	50%	4 to 5 Days	4 to 8 Months				
APPLY	16 to 18	45%	55%	4 to 5 Days	8 Months				
EXCEL	19+	Collegiate or Professional Level Dependent							

Individual off-season training can be prescribed on a one-to-one basis. Athletes should take a measured approach to their physical and mental development in preparation for the upcoming season. Competition for players that are pitchers only should follow guidelines set forth in the Pitch Smart program.



The American Development Model

This plan serves as an ADM for the sport of baseball in the United States. As a multi-stage pathway that builds upon itself, the ADM guides practice, competition, recovery, and overall experience in sport. Through developmentally appropriate programs for all ages, the ADM aims to increase participation, aid in performance, and enhance enjoyment across the sport of baseball.

Stage 1: Activate

Chronological Age: Entry - 7

Foster a love for the game by introducing children to the sport of baseball through styles of game-play that promote fun, creative play and success. Athletes in this stage should be developing basic movement and motor skills via sport sampling. Baseball should also be a means for developing friendships and encouraging other positive peer interaction. Proper warm up and cool downs should be part of the sport experience.

PHYSICAL LITERACY This is a fundamental stage for young athletes to develop basic physical literacy and fundamental movement skills. Basic fundamental skills should be taught and mastered before progressing into more complex skills.

PHYSICAL DEVELOPMENT

Children should be introduced to movement and play activities that develop motor skills and muscular strength in a fairly unstructured and exploratory manner. Game-based activities that are fun, engaging and socially stimulating can help young children experience the mere enjoyment of learning new skills and playing with friends.

INJURY PREVENTION

Children should perform full body warm up before and full body cool down after practice to learn healthy habits.

PSYCHOSOCIAL WELL-BEING

Emphasize enjoyment of physical activity in general. Introduce baseball as a great avenue to experience sport enjoyment. Sport should be a venue for athletes to develop friendships and positively interact with peers and adults. This will set the stage for broader social development as well as a lifetime love of baseball.

SPECIALIZATION

No single sport specialization.

Sport and activity sampling are highly recommended and are imperative to well balanced and proper physical development, injury prevention, and psychosocial well-being.

PERIODIZATION & COMPETITION

Parents and coaches should encourage sampling of multiple sports that primarily focus on deliberate play. Athletes should spend 75 percent of dedicated time to sports practicing, or participating in deliberate play, and no more than 25 percent of dedicated time to sport should be spent competing.

Stage 2: Discover

Chronological Age: 7 - 12

Basic baseball skills are being fostered and in some cases honed. Athletic movement should become more advanced as speed, agility, balance and general coordination all improve. Athletes should be in an environment where they learn to be motivated to succeed, while continuing positive social development amongst teammates and competitors. Sport sampling and informal or deliberate play continue to promote well-roundedness. Injury awareness, including arm care should be present for the athlete, their coach and parents.

PHYSICAL LITERACY

Continue basic development of physical literacy and fundamental movement skills, as well as improve agility, balance, coordination, and speed. A modified form of baseball is recommended to increase mastery of basic skills. An example of game modification includes the Fun at Bat program. Specific baseball tasks can continue to be modified throughout this stage in terms of the size of the ball, distances of the bases, format of the game, etc.

PHYSICAL DEVELOPMENT

Health- and skill-related fitness qualities should be trained in an integrative manner with a focus towards enhancing competence and confidence in the ability to perform strength-building and skill-enhancing exercises.

INJURY PREVENTION

Educate athletes on injuries and how to communicate symptoms to parent/coach. Follow Pitch Smart recommendations for pitching guidelines and required rest.

PSYCHOSOCIAL WELL-BEING

Continue to foster a motivational climate where individual improvement and skill development is modeled and rewarded. All athletes should have opportunities to experience success so as to enhance their sense of competency within the sport, regardless of individual skill level.

SPECIALIZATION

Continue to strongly discourage single sport specialization – encourage two other sports to grow and cross train. This will serve to promote identity development, social development (exposure to multiple social groups) and discourage burnout and dropout.

PERIODIZATION & COMPETITION

Athletes should spend 75 percent of dedicated time to sports practicing, or participating in deliberate play, and no more than 25 percent of dedicated time to sport should be spent competing.

DELIBERATE PLAY -

An activity that is intrinsically motivating and is meant to be enjoyed, such as playing backyard baseball. These activities allow for children to try a variety of movements while learning how to handle different athletic situations.



Stage 3: Progress

Chronological Age: 12 - 14

Skill training is now becoming more specific and should include mechanical elements and awareness. Athletes should be self-motivated and will begin understanding how to self-diagnose aspects of their training and performance. Physical development should be technique driven and age-appropriate, and overall wellness should include proper arm care planning. Competency (success or self-improvement) is important in this stage, as is a continued multi-sport approach. While competitive play will increase, more time should still be spent training proportionately.

PHYSICAL LITERACY

Continue to be introduced to new closed skills first (e.g., hit off a batting tee to control external factors while making mechanical adjustments, such as changing hand path position for hitting swing) and then progress into open skill environment with new mechanical adjustment.

PHYSICAL DEVELOPMENT

Early exposure to strength and conditioning programs that are developmentally-appropriate, technique-driven and supervised by qualified professionals will set the stage for even greater gains in physical fitness during adolescence and adulthood. While there is no "minimum age" for participation in strength and conditioning activities, participants must be able to following coaching instructions and be able to handle the demands of a practice session.

INJURY PREVENTION

Follow Pitch Smart recommendations for pitching guidelines and required rest.

Athletes should participate in stretching and injury prevention program before practice and stretching after practice.

PSYCHOSOCIAL WELL-BEING

Continue to develop intrinsic motivation for baseball and motivational climates via modeling, reinforcement and promotion of sport competence. When correction is needed, utilize positive approaches to communication. Enhance sport commitment by making baseball an enjoyable and cost-effective physical activity option. Also, provide athletes with autonomy (i.e., input) into their sport participation decisions.

SPECIALIZATION

Do not encourage single sport specialization; participation in one other sport is still highly encouraged. Athletes should sample a variety of sports and avoid specializing early in a single sport.

PERIODIZATION & COMPETITION

Athletes should spend 65 percent of dedicated time to sports practicing, and no more than 35 percent of dedicated time to sport should be spent competing.



Stage 4: Develop

Chronological Age: 14 - 16

The athletes physical and skill development should become increasingly individualized and should cater to their own growth, and be specific to their preferred position(s). Safe training practices should be maintained, and rest and recovery after workouts, practices, and games remain imperative. Fostering a positive social environment that includes opportunity for self-determination for the athlete, and open communication between the athlete, parents and coaches will aid in success on and off the field. In appropriate instances, specialization may occur in this stage, but multi-sport athletics are still encouraged.

PHYSICAL LITERACY

Athletes are likely experiencing major changes in growth. It is critical that movement quality during skills is maintained during this period. Coaches may need to revisit technique of basic skills (e.g. throwing, running) to ensure athletes maintain optimal performance without increasing injury risk. Athletes should lead in decision making process and continue to be encouraged to make their own playing decisions while making large amounts of safe mistakes.

PHYSICAL DEVELOPMENT

Athletes should continue to participate in developmentally appropriate strength and conditioning activities that should be consistent with the specific demands of each player's position. Total body fitness, muscular strength and motor skill competency remain key components of sport training programs for performance enhancement and injury reduction.

INJURY PREVENTION

Follow Pitch Smart recommendations for pitching guidelines and required rest.

Athletes should partake in full body training programs, not just strengthening programs, to promote symmetrical balance.

PSYCHOSOCIAL WELL-BEING

Despite increases in competition level, continue to foster more self-determined forms of motivation by promoting athlete feelings of autonomy, competence and relatedness in their baseball experiences. Encourage development of positive and cooperative relationships among athletes, parents & coaches via parent and coach training and athlete communication skills development.

SPECIALIZATION

While specialization may begin it should be delayed as late as possible within this stage. Participation in one other sport is highly encouraged, especially if the athlete is gifted in multiple sports.

PERIODIZATION & COMPETITION

Athletes should spend 65 percent of dedicated time to sports practicing, or participating in deliberate play, and no more than 35 percent of dedicated time to sport should be spent competing.

Stage 4: Develop - Advanced Track

Athletes who demonstrate an advanced level of development within the sport may wish to further dedicate themselves to their progression towards the upper echelons of the game. While maintaining a well-rounded approach, athlete training should further focus on position specific skills and mechanics. Baseball specialized athletes may spend added time throughout the year training and competing but should be even more alert to overuse related injuries, especially connected to throwing. Mentors should be aware that while these athletes may be gifted in sport, they are often on par with their peers' mental and social development. See "Develop" stage for additional markers.

SPECIALIZATION

Allow specialization if coaches, parents and athletes agree it is appropriate but it should not be a requirement of leagues/teams (breaks and cross-training remain important). There are still many benefits to multisport participation. Athletes can begin identifying a primary position skill set where more but not all of skill development can be focused. Being a well-rounded, versatile athlete in several positions is recommended.

PERIODIZATION & COMPETITION

Time spent practicing versus competing should be equal.

Athletes can spend four to five days per week in season practicing or competing.

Athletes can spend four to eight months of the calendar year practicing and competing.



Stage 5: Apply

Chronological Age: 16 - 18

Training and practices should be working towards team and individual optimization. Athletes should be able to use self-observation to identify mechanical and other skill deficiencies. Strength and conditioning activities should be athlete specific and should maintain an approach that ensures total body fitness, muscular strength and motor skill competency. Athletes should maintain an individualized arm care program, especially as the amount of competition increases over time. Specialization among advanced athletes may occur. The promotion of positive developmental environments within teams and personal training settings remains important.

PHYSICAL LITERACY

Training intensity can begin to increase as athletes move through this stage. Athletes may benefit from more individualized training. Athletes should maintain and seek expert enhancement of correct movement patterns through advanced self-observation (e.g., video feedback) and continue detailed review of their techniques. Video observation and feedback can be readily provided with coach and athlete interaction.

PHYSICAL DEVELOPMENT

Athletes should continue to participate in developmentally appropriate strength and conditioning activities that should be consistent with the specific demands of each player's position. Total body fitness, muscular strength and motor skill competency remain key components of sport training programs for performance enhancement and injury reduction.

INJURY PREVENTION

Follow Pitch Smart recommendations for pitching guidelines and required rest. Athletes should partake in full body training programs, not just strengthening programs, to promote symmetrical balance. Position-specific strength and conditioning programs can be added to the strength and conditioning program.

PSYCHOSOCIAL WELL-BEING

Competition levels are likely to increase for non-recreational athletes in both the 15-16 and 17-18 age groups. Coaching methods should remain positive and enhance athlete motivation via promotion of autonomy, competence and relatedness. Coach and parental education is key to monitoring and promoting athlete well-being.

SPECIALIZATION

Allow specialization as appropriate when athlete, coach and parents agree it is appropriate. Training breaks and cross-training should be utilized as needed if specialization is pursued. Other recreational activities and sports continue to be an important factor in overall health and well-being.

PERIODIZATION & COMPETITION

Athletes should spend 65 percent of dedicated time to sports practicing, or participating in deliberate play, and no more than 35 percent of dedicated time to sport should be spent competing.

Stage 5: Apply - Advanced Track

Advanced level athletes within this stage are those who are likely to graduate to the Excel stage, and will play either at the collegiate or professional levels. While those outcomes may motivate the athlete, a process based development plan should be maintained that promotes a well-rounded approach to the physical, mental and social sides of the sport. Single sport specialization in this stage is more likely to occur, although it is not mandatory for baseball advancement. Increased competition levels, mean an increased focus should be paid to total body wellness and arm care. Skill specific training should be advanced with the athlete possessing a base of knowledge in individual and situational play. See "Apply" stage for additional markers.

SPECIALIZATION

Allow specialization if coaches, parents and athletes agree it is appropriate but it should not be a requirement of leagues or teams (i.e., breaks and cross-training should be considered). Single sport specialization of advanced athletes in this stage is more likely to occur. There are still many benefits to multisport participation.

PERIODIZATION & COMPETITION

Slightly more time can be devoted to competing versus practicing.

Athletes can spend four to five days per week in season practicing or competing.

Athletes can spend eight months of the calendar year practicing and competing.



ADVANCED TRACK ATHLETES ONLY

Stage 6: Excel

Chronological Age: 19 +

Athletes in this stage are maximizing their physical, psychosocial, and skill specific preparation and performance. Mastery of all individualized mechanical functions and team related situational plays are being worked on as a daily occurrence in practice and in games. Physical competencies should be optimized with athletes training to move and think at levels approaching their personal best. Coaches within this stage should be experts within their specific field. Sport specialization is highly likely, but other recreational sports can aid in overall well-being as allowable. Position specific training and nutritional guides should be implemented to support the challenging practice and competition schedules athletes will endure.

PHYSICAL LITERACY Athletes should maintain and seek expert enhancement of correct movement patterns through advanced self-observation (e.g. video feedback) and continue detailed review of their techniques. Athletes should lead in decision making process and continue to be encouraged to make their own playing decisions while continually trying to minimize cognitive and physical mistakes.

PHYSICAL DEVELOPMENT

Having the ability to express total body power safety within a spectrum of movement competencies that include acceleration and deceleration, pushing and pulling, and jumping and landing will provide the best opportunity for a player to exceed expectations on the field and tolerate the unpredictable impact forces experienced in high action sport activities.

INJURY PREVENTION

Follow Pitch Smart recommendations for pitching guidelines and required rest.

Athletes should partake in full body training programs, not just strengthening programs, to promote symmetrical balance. Addition of position-specific strength and conditioning programs.

PSYCHOSOCIAL WELL-BEING

Continue to promote self-determined motivation for and enjoyment of baseball in both recreational and competitive environments.

SPECIALIZATION

As is permissible within the competitive environment, other recreational activities and sports can continue to be an important factor in overall health and well-being. Allow specialization if coaches, parents and athletes agree it is appropriate but it should not be a requirement of leagues/teams.

PERIODIZATION & COMPETITION

Athletes should spend 70 percent of dedicated time to sports practicing, or participating in deliberate play, and 30 percent of dedicated time to sport should be spent competing.

Time spent practicing and competing can be dependent upon the collegiate or professional level of play.

Stage 7: Inspire

Chronological Age: ANY

This stage of development can be accessed at any point after the Activate stage. Those who Inspire within the game continue to participate in a bat and ball sport to foster a healthy lifestyle. Athletes should remain involved in any capacity, whether it is as a player, coach, umpire, or volunteer. Participation in game-play either at baseball recreational levels or on the softball field is encouraged. Developing a love and mentoring future generations through positive experiences in baseball allows athletes to pass on the many great life lessons learned through the game.

ACTIVE PARTICIPATION

All adults should avoid inactivity. Some physical activity is better than none, and adults who participate in any amount of physical activity gain some of the health benefits that it offers. Adults should get at least two and a half hours each week of moderate-intensity aerobic physical activity, or an hour and fifteen minutes a week of vigorous-intensity aerobic physical activity. Adults should also do strengthening activities at least two days a week.

MENTORSHIP & ENGAGEMENT

Give back to the game by becoming a coach, umpire, instructor, volunteer, or mentor. Seek out education within baseball, for example coaching or umpire education. Education is important so that positive experiences can be facilitated for these athletes that may one day be in the position to promote healthy baseball participation for other youth or adolescent baseball athletes.











