

BASEBALL CANADA

LONG TERM ATHLETE DEVELOPMENT



Canadian Leader in Throwing, Catching and Hitting

BASEBALL CANADA LTAD DOCUMENT

Published by: Baseball Canada
Project managers : André Lachance and Mike Bowes
Editors: LTAD Work Group
Graphic design: Jean-Pierre Desautels
Printed: November 2007
Printer: TBA
Copyright: Baseball Canada
ISBN: 978-0-9686789-1-6



TABLE OF CONTENTS



4	Acknowledgements	18	The Challenges We Face	34	State of the Game and its Vital Components <i>Player Development, Coaching , Leadership & Organization, Competition, Facilities</i>
5	Foreword	21	Baseball LTAD Model	43	Baseball LTAD Stage Descriptions
7	Executive Summary	22	Overview of the Canadian Baseball Model chart	61	Stakeholder Roles
11	Our Core Principles	23	The 10 Key Factors Behind LTAD	62	Recommendations and Implementation
12	Baseball in the Canadian Context	29	The 10 S's of Training and Performance	65	LTAD Strategic Initiatives
14	Why an Athlete-Centered Focus?				

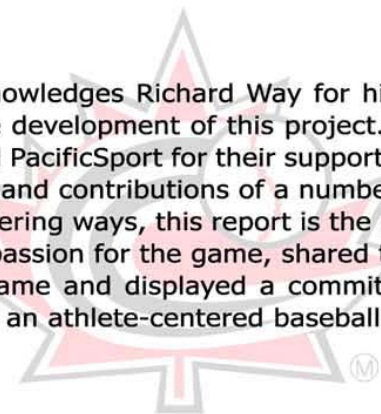


APPENDIXES

67	Glossary of Terms
70	Sample Skill Checklist for FUNdamentals Stage Program Rally Cap
71	Profile of Baseball Players in Canada
74	Summary of Challenges, Opportunities, Proposed Initiatives
87	Bibliography

>>> ACKNOWLEDGEMENTS

BASEBALL CANADA acknowledges Richard Way for his encouragement and guidance throughout the development of this project. Baseball Canada also thanks Sport Canada and PacificSport for their support. As baseball is a team sport requiring the skills and contributions of a number of players contributing in significant and differing ways, this report is the product of a dedicated team who applied their passion for the game, shared their broad experience in many facets of the game and displayed a commitment to excellence in developing a pathway to an athlete-centered baseball system in Canada.



BASEBALL CANADA Long-Term Athlete Development Team

André Lachance:	Manager Baseball Operations, Baseball Canada
Jim Baba:	Director General, Baseball Canada
Mike Bowes:	Baseball Canada LTAD Contractor
Jason Dickson:	Executive Director, Baseball New Brunswick
Alex Agostino:	Technical Director, Baseball Québec
Remo Cardinale:	Former National Team Coach
Shari Reiniger:	Baseball parent
Brent Crowther:	Baseball Canada High Performance Committee Representative
Morgan de Peña:	Executive Director, Baseball Manitoba





FOREWORD



This project germinates from two separate initiatives originated by Baseball Canada, the national governing body of baseball in Canada, and by Sport Canada, with the cooperative support of the Federal – Provincial – Territorial Council of Sports Ministers.

Baseball Canada and its constituent members met in a summit in Quebec City in November 2003 to discuss concerns related to development and sustainability of the sport of baseball in Canada. A number of planning and forward-looking projects were suggested and proposed. Work had commenced on these initiatives prior to the Long Term Athlete project introduced by the Sports Ministers.

Subsequently, as a result of the Canadian Sport Policy, in 2005, Canada began a major project to re-invigorate its national sport system. This new approach was undertaken in response to:

- Concerns about Canada's lack of physical activity;
- Growing obesity epidemic particularly among children; and
- The perceived poor performance of Canadian teams internationally.

This project has the full endorsement and support of the Federal – Provincial – Territorial Council of Sports Ministers. Under the direction of Sport Canada, the Canadian Sports Centre – Vancouver and Pacific Sport were given the monumental task of transforming the Canadian sport system and took an innovative approach to this challenge. A five-person (now six-person) Expert Group was established to lead the transformation. The Expert Group's approach was:

- ▶ To create a new generic long-term athlete development (LTAD) model for able bodied athletes.
- ▶ To create a supplement to the LTAD model that addressed the additional needs of athletes with intellectual or physical disability.
- ▶ To work with individual National Sport Organizations (NSOs) to adapt the generic model to meet sport specific needs.

Baseball Canada approved the establishment of its sport-specific Workgroup at its Fall Conference in Regina in November 2005. Baseball Canada had identified many of the same challenges facing the development of baseball in Canada at its Quebec City Summit in November 2003. The adoption of the LTAD pathway to transforming baseball in Canada is an apt innovative approach to the needs of both our system and our athletes. Following the development of our sport-specific LTAD model, Baseball Canada and its constituent members will then publish our development plans for implementation with stakeholders across the country.

This Plan is being proposed after study by an expert committee established by Baseball Canada. This group received suggestions and feedback from stakeholders and reviewed applied research, sport science, appropriate development principles and recommended programming in drafting suggested LTAD outcomes and programs.



FOREWORD by Jeff Francis



Baseball has been my life. From my years playing catch with my dad in the backyard to the mound I like to stand on in various Major League stadiums, this game has allowed me to learn not only skills but about life in general.

What I like about this game is the fact that it can be played everywhere, in parks and playgrounds, in back alleys and farmer's fields by both male and female participants, small children and elderly gentlemen, by raw amateurs and professionals. The game requires speed and a high level of eye-hand coordination that you can see in many other sports but it is not ruled by a clock.

Over the years, I have been fortunate enough to be surrounded by great coaches and participated in great programs and was particularly proud to wear the Canadian uniform at the first edition of the World Baseball Classic. Our country has seen great performances over the past few years by many Canadians. What an accomplishment to have had a Canadian win the American League Most Valuable player Award, the National League Rookie of the Year Award and the National League Cy Young Award over a three year span. As a country, I am sure all of you were as thrilled as I was when we qualified for the Olympics for the first time in 2004 and by watching my friend Adam Stern leading us to a great victory at the WBC against some of the best in the world.

Canada has shown its leadership in the development of this great game and this document is another proof. I want to invite you to join the family of Canadian Baseball by reading this document and be part of the great initiatives planned by this Baseball Canada working group. As you know, the importance of putting the young player at the center of our programs is vital.

I believe Long Term Athlete Development will achieve this goal.



Jeff Francis
(Major League
Baseball pitcher)



EXECUTIVE SUMMARY

On a warm early summer evening June 6, 2006, **Carlos Delgado** must have thought he had been transplanted back to Canada when he stepped into the batter's box to lead off the 9th for the NY Mets. **Russell Martin**, the Dodger rookie catcher flashed the sign to closer **Eric Gagne**. The pair were the first to make the climb from "Les Ailes du Quebec" and form a battery in the majors.

Justin Morneau winning the American League MVP award for his break-out season with Minnesota Twins, **Jason Bay** following up his National League Rookie-of-the-year season by being the 2nd highest NL vote getter for the MLB all-star game and the outstanding victory by **Canada** over the US in the World Baseball Classic all gave proof that Canadian baseball had arrived on the professional stage.



Russell Martin and Eric Gagne



While Canadian baseball has become more prominent professionally, the state of our game, and sport in general, has been under examination by sports governing bodies in Canada. Decreasing rates of participation, increasing obesity and a lack of overall fitness has resulted in a review of sports programming to ensure that our systems are athlete-centered, accessible and open to all, that is, the adoption of a long term athlete development model. Baseball Canada approved the establishment of its LTAD Workgroup at its Fall Conference in Regina in November 2005. The adoption of the LTAD pathway to transforming baseball in Canada is an apt innovative approach to the needs of both our system and our athletes.

Baseball Canada aims to be the Canadian leader in **"Throwing, Catching and Hitting"**. Young athletes in Canada will develop these fundamental sport skills through programs developed and introduced by Baseball Canada. With the relatively decreasing rate of participation in the sport at the youth level, questions naturally arise as to why Canada continues to produce a greater number of professional players to consistently compete with greater success on the international stage. This incongruity indicates how great baseball could be if the proper steps are taken at the youth level.

Our core principles in this journey will be:

- ▶ To develop the optimal training, competition and recovery program for Canadian baseball players that meet the needs of our athletes at each stage of their biological development and maturation
- ▶ To provide equal opportunity for all our players to participate and develop to their maximum potential
- ▶ To provide a program of excellence that will be athlete-centered, coach-driven and supported by administration, sport science and sponsorship that is world-class.

The greater the quality of preparation, the greater the likelihood that players of all abilities will remain active throughout their lifetimes and the greater the likelihood that the performance peaks of those who pursue excellence will be higher and maintained over a longer period. Sport research shows that rushing into competition frequently results in technical, physical, tactical, psychological and emotional shortcomings that hinder performance. While premature competition actually detracts from performance and achievement, progressive player development that follows a balanced formula of training, competition, and recovery tends to produce longer involvement in sport and higher achievement.

To produce both lifelong wellness and international excellence, an integrated model of player development that is player centered is needed. As this paper will demonstrate, the model must respect the physical, mental, and emotional maturation of players. This is the science and the motivating spirit behind the design of the Long-Term Athlete Development (LTAD) model for Canadian baseball.

The LTAD process forces us to examine why we do things the way we do. Why? Where are we going? For whom? These are the real questions we are trying to answer. Baseball leadership, including coaches and administrators often focuses on the question of "how" we do things. The initial step in our LTAD process is to examine the "why" and "who" questions. Our process asks these questions first and provides answers about what is good for our kids playing our game. The "how" questions will be addressed once we establish the answers to the "why" and "who" questions. This process is a continuing one and the challenges of managing change and continuously improving our programs, systems and processes will be a daunting task. Progress will only be made if significant effort is made in managing the 'people' side of change. The focus of systemic and program changes will be athlete-centered; however, the people side of change will require us to recognize that change is threatening to many stake-





holders, to develop an understanding of the resistance to change, to be inclusive and to permit stakeholders to feel they have a valued role and their past contributions will be honoured and valued. This process initiated rethinking ALL aspects of our sport including the three most difficult tasks of changing the baseball culture in order to outline a systematic development pathway for baseball, that is:

- 1) All Going in the Same Direction - (One Country, One Vision, One System)
- 2) Enabling the system to be Coach-driven – (Coach Development)
- 3) Managing Change to Promote a Culture Where LTAD is Dominant

The Baseball LTAD Model is built on the 10 Key Factors of LTAD as developed by sport science and research allowing us to develop the tools and resources to enhance the 10 S's related to sports training and performance. Factors such as Fundamental Skills, Calendar Planning, Trainability, Physical, Emotional, Mental and Cognitive development are all addressed in order to enhance the opportunities available to baseball players in Canada. The 10 S's of Stamina, Speed, Skill, Strength, Suppleness, Structure/Stature, p(S)ychology, sustenance, schooling (stress) and socio-cultural must all be addressed in complete program.

10 S's related to sports training and performance

- | | |
|---------------------|------------------------------|
| ◆ Stamina | ◆ Structure / Stature |
| ◆ Speed | ◆ P(S)ychology |
| ◆ Skill | ◆ Sustenance |
| ◆ Strength | ◆ Schooling (stress) |
| ◆ Suppleness | ◆ Socio-cultural |

A number of shortcomings in the current state of our game were identified, such as gaps in governance, lack of direct connection between Baseball Canada and many of its stakeholders. Most Canadians are not instructed in fundamental movement skills at an early age. Instead, young athletes find that much of their training comes in the form of competitive games in a "win at all costs" environment. This omission in basic athletic preparation is the first key failure that prevents Canadian athletes in all sports from developing their full genetic potential. Due to shortcomings in coach education, many coaches are not aware that this approach fails to utilize the natural windows of "trainability" for developing certain playing qualities and skills. Sadly, the deficits that players develop can **NEVER BE FULLY REMEDIED.**

LTAD offers to remedy this situation by providing a logical training, competition, and recovery program that follows the natural window of opportunity in each player's physical, mental, and emotional development. To date, the implementation of LTAD-based programs in Canada, Ireland, and the United Kingdom indicates that the LTAD framework upon which LTAD is based addresses these sports system shortcomings and significantly enhances the long-term development of players and athletes.

In examining the existing baseball system we identified 5 vital components – player development, coaching, leadership and organization, competition and facilities. Challenges, strategies and expected outcomes for each in a Baseball LTAD are outlined and proposed. A description of the 7 stages of athlete development for a baseball player is outlined using the 10 key LTAD factors, the 10 S's of training and performance, in particular as they relate to the vital components of our baseball system.

5 vital components

- Player development
- Coaching
- Leadership and organization
- Competition
- Facilities

The system of leadership and program delivery of Canadian baseball is often complex. We have outlined a chart as an example of the shared leadership in many areas and the collaborative model of programming. Baseball Canada will provide leadership and program development and design at all levels and delivers programs at Training to Compete and Training to Win. PSOs and Regions will provide leadership (administration and support) at most levels while delivering programs at Learning to Train and Training to Train. Local Associations will provide direct delivery and implement programs at most levels while coaches will teach and provide appropriate direct support to players at all stages.

The immediate steps to be taken are the adoption of the core principles as outlined and the consideration of the changes in governance and financial framework as recommended in this report in order to commence the implementation of the strategic initiatives.

This report lists Strategic Initiatives to be considered as first steps towards a LTAD system. Each initiative will require a tactical plan to be developed.



Implementing LTAD will require changes to every level of baseball governance in Canada, and it will require a concerted effort to educate parents, coaches, and administrators in its principles. Support for LTAD implementation will need to come from diverse stakeholders who may have to set aside personal interests for the greater success of Canadian baseball as a whole. For these reasons and many more, the implementation of LTAD must be approached with patience, understanding, resolve, and a firm sight on the end goal of strengthening Canadian baseball.

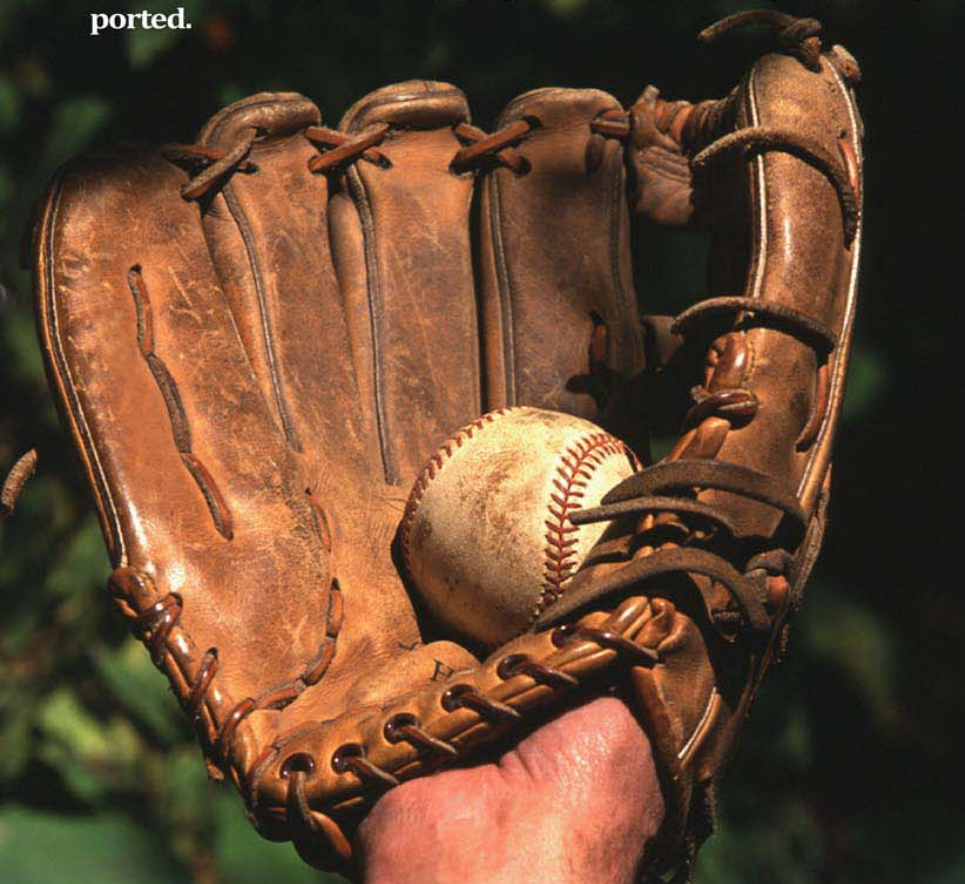
Delgado struck out and **Gagne** got his first save in 11 months as he returned from a serious injury. **Martin** was 2 for 4 in the game.



OUR CORE PRINCIPLES



Long Term Athlete Development (LTAD) is optimal training, competition and recovery programming with relation to biological development and maturation; equal opportunity for participation and competition; and athlete centred, coach driven and administration, sport science and sponsor supported.



The core concept of the Canadian LTAD system and our Baseball LTAD is that it recognizes that better athletic performance and a greater percentage of the population engaged in health-promoting physical activity are both outcomes of a well developed sport development system.

Within the LTAD system there are 7 stages of development through which athletes can pass through, and although they all pass through those stages, they do so at different ages depending on how advanced or delayed they are in their passage through adolescence.

Baseball Canada is not alone in this process. At least 55 Canadian National Sport Organizations have commenced the monumental task of developing sport-specific LTAD programs. Baseball Canada has had the benefit of monitoring the progress of other sports, the sharing of best practices and the guidance of world-class sport science experts in developing their own LTAD project.

Baseball Canada aims to be the Canadian leader in 'Throwing, Catching and Hitting'. Young athletes in Canada will develop these fundamental sport skills through programs developed and introduced by Baseball Canada.

Our core principles in this journey will be:

- ➔ To develop the optimal training, competition and recovery program for Canadian baseball players that meets the needs of our athletes at each stage of their biological development and maturation.
- ➔ To provide equal opportunity for all our players to participate and develop to their maximum potential.
- ➔ To provide a program of excellence that will be athlete-centered, coach-driven and supported by administration, sport science and sponsorship that is world-class.



Despite the decreasing participation, it is interesting to note Baseball Canada's performance at the elite level. 23 Canadians played in the Major Leagues in 2006 and that represents the highest number ever. Canada participated in the Olympics for the 1st time in 2004. We implemented a women's national program considered to be one of the best teams in the world, winning medals at the first two World Cups.



BASEBALL IN THE CANADIAN CONTEXT



BASEBALL has been known as American pastime for over 150 years now. In Canada, it's one of the most popular sports. It is played in virtually every country, and it engages players and spectators alike with its exciting movement and unpredictable action. In Canada, participation rates in baseball grew dramatically in the '80s and early '90s; however, since the late '90s, there appears to be decreasing enthusiasm for the game as a spectator sport. Blame can be placed on baseball strike, steroids scandal, Montréal Expos leaving town and competitors such as soccer and golf offering new options for kids for summer sports in Canada.

Everything has changed and nothing has changed over the years. Baseball remains a nineteenth century game which just entered the twenty-first century, altered but intact, and still the favorite sport of millions of people around the world. But baseball remains a conservative sport and at Baseball Canada, the decision was made to revitalize our sport by focusing on Long Term Athlete Development as a vehicle of change to create a world-class model which will re-energize our sport in Canada.

Baseball is a sport particularly well suited to the promotion of lifelong activity and wellness. The game is easy to understand and requires very little equipment, but demands the development of complex movement skills such as throwing, catching, hitting and running. Baseball Canada intends to be the sport leader in developing these skills. However, participation rates in recreational baseball across the general Canadian population diminishes significantly following adolescence, so the health promotion benefits of the sport are quickly reduced. This tendency towards reduced recreational activity is consistent with other sports in Canada.

With the relatively decreasing rate of participation in the sport at the youth level, questions naturally arise as to why Canada continues to produce a greater number of professional players to consistently compete with greater success on the international stage. This incongruity indicates how great baseball could be if the proper steps are taken at the youth level.

This document presents solutions to the problems we experience in developing baseball for lifetime wellness and excellence in Canada. This paper proposes the adoption of a scientific and practical model for player development that not only promotes lifelong wellness for Canadians of all playing abilities, but also promotes excellence within the arena of elite competition. This project will be a key first step in the pathway to player excellence. Like a batter-runner reaching first safely, we will now have to circle the bases to reach home.

PLAYER EXCELLENCE: Some Facts & Figures (2006)


As elite players, Canadians are currently represented in MLB professional system as follows:

- ▶ *Major Leagues - 23 players*
- ▶ *Minor Leagues (MLB) - 88 players*

Canadians are currently represented in independent and international professional leagues as follows:

- ▶ *Taiwan League - 1 player*
- ▶ *Mexican League - 1 player*
- ▶ *Independent Leagues - 65 players*

Playing in US Colleges – 704 players



Worldwide, the training of baseball players is becoming more sophisticated while we stubbornly cling to outdated traditions.

WHY AN ATHLETE-CENTERED FOCUS ?



Scientific research in athlete performance has demonstrated that it takes 8 to 12 years of training for players to reach elite levels. This translates into slightly more than 3 hours of daily practice for 10 years (Salmela, 1998), and it indicates the importance of long-term training for obtaining athletic excellence and competitive results. It has also been suggested that athlete training that follows logical, progressive development pathways is linked to higher rates of lifelong recreational participation for participants of all abilities.

We have to examine some of the fundamental questions related to how and why the game is played in Canada.

What is the current developmental pathway for baseball in Canada, and how effective has it been in promoting lifelong activity for athletes of all abilities? How effective has it been in producing elite players and baseball excellence? How accessible have our programs been to athletes at all stages and from all regions?

In Canadian baseball at present, many coaches and administrators involved in the development of young baseball players continue to approach training in a way that places too much emphasis on short-term competitive results. Short-term aims of "winning" a weekend league or tournament game are given more importance than long term gains in player performance and satisfaction that will translate into greater levels of excellence and lifelong wellness. The approach is largely coach or parent centered, and it is frequently neglectful of the long-term needs of players. Inconsistent access to appropriate training and playing facilities is also problematic.

As a striking example for the impact of a fixed January 1 cut-off age on opportunities for late birth babies, the project team looked at the months of birth for players participating at Pee Wee National Championships and at the Canada Cup. This initial research identified a number of issues to be addressed in developing and implementing a baseball system that provides equal access and opportunities for our young athletes to improved and world-class training and development programs. This Relative Age Effect is shown in the charts attached.

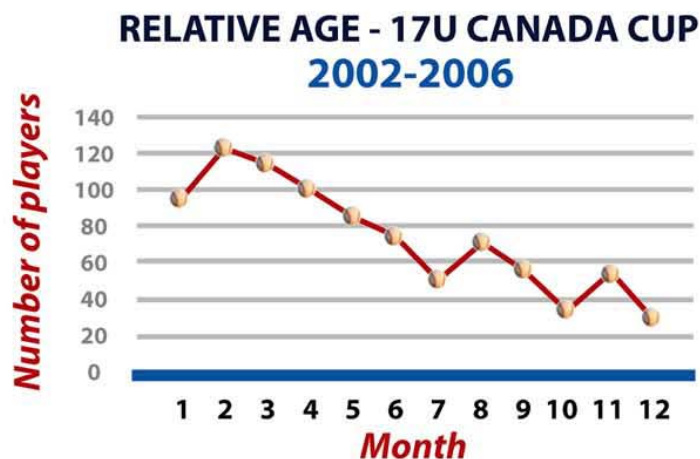
**RELATIVE AGE - PEE WEE NATIONALS
2002-2006**



It's fascinating to notice how privileged kids are when born in the first 4 months of the calendar year (January, February, March and April). With Baseball Canada's cut-off date for registration set to be January 1st, kids born later in the year are facing a major disadvantage during competition where, in some cases, could compete with and against kids that are almost 12 months older. Looking at our annual Baseball Canada Pee-Wee Championship and Canada Cup, here is what we can see from the participants' age. We recognize that socio-economic status, geographic location (access to facilities) and length of season also have significant impact on 'opportunities' available to players; however, we will examine our programs to address such inequities. We have not made specific proposals to address this Relative Age Effect; however, highlight it as an issue to be addressed in ensuring equal opportunity and access.



Compare the Pee Wee (previous page) & 17U Canada Cup charts with the Major League Baseball graph:



Baseball Long-Term Athlete Development (LTAD) will be a Baseball Canada specific adaptation of the Long-Term Athlete Development model (LTAD) developed by Sport Canada. LTAD is a scientific model for periodized athlete training and development that respects and utilizes the natural stages of physical, mental, and emotional growth in athletes, and it has already been adopted by major sports organizations in the United Kingdom, Ireland, and Canada.

The greater the quality of preparation, the greater the likelihood that players of all abilities will remain active throughout their lifetimes, and the greater the likelihood that the performance peaks of those who pursue excellence will be higher and maintained over a longer period. Sport research shows that rushing into competition frequently results in technical, physical, tactical, psychological, and emotional shortcomings that hinder performance. While premature competition actually detracts from performance and achievement, progressive player development that follows a balanced formula of training, competition, and recovery tends to produce longer involvement in sport and higher achievement.

This program will be designed to:

- ▶ Promote lifelong enjoyment of athletic activity.
- ▶ Provide a structured player development pathway.
- ▶ Describe best practices for elite player development.
- ▶ Create long-term excellence.
- ▶ Provide equality in access and opportunities to athletes throughout Canada.

LTAD aims to encourage lifelong wellness and promote optimal performances for elite players, particularly in the growth and development years when performances can become unstable and lead to dropout.

LTAD encourages players to enjoy the game and improve their performances through:

- ➔ Logical and integrated training and practice programs.
- ➔ Application of growth, development, and maturation principles.
- ➔ Optimal structure for competition at all stages of LTAD.



To produce both lifelong wellness and international excellence, an integrated model of player development is needed that is player centered. As this paper will demonstrate, the model must respect the physical, mental, and emotional maturation of players. This is the science and the motivating spirit behind the design of the Long-Term Athlete Development (LTAD) model for Canadian baseball.

"Baseball is the only thing besides the paper clip that hasn't changed."

Bill Veeck

THE CHALLENGES WE FACE



The game of baseball is dominated by challenges. The pitcher challenges the hitter; every player faces the challenge of excelling in competition, of going to the next level, of matching skills against another skilled athlete, against another team.

The athlete who excels rises to this challenge. He performs at his best when challenged.

The process of implementing a change in our culture is an intimidating challenge. We must be prepared to meet this challenge head on, to do the work necessary to meet the obstacles we will face in implementing a program to develop the best in our athletes. With challenge comes opportunity, the opportunity before us to make a lasting impact on the future development of Canadian baseball players.

Over the years, the sport of baseball had the reputation of being conservative in every aspect of the game. Here are some facts:

- Baseball waited over 45 years to include the first black player
- Baseball waited over 30 years to ban the spitball from the game
- Baseball waited 70 years to make the batting helmet mandatory
- And 88 years to make the catcher helmet mandatory
- For more than 50 years, defensive players left their glove on the field when the 3rd out was recorded ...
- And even today, the foul pole is still fair...

We all have a role to play in introducing an integrated system of athlete development that will be a world-class model of excellence. Our challenge will be to apply the most effective tools to make all stakeholders part of our team.

Our mission is to turn challenges into opportunities, to convert those opportunities into action and to engage all stakeholders as partners in meeting the goals of long-term athlete development.



What do we expect from the LTAD process?

The expected outcome of the process will be a framework that will fully integrate and align athlete development, coaching development and all elements of our baseball system into a guide for planning for optimal performance for all stages of athlete development. This process will identify gaps in our existing system and provide guidelines for problem solving.

As we see, 'Change' in our sport is often incremental. In addition to basic inertia, often we see barriers in 'how' we effect change. The response is often the words "It's complicated". This is an oft-used excuse in order not to take our responsibilities, when our membership is going down for example.

As soon as our membership began to decrease, we said the situation was more complicated because of other sports, because of computers, because of internet and because of because. Similarly, the debate or discussion more often involves the question of 'how' we will effect change before we settle the issue of 'why'.

The LTAD process forces us to examine why we do things the way we do. Why? Where are we going? For whom? These are the real questions we are trying to answer. Baseball leadership, including coaches and administrators often focuses on the question of 'how' we do things. Baseball people are always looking for recipes, yet kids are asking "why" all the time. This is simple and natural. Adults and especially baseball people have just reversed this logic. They do programs for doing programs and coaches are doing drills because we have to do drills and that's the way it's always been done. Kids have been playing for years with kids standing in the outfield, playing in the sand, sitting down, sleeping, while they never get to touch the ball. But we keep doing it because we have always done it this way.

The initial step in our LTAD process is to examine the 'why' and 'who' questions. Our process asks these questions first and provides answers about what is good for our kids playing our game.

We have examined our game and will make recommendations based on an athlete-centered approach. We are proposing strategic initiatives to address the issues, challenges and opportunities available to use. A tactical plan will be developed for each stage and key component of our system to bring baseball in Canada to a true leadership position in sports in Canada and in baseball on the international stage.

"I believe in the Rip Van Winkle theory: that a man from 1910 must be able to wake up after being asleep for 70 years, walk into a ballpark and understand baseball perfectly."

Bowie Kuhn



BASEBALL LONG TERM ATHLETE DEVELOPMENT MODEL



The process to develop the Baseball LTAD Model was extensive, inclusive and comprehensive. Knowledge was sought from experts across Canada and in-depth discussions have analyzed how our sport can adjust to integrate LTAD into all that we do. We applied the best sport science and experience available to consider potential solutions to the challenges faced. In considering or posing resolutions, we must test all against an athlete-centered result.

Change will only be effective for Baseball when we change

*what we believe,
what we do and
how we do it.*

This process is a continuing one and the challenges of managing change and continuously improving our programs, systems and processes will be a daunting task. Progress will be made only if significant effort is made in managing the “people-side” of change. The focus of systemic and program changes will be athlete-centered; however, the people side of change will require us to recognize that change is threatening to many stakeholders, to develop an understanding of the resistance to change, to be inclusive and to permit stakeholders to feel they have a valued role and that their past contributions will be honoured and valued.

We will establish the ‘why’ side of the change process and then find the most effective way to implement the change – find the way ‘how’ to make the system work. This process initiated rethinking ALL aspects of

our sport including the three most difficult tasks of changing the baseball culture in order to outline a systematic **development pathway** for baseball, that is:

All Going in the Same Direction - (One Country, One Vision, One System):



Ensuring that the stakeholders are coordinating, directing and developing programs that addresses the appropriate developmental principles relating to training, competition and support systems at each stage of development.

Enabling the system to be Coach-driven - (Coach Development):



Education: ensuring that coaches are working in developmentally appropriate ways and that coach training focuses on nurturing the requisite skills to promote LTAD principles.

Service: Developing the new tools and resources needed to coach in an athlete-centered environment.

Recruitment and retention: identifying, promoting and retaining competent coaches.

Managing Change to Promote a Culture Where LTAD is Dominant:



Ensuring that stakeholders, including sports leaders, athletes, parents and officials, can focus on long-term development – even when this means less short-term success and changes in status and expectations.



OVERVIEW OF THE CANADIAN BASEBALL LTAD MODEL



Stage	LTAD Stage	Focus / Age	Skill Level	Program Level	Coaching Stage
Inning 1	ACTIVE START Playing catch	Females and Males 6U	Fundamentals movements and play	Non-Structured program	Training Not Needed
Inning 2	FUNDAMENTALS My First Cap	Females and Males 9U	Fundamentals movements skills	Entry Level Program Rally Cap Program	On-line Module (In Training)
Inning 3	LEARNING TO TRAIN Learning the game	11U Females 12U Males	Fundamentals Sport Skills	Local teams (Branded) program	Initiation Coach - Trained Regional Coach - Trained
Inning 4	TRAINING TO TRAIN Being identified	16U Females 15U Males	Developing specific skills and position play	Regional Teams Provincial and National Events Baseball Academies	Regional and Provincial Coach Trained or Certified
Inning 5	LEARNING TO COMPETE From Dream to Action	Females and Males 18U	Consolidating specific skills and position play	Regional Teams Provincial Events Canada Cup Baseball Academies	Competition Development Trained or Certified
Inning 6	TRAINING TO COMPETE Knocking at pro door	Males 23U	Consolidating specific skills and position play and training specific	National Junior and Senior Team US Colleges Pro teams	High Performance-Trained or Certified
Inning 7	LEARNING TO WIN Finally drafted	Females and Males 18U	Fine tuning Specific skills and position play	National Junior Team US Colleges Baseball Academies	High Performance-Trained or Certified
Inning 8	TRAINING TO WIN In the Show	21 + Males	Perfecting Specific skills and position play	Pro teams World Cup and Classic Olympic Games	High Performance Trained or Certified and/or pro experience
Inning 9	ACTIVE FOR LIFE Your Hall of Fame	Females and Males All ages	Enjoyment and play	Move from Developmental to Community Competitive / Recreational	Community Coach – On going

THE 10 KEY FACTORS BEHIND LTAD



The LTAD model is built on the following research, principles, and tools.



The 10-year Rule

Scientific research has determined that it takes at least 10 years and 10,000 hours of training for athletes in any sport to reach elite performance levels. While the LTAD model promotes basic physical wellness for a broad range of baseball players regardless of ability or disability, it has also

been designed to address the long-term needs of players who pursue excellence for professional performance according to the 10-year rule. Research has shown that baseball players reach their peak as an athlete at 27 years of age.

For an athlete and coaches, this translates to slightly more than 3 hours of training or competition daily for 10 years.

Recommendation: Further research be conducted to confirm the peak “age” of the elite baseball player and the relative contributions of physical, mental, cognitive and emotional training in training periods leading to peak performance.

The FUNdamentals

All sports are based on fundamental movement skills and sports skills. Basic movement skills include agility, balance and coordination, while basic sports skills include running, jumping,



throwing, striking, catching, and dribbling. Research has demonstrated that children will achieve excellence in a broad variety of sports if they are trained to be physically “literate” in these skills prior to their adolescent growth spurt, and they will also be more likely to find satisfaction in lifelong physical activity. Baseball Canada can become the Canadian leader to develop the key fundamental skills of throwing, hitting (striking) and receiving / catching. These FUNDamental movements and motor skills will be introduced through fun and games in programs such as Rally Cap, including the basic sport skills of throwing, hitting and catching.

Recommendations:

Develop and implement a fundamentals baseball program (Rally Cap) including:

- ▶ Ensure available nation-wide, link Rally Cap to coach training, create a Rally Cap guide for parents, create a training guide for coordinators.
- ▶ Develop and implement a “Learning to Train” baseball program to complement and follow Rally Cap (including increasing penetration of Winter Ball program in schools and branding of new program).



Rally Cap and Winter Ball programs

3

Specialization

Some sports, such as gymnastics and figure skating, require “early specialization” to obtain elite performance levels while other sports demonstrate better athlete performance through “late specialization,” such as basketball, baseball, hockey and soccer. As a late specialization sport, baseball relies on a variety of components in the overall sport system (schools, recreation centres, other sports) to develop physical literacy during the FUNdamental stage, as well as speed and suppleness training into adolescence.

LTAD actively discourages early specialization in baseball (e.g. prior to the age 12 years old or puberty) since premature specialization contributes to imbalanced physical development, overuse injuries, early burnout, and inadequate development of movement and sports skills.

Developmental Age

Everyone passes through the same stages of development from early childhood through adolescence, but the timing, rate, and amount of their development varies. This is described as the difference between chronological age and developmental age. Two children may be the same chronological age (e.g. 11 years old), but at the same time they may be four to five years apart in developmental age. LTAD asks baseball coaches and administrators to take developmental age into account when they design programs and select players. The Relative Age Effect is one major issue we have identified as a priority in system review.

Early maturers have a significant biological advantage over their competitors and have traditionally been selected over late maturers at an early age. Early maturers catch up, further confirming that all children and young athletes do not evolve at the same rate. Few, if any existing programs take a long-term development approach with either early or late maturation considerations in program design.

4



Age?

When coaches consider training, competition and recovery programs for a player regardless of LTAD stage, they must consider the 'age' of the athlete. This is not done simply by checking the date of birth. There are a number of 'ages' which must be considered including:

- 1. Developmental age (Physical, Mental and Emotional)
- 2. General Sport Training age
- 3. Baseball Training age
- 4. Skeletal age
- 5. Chronological age

The better the coach is able to determine the 'age' of his / her player, the higher quality the training program will be.



Trainability

The physiological system of each player can be trained at any age, but there are critical periods in the player's development when the body is especially responsive to specific types of movement and skills training. To reach their genetic potential, players need to receive the right type of training at the correct stage of development. If these critical periods are missed, players may grow to be fast, throw hard, and swing a bat well, but they will never be as fast, throw as hard, or hit as well as they might have done with timely specialized training.

For each skill, the optimum period may be a different stage. For example, it is critical to the fundamental sport movements (throwing, hitting, catching) that these skills be emphasized at the Learning to Train stage (9-12 years). It is vital that coaches, parents and club administrators are aware of these critical periods of "accelerated adaptation" so that they become fully exploited.

Physical, Mental, Cognitive, and Emotional Development



As players grow from childhood through adolescence, they experience significant changes in physical, mental, cognitive, and emotional development. Coaches and administrators need to consider these changes carefully when they plan training programs and design competition formats. Failure to address these changes may result in mental or emotional burnout, undue mental stress, anxiety, diminished confidence, and early exit from the sport. Baseball is a sport in which the emotional and mental skill development has a significant impact on overall athlete development.

Since players are often placed in stages according to their technical abilities, the other performance factors must be adjusted accordingly.

Baseball is 90% mental. The other half is physical.

Yogi Berra

Periodization

Periodization refers to the time frames that are used to schedule player training, competition, and recovery. Baseball programs at every stage of player development need to follow a logical and scientific schedule to ensure that players remain healthy and achieve optimum perfor-



mance at the required time. Periodization plans are adjusted at each stage of development to account for player growth, maturation, and trainability. Our players are impacted because of program variability due to periodization affected by other sports, weather and competition-only based programs.

Recommendation:

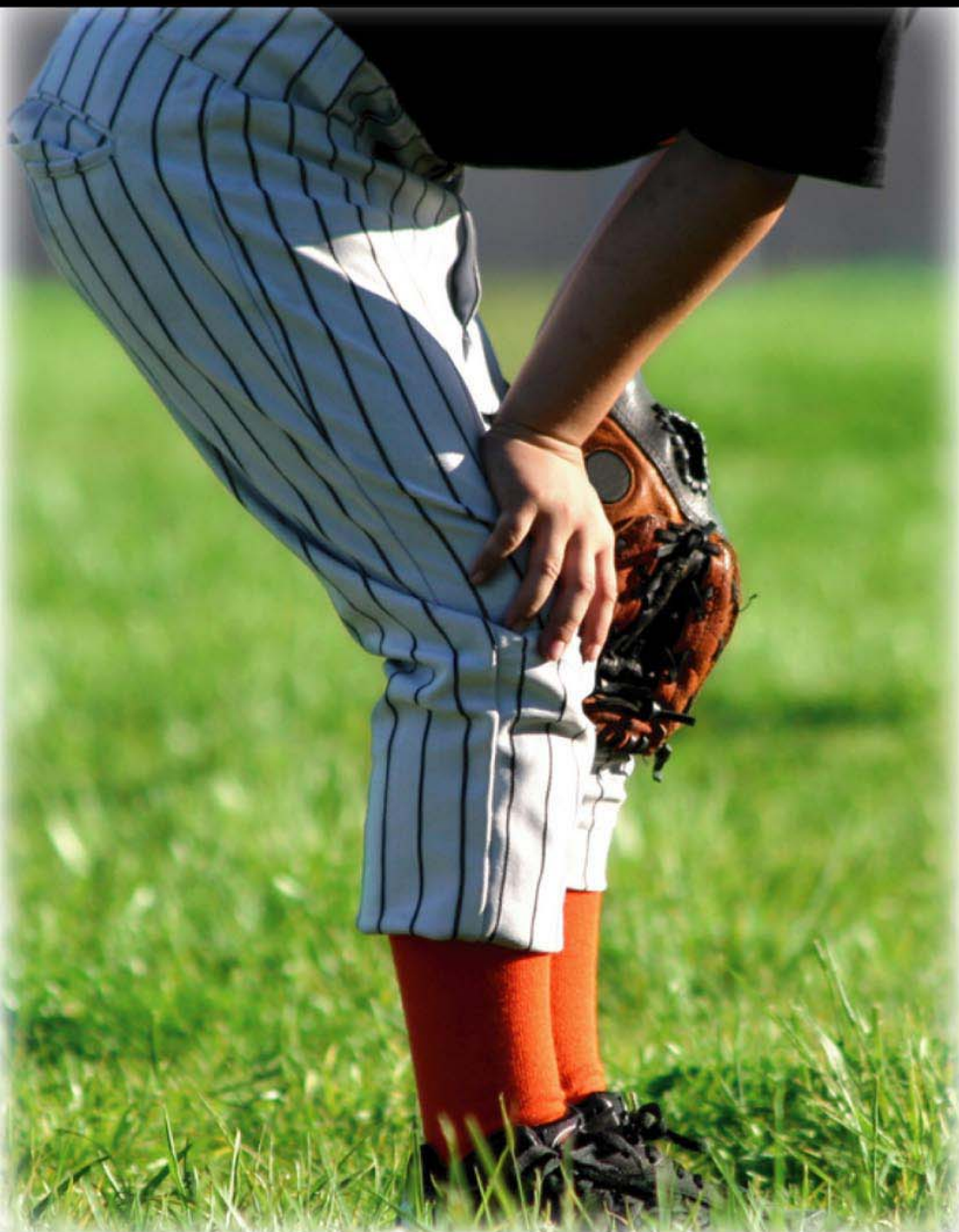
Develop a comprehensive matrix of what capabilities are required at all stages of a baseball players development (including guidelines for off-season pre-season and in-season training plans for each stage).

Calendar Planning for Competition



The calendar for game competition has a critical impact on the development of each player. Different stages of development have different requirements for the type, frequency, and level of competition. At certain stages, training physical capacities in players is more beneficial to their long-term performance and wellness than competitive game or tournament experiences. Put simply, short-term competitive success should not be emphasized for children and youth players at the expense of their long-term development. If players are to reach levels of excellence and remain active for life, training-to-competition ratios at each stage of development must be sensitive to their long-term needs.

Often our programs are more likely to be determined by field availability due to weather rather than the athlete's needs, similarly, governed by tradition more than the appropriate competition / training / rest ratios.



Once the training programs have been designed around growth and development principles, teams will need a competition environment to facilitate performance. Optimal competition calendar planning allows for the strategic development of physical capabilities or other critical performance factors to foster success and continued participation.

People ask me what I do in the winter when there's no baseball. I'll tell you what I do. I stare out the window and wait for spring.

Roger Hornsby
Hall of Famer

Recommendation:

Complete a competition review to include:

- Stream players during and after PHV
- Ensure appropriate training to competition ratio
- Review rules considering LTAD and alignment of rules nationally
- Ensure appropriate level of competition at each stage by designing competitions appropriate to stream and age. Regional (12+ years) to National (15+ years)
- Realign competition to address streaming which includes more regional events so more athletes are involved in the national training pool

System Alignment and Integration



LTAD recognizes that long-term player development is influenced by a number of different elements and groups in the overall baseball and sports system, such as school teams, physical education programs, recreational activities, baseball clubs, and regional associations. To optimize player development, LTAD asks that these different groups and institutions become integrated

and aligned with each other, ensuring that they are mutually supportive, clear in their roles and responsibilities, and aware of how they contribute to player learning and development. Players will best develop in a coordinated baseball system that is clearly defined, logically structured, and based upon consistent principles.

Through LTAD, players are able to identify the opportunities available to them and to understand the pathway they need to follow, whether their aim is long-term excellence or simply remaining active for life. All stakeholders need to have a clear understanding of their roles and responsibilities.

BASEBALL CANADA: Provides leadership, designs programs and promotes ...

PSO's: Provides leadership, administers and delivers programs ...

Associations: Implements programs ...

Coaches: Teach and direct the athlete ...

Continuous Improvement

LTAD is based on the best available research in sports science and the best practices in player development around the world, but knowledge and research continue to grow. LTAD should respond to



new scientific research and baseball-specific innovations to ensure that the development system continually optimizes the systematic and logical delivery of programs, and LTAD may even initiate new research. As well, LTAD should drive ongoing education, promotion, and advocacy regarding player development with government, media, educators, parents, coaches, administrators, and sports scientists.

I'm never satisfied. I can't stand satisfaction. To me, greatness comes from that quest for perfection.

Mike Schmidt



THE 10 S's OF TRAINING AND PERFORMANCE



The original 5 Basic S's of training and performance were introduced in the **Canadian Sport for Life: Long-term Athlete Development** document. The 5 S's are: stamina (endurance), strength, speed, skill, and suppleness (flexibility), (Dick, 1985). Building on the physical development, an additional five S's create a complete, holistic, training, competition and recovery program.

Thus, there are 10 S's of training which need to be integrated when developing annual training, competition and recovery plans. Each of these capacities is trainable throughout a player's lifetime, but there are clearly critical periods (or sensitive periods) in the development of each capacity during which training produces the greatest benefit to each athlete/player's improvements.

The critical periods in trainability are referred to as "critical windows of accelerated adaptation to training."

These critical periods vary among individuals as each athlete/player is unique in his / her genetic makeup. While the critical periods follow general stages of human growth and maturation, scientific evidence shows that humans vary considerably in the magnitude and rate of their response to different training stimuli at all stages. Some players may show potential for excellence by age 11, whereas others may not indicate their promise until age 15 or 16. Consequently, a long-term approach to athlete/player development is needed to ensure that players who respond slowly to training stimuli are not "short-changed" in their development.



The critical periods in trainability are referred to as "critical periods of accelerated adaptation to training." If athletes/players are to reach their genetic potential, correct training must be provided during these critical periods, during which there is accelerated adaptation to training.

S **tamina** (Endurance)

The critical window for training stamina occurs at the onset of the growth spurt or Peak Height Velocity (PHV), commonly known as the adolescent growth spurt. Athletes/players need increased focus on aerobic capacity training (continuous or aerobic interval workloads) as they enter PHV, and they should be progressively introduced to aerobic power training (anaerobic interval workloads) as their growth rate decelerates.

S trength

There are two critical windows of trainability for strength in girls: immediately after PHV and after the onset of menarche. Boys have one strength window, and it begins 12 to 18 months after PHV.

S peed

There are two critical windows of trainability for speed. For girls, the first speed window occurs between the ages of 6 and 8 years, and the second window occurs between 11 and 13 years. For boys, the first speed window occurs between the ages of 7 and 9 years, and the second window occurs between 13 and 16 years. During the first speed window, training should focus on developing agility and quickness (duration of the intervals is less than five seconds); during the second speed window, training should focus on developing the anaerobic alactic power energy system (duration of the intervals is 10-15 seconds).

S kill

Girls and boys both have one window for optimal skill training. For girls, the window is between the ages of 8 and 11 years, while in boys it is between 9 and 12 years. During this window, young athletes should be developing physical literacy. Physical literacy is the development of **fundamental movement**





skills and fundamental sports skills that permit a children to move confidently and with control, in a wide range of physical activity and sport situations. It also includes the ability to “read” what is going on around them in an activity setting and react appropriately to those events. Physical literacy is the foundation of life-long involvement in physical activity and also for high performance participation.

Suppleness

The critical window of trainability for suppleness occurs between the ages of six and 10 years in both girls and boys. However, because of the rapid growth special attention should also be paid to flexibility during the growth spurt.

Structure **S**tature

This component addresses the seven stages of growth (Phase 1: very rapid growth; Phase 2: very rapid deceleration; Phase 3: steady growth; Phase 4: rapid growth; Phase 5: rapid deceleration; Phase 6: slow deceleration; Phase 7: cessation of growth) in the human body linking them to the windows of optimal trainability. It recognizes stature (the height of a human) before, during and after maturation guiding a coach or parent to the measurements needed to track growth. The tracking of stature as a guide to developmental age allows planning to address the critical or sensitive periods of physical (endurance, strength, speed and flexibility) and skill development. Diagnostics to identify individually relevant critical periods of accelerated adaptation to training are essential to design and implement optimal training, competition and recovery programs.

p**S**ychology

Sport is a physical and mental challenge. The ability to maintain high levels of concentration and remain relaxed with the confidence to succeed are skills that transcend sport to everyday life. To develop mental toughness for success at high levels requires training programs which are designed specific to the gender and LTAD stage of the athlete. The training programs should include key mental components identified by sport psychologists: concentration, confidence, motivation and handling pressure. As an athlete progresses through LTAD stages, the mental training aspect will evolve from having fun and respecting opponents to visualization and self-awareness to goal setting, relaxation and positive self-talk. To master the mental challenge of sport, those basic skills are then tested in increasingly difficult competitive environments.

Ultimately the planning, implementing and refining of mental strategies for high level competition will determine podium performances. The mental training program is critical at any LTAD stage as dealing with success and failure will determine continuation in sport and physical activity, therefore dramatically affecting an individual lifestyle.

Sustenance

Sustenance recognizes a broad range of components with the central theme of replenishing the body. This is to prepare the athlete for the volume and intensity required to optimize training or living life to the fullest. Areas addressed are nutrition, hydration, rest, sleep and regeneration, all of which need to be applied differently to training (life) plans

depending on the stage within the LTAD. Underlining sustenance is the need for optimal recovery management moving the athlete to the 24/7 model which places a high degree of importance on the individual's activities away from the field of play. For proper sustenance and recovery management there is a need to monitor recovery by the coach or parent through the identification of fatigue. Fatigue can come in many forms including metabolic, neurological, psychological, environmental and travel. While overtraining or over-competition can lead to early burn-out, improperly addressing sustenance can lead to the same result.

Schooling (Stress)

In training program design, the demands of school must be considered. This is only limited to the demands placed by school sports or physical education classes. This includes integrating school academic loads, timing of exams and other stresses. When possible, training camps and competition tours should compliment, not conflict, with the timing of major schools academic events.

Overstress should be monitored carefully. Overstress refers to the everyday stresses of life, like schooling, exams, peer groups, family, boyfriend or girlfriend relationships as well as increased training volume and intensities.

Interference from other school sports should be minimized, communication among coaches who are responsible for delivering the training and competition programs is essential. A good balance should be established between all factors, and the coach and the parents should be working on this together.



Children often begin to play baseball after the critical windows of trainability for speed, skill, and suppleness have passed. These children are therefore dependent on schools, recreation programs, and other sports to provide timely training in these capacities. LTAD advocates that baseball groups build relationships with these organizations to promote and support appropriate training. If players miss these training periods entirely, coaches will need to design individualized programs to remedy any shortcomings.

Socio-Cultural

The socio-cultural aspects of sport are significant and must be managed through proper planning. Socialization via sport will ensure that general societal values and norms will be internalized via sport participation. This occurs at the community level and, as an athlete progresses through the LTAD stages, can lead to international exposure. This socialization can be broadening of perspective including ethnicity awareness and national diversity. Within the travel schedule, recovery can include education of competition location including history, geography, architecture, cuisine, literature, music and visual arts. Proper annual planning can allow sport to offer much more than simply commuting between hotel room and field of play.

Sport socialization also must address sport sub-culture. As well, coaches and parents must guard against group dynamics that create a culture of abuse or bullying. Ethics training should be integrated into training and competition plans at all stages of LTAD.

Overall socio-cultural activity is not negative distraction or interference with training and competition activities. It is a positive contribution to the development of the person and the athlete.



LTAD can provide solutions to many of the challenges that face Canadian baseball, but before we ask what solutions we desire, we need to have a clear vision of where we want to go with Canadian baseball. Before we look at where we want to go, we need to see clearly where we are.

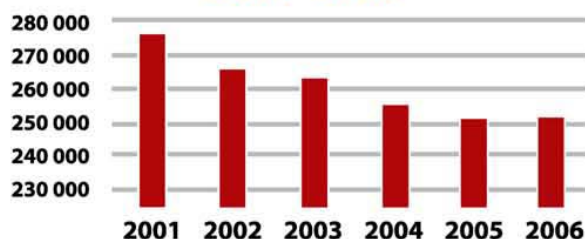
STATE OF GAME AND ITS VITAL COMPONENTS



Canada has high rates of amateur youth participation in baseball, but participation quickly diminishes in late adolescence. Yet, at the elite level, our representation in professional clubs is increasing and our achievements in international competitions are improving year after year. If Canada is to build on its success in both men's and women's programs internationally, the base number of players will have to be expanded significantly and optimal programs adopted.



**BASEBALL PLAYERS IN CANADA
2001-2006**



In 2006, there were 252,000 players registered in Canada between youth and adult programs. Youth players represented 95% of this figure while adult players numbered 5%. The figures suggest that we are losing an opportunity to promote lifelong wellness through baseball, and we likely have less than optimal numbers of players continuing on a development pathway to excellence.

Our research indicates that we are not capturing the complete data on participation in Canada. Not all programs are affiliated with Baseball

Canada and, as well, provincial associations have different membership rules and guidelines that do not give accurate information on participation rates. In addition to not capturing the participation rates, in particular in the stage of Active for Life, we do not capture data or information related to cross-over of our trained athletes in other related sports.

FROM 2004 FIGURES

	Players	Coaches
British Columbia	40 680	8958
Alberta	10 410	1127
Ontario	143 557	2616
Quebec	29 059	5491

We want to have more Canadians of all ages playing baseball for recreational activity, and we want to see more Canadian players and teams competing at the highest professional and international levels. The formula for achieving these aims is complex, and it requires intelligent application of resources, leadership, and sport science.

Currently, Canada does not have a cohesive, coherent model for promoting lifelong wellness and elite achievement through baseball. In this regard, there are several issues of concern that baseball shares with other sports in Canada:

- ▶ Young players over-compete and under-train.
- ▶ Competition-to-training ratios are too high, particularly in the early years.
- ▶ Young players often follow adult training and competition schedules.
- ▶ Females are joining baseball in increasing numbers and young female players primarily follow programs designed for males.
- ▶ Training/practice in the developmental years often focuses on winning and not on development (short-term result versus long-term process).
- ▶ Chronological age influences coaching and selection rather than biological age (physical maturation).
- ▶ The so-called critical periods of accelerated adaptation are under-utilized.
- ▶ Poorly planned programs between the ages of 6-16 result in athletes never reaching their genetic potential.
- ▶ The “best” coaches are encouraged to work at elite levels – they are not recognized as essential to the success of developmental programs in novice groups.
- ▶ Coach education tends to provide only a superficial understanding of the growth, maturation, and development stages of young players.
- ▶ There is no integration between physical education programs in the school system, community recreational programs, and elite competitive programs.

Most Canadians are not instructed in fundamental movement skills at an early age. Instead, young athletes find that much of their training comes in the form of competitive games in a “win at all costs” environment. This omission in basic athletic preparation is the first key failure that prevents Canadian athletes in all sports from developing their full genetic potential.

Due to shortcomings in coach education, many coaches are not aware that this approach fails to utilize the natural windows of “trainability” for developing certain playing qualities and skills. Sadly, the deficits that players develop can never be fully remedied.

As these young players progress through their playing careers, their lack of basic skill mastery means that they are unable to play and enjoy baseball to their full capacity. Consequently, they fail to develop the deeper satisfaction and appreciation of the game that would motivate them to remain lifelong participants or inspire them towards long-term elite development.



The key components impacting on LTAD for Baseball in Canada can be broadly categorized under:

- ➔ **PLAYER DEVELOPMENT**
- ➔ **COACHING**
- ➔ **LEADERSHIP & ORGANIZATION**
- ➔ **COMPETITION**
- ➔ **FACILITIES**

LTAD offers to remedy this situation by providing a logical training, competition, and recovery program that follows the natural windows of opportunity in each player's physical, mental, and emotional development. To date, the implementation of LTAD-based programs in Canada, Ireland, and the United Kingdom indicates that the LTAD framework upon which LTAD is based addresses these sports system shortcomings and significantly enhances the long-term development of players and athletes.

To understand how LTAD may help the development of Canadian baseball players and lifelong wellness, we first need to examine the major components of the game as played in Canada. This examination has to be done in light of the challenges and issues faced by each component, potential changes or improvements to the game taking into account LTAD principles and specific implementation priorities in a baseball-specific context.





PLAYER DEVELOPMENT

CHALLENGES

At present, the Canadian approach to developing baseball players is not consistent between organizations across the country, and at times it even contravenes the mental, emotional, and physical needs of players.

PLAYER DEVELOPMENT

As revealed by current research, correct player development requires the application of a consistent training and competition model that is based on sport science and proven experience.

EXPECTED OUTCOMES

- More Canadians of all ages playing baseball for recreational activity
- More Canadian players and teams competing at the highest professional and international levels
- High quality regional and national training centres in place.

STRATEGIES

- Intelligent application of resources, leadership, and sport science
- More players participate in quality baseball programs that are matched to their age and stage of development
- Clear pathways exist for all players, coaches, umpires and administrators within the game
- Adoption of an athlete-centered focus to program by application of the 10 key LTAD factors to train sponsored programs
- Encourage physical literacy through directed programs and partnerships

COACHING <<<



CHALLENGES

At present, the Canadian system for identifying and training coaches is inadequate, and the quality of coaching is very inconsistent. Baseball Canada does not have a clearly defined Long Term Coaching Development plan that matches the needs of athletes as well as coaches. The existing situation:

- Poor Retention of coaches
- No continuing development
- Single system – based on vertical levels

COACHING

To develop players who pursue elite competition or lifelong wellness, there must be coaches qualified to train them. Baseball Canada must ensure that the major changes in its training program meet the needs, goals and objectives of both the Baseball LTAD and the NCCP. The entire LTAD process is coach driven and the concurrent and integrated development of a new CDM (Coaching Development Model) will be key to the overall success of LTAD.

EXPECTED OUTCOMES

- Education: ensuring that coaches are working in developmentally appropriate ways and that coach training focuses on nurturing the requisite skills to promote LTAD principles.
- Service: Developing the new tools and resources needed to coach in an athlete-centered environment.
- Recruitment and retention: identifying, promoting and retaining competent coaches.

STRATEGIES

New Long Term Coaching Development model featuring:

- Competency based training (NCCP conversion)
- LTAD compliant for all contexts
- New tools & resources to meet needs of coaches
- Training and resources specific to the Context in which the coach participates
- Based on Adult education principles (self-directed)
- Legacy coaches recognized and supported
- Integrated with theory and applying best sport science available



LEADERSHIP AND ORGANIZATION

LEADERSHIP and ORGANIZATION

The development of Canadian baseball is hampered by inconsistent leadership and ineffective organization. Players and coaches need the support of solid administrative frameworks to deliver programs that maximize player participation, development, and success.

CHALLENGES

- Baseball Canada has no direct link to the stakeholders for whom they develop programs
- There are many gaps and inconsistencies in staffing, program administration and access throughout the country
- As many as 150 different sets of rules apply throughout Canada
- Decision-making is often not athlete-focused
- Not all organizations operating programs in Canada have direct link to Baseball Canada

STRATEGIES

- Create a financial framework to initiate and sustain programs on a national basis
- Clarify program development and delivery roles, responsibilities and linkages between primary baseball stakeholders
- Create positive partnership models between baseball organizations, outside service groups and funding agencies
- Develop more and better-trained administrative staff and support for volunteers

EXPECTED OUTCOMES

- A sustainable financial framework for programs – for design, delivery and maintenance
- Programs that are athlete-centered, LTAD appropriate and accessible throughout the country
- Accountable governance structures and best-practices for organizations exist at all levels
- Staffing levels available to deliver programs of a National scope

COMPETITION <<<



CHALLENGES

- Competition structure is not integrated or rationalized at all levels across Canada
- Competitive seasons are based on tradition, weather and other programs
- No periodization guidelines are available for appropriate training, competition, recovery
- There is inconsistent access to competition and training
- Appropriate off-season programs are not available to many players

COMPETITION

If a Canadian player is fortunate enough to receive good coaching and train with an appropriate development model in a well managed environment, their next challenge is playing within a suitable competition format. The current game formats, leagues, and tournaments in Canada are often unsuitable for the players and regions they serve.

STRATEGIES

- Undertake a competition review
- Ensure appropriate training to competition ratio and rest / recovery requirements at key stages
- Review rules considering LTAD and alignment of rules nationally
- Ensure appropriate level of competition at each stage by designing competitions appropriate to stream and age
- Introduce LTAD materials into coach training for all contexts
- Establish appropriate programs and access for athletes to enter the stages at different entry points

EXPECTED OUTCOMES

- Rationalized competition structure that is LTAD compliant
- Defined periodization of training, competition and recovery phases for all development stages
- Clearly defined roles for different organizations and competitions
- Guide for player development during games for each stage of development



>>> FACILITIES

FACILITIES

The backdrop for every playing experience is the playing surface itself, and at elite levels, available ancillary training facilities for peak fitness and performance training. The current status of baseball facilities in Canada needs to be improved.

CHALLENGES

- Access to programs at all ages is limited by availability of facilities
- Shortage of high level training facilities (field turf, indoor, regular fields)
- Facility needs not prioritized
- Sponsorship and funding is significantly less per capita than other baseball countries

EXPECTED OUTCOMES

- National Facilities strategy to increase number of indoor facilities and more baseball-specific outdoor fields
- Public-private partnerships exist to support investment in baseball-owned facilities
- Partnerships between Baseball Canada and universities / colleges exist for player development and use of facilities

STRATEGIES

- Generate relationships with municipalities to develop indoor and outdoor facilities
- Work with baseball stakeholders to increase numbers of indoor facilities and to develop a baseball specific urban planning facility strategy (local to national)

BASEBALL LTAD STAGE DESCRIPTIONS



BASEBALL CANADA PROGRAM



FALL MONTHS

WINTER MONTHS

SPRING MONTHS

SUMMER MONTHS

Baseball Canada Stages

Active Start	Swimming Lessons	Gymnastics Lessons	Gym/Swim Lessons	Baseball branded Program
FUNDamentals	Gymnastics Lessons	Team Sports	Swimming Lessons	Rally Cap Program
Learning to Train	Run, jump and throw	Team Sports	Gymnastics Lessons	Baseball branded Program
Training to Train	Multi-sports Academy	Multi-sports Academy	Baseball Reg./Prov./Nat.	
Learning to Compete	Baseball Specific Academy		Reg./Prov./Nat. Events	
Training to Compete	US College participation + Specific training		International Events or Semi-pros	
Learning to Win	Major League Baseball (Starter) + World Baseball Classic + Olympic Team			
Training to Win	Major League Baseball (Starter) + World Baseball Classic + Olympic Team			

Baseball specific

ACTIVE FOR LIFE
(players, coach, umpires, administrator)

BASEBALL LTAD STAGE DESCRIPTIONS

STAGE 1

ACTIVE START



Ages: 0 - 6 Boys / 0 - 6 Girls
"PLAYING CATCH"

→ MAIN GOAL

To get children moving and keeping them active.

SUMMARY Stage 1

At this introductory level, the goal is to get children moving and to keep them active. At daycares, schools, clubs, recreation centres and home, small children can be provided with early opportunities to learn basic athletic baseball elements. No competitive games should be played - the goal is for adults and children to play together informally. Family fun time is key.



Technical aspects covered:

Basic fundamentals movement skills such as:

- running
- twisting
- throwing
- catching
- jumping
- kicking
- wheeling

Technical instruction:

Introduce baseball by encouraging children to enjoy throwing a ball one-on-one with an adult, practicing catching, hitting, tracking and running. Provide structured physical activity that encourages all movement and motor skills (30 minutes per day for toddlers and 60 minutes for preschoolers) and ensure children are receiving unstructured physical activity/active play time every day (at least 60 minutes per day up to several hours per day for toddlers and preschoolers). All children should be enrolled in structured gymnastics and swimming programs based on their age and ability.

Partners involved: Parents, parks/recreation departments, swimming programs, gymnastics programs, day cares, pre-school and schools

Field requirements: Backyard, playground, park

Distance field: Any backyard

Resources: To be developed



ABOUT **ACTIVEstart**

PLAYERS PER TEAM

Not applicable

COMPETITION FORMAT

While the adult should **challenge** the child player, they should allow the child to **"hit"** home runs and **"beat"** the adult at simple games.

SPECIAL RULES

Adults are advised to discontinue play when the child has lost interest.

GAME FORMAT

Create games that are fun and stimulate interest.

EQUIPMENT Required

- T-Ball
- Balls (polysoft)
- Tennis balls
- Wiffle balls
- Any equipment





»»» FUNDAMENTALS



Ages: 5 - 9 Male / 5 - 8 Female

"MY FIRST CAP"

→ MAIN GOAL

To develop fundamental movement and basic baseball skills in a fun environment.

SUMMARY Stage 2

Children require a structured, fun and stimulating environment in this stage that focuses on developing the ABC's of athleticism (agility, balance, coordination and speed), hand-eye coordination and basic baseball specific skills. Programs must be developed that keep their interest and promote a feel for the sport without any focus on structured competition. Children should be introduced to simple rules and ethics as well as encouraged to cooperate within a group environment



Technical aspects covered:

Fundamentals in:

- hitting
- receiving
- running
- throwing
- + Agility, balance, coordination and speed

Partners involved: PSO / LBA / Schools / Camps

Coach training required: Online training (Initiation clinic possible as supplement)

Resources: Rally Cap Instruction manual, Rally Cap scoreboard, WinterBall Teacher's manual, Fan guide.



TRAINING

- Warm-up and cool-down
- hydration

- Bat/gear safety
- Basics rules and understanding of the game

Children in this stage should participate in a wide range of sporting activities each week with no more than two sessions per sport per week unless involved in early specialization sports such as gymnastics and swimming. The optimal window of trainability for speed (first of two) and flexibility occur during this stage for both boys and girls.

* Others sports recommended at this stage are gymnastics, swimming, hockey, and all other eye-hand coordination dominance sports. Training sessions should be station focused and stimulating, including simulated games.

EQUIPMENT Required

- Shoes
- Glove
- Hat
- Protective cup

ABOUT FUNDamentals

PLAYERS PER TEAM

6 players
by team

COMPETITION FORMAT

RALLY CAP FORMAT: 3 team
rotation (1 practicing, 2 playing)

SPECIAL RULES

No bunt, strike out, walk, steal. No
players cut from teams. All players
hit every inning. Points awarded in
offense and in defense. Throw at
any base for recording an out.

GAME FORMAT

6 vs 6. All players hit every inning.
Rotate batting order each inning.
No league standings. Jamboree
format.

SPECIALIZATION

All players should play equal time
and try all team positions, including
catching, and equal time should be
allowed to both practices and
games.



RATIO

Train 80%

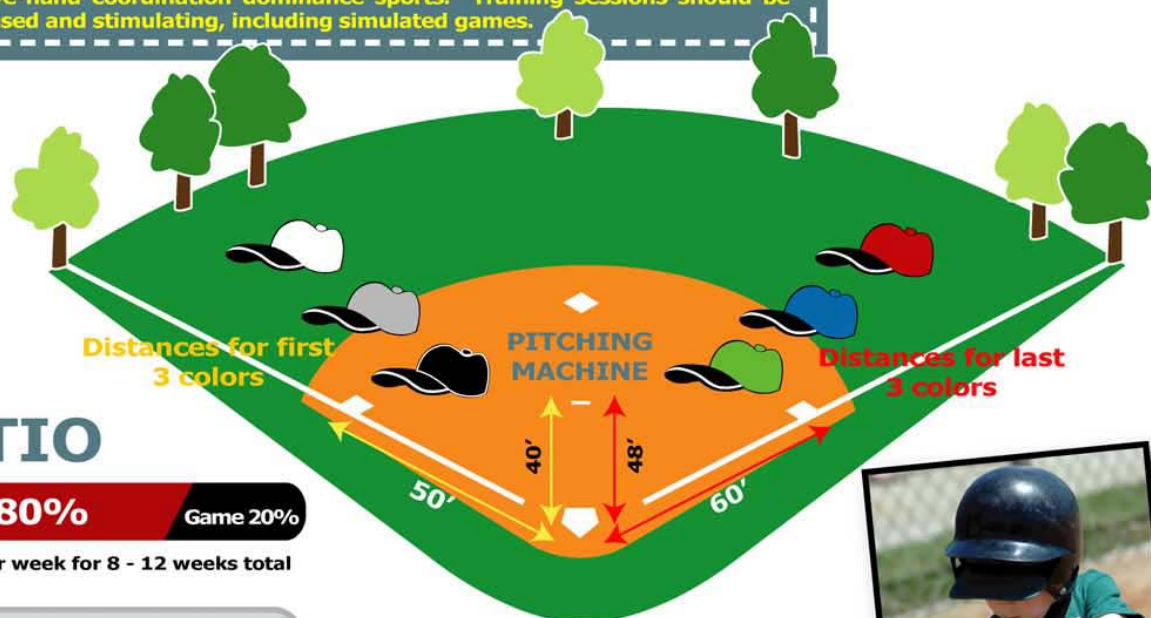
Game 20%

One hour per week for 8 - 12 weeks total

**Parents act as umpires.
No scorekeepers.**

**1 coach for every 3 players
(2 per team minimum)**

PITCH LIMITATION: Coach / machine pitch only





LEARN TO TRAIN



Ages: 9-12 Male / 8-11 Female
"LEARNING THE GAME"

MAIN GOAL

To continue developing fundamental movement and general baseball skills

SUMMARY Stage 3

The Learning to Train Stage coincides with peak motor coordination development. The emphasis, therefore, should be on skill development through training. Coaches should use a single periodization format. While **the focus is on training**, competition should be utilized to test and refine skills. If athletes miss the Learning to Train stage of development or if coaches focus mainly on competition, athletes will fail to reach their full potential.

Technical aspects covered:

- Hitting sequence
- Throwing and receiving basics
- Laterality (switch hit introduction)
- Basic position play
- Basic pitching

Partners involved: PSO / LBA / Schools / camps.

Coach training required: Regional Coach - Trained (Certified - preferred)

Resources: L2T Document (to be developed)

PITCH LIMITATION - early stage

	LOW		MEDIUM LOW		MEDIUM		MEDIUM HIGH		HIGH		MAX
May 1 to June 4	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 20	None	--	--	21 - 30	1 day	31 - 34	2 days	35 - 45	3 days	45
June 5 to End of season	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 20	None	21 - 30	1 day	31 - 44	2 days	45 - 54	3 days	55 - 70	4 days	70

PITCH LIMITATION - late stage

	LOW		MEDIUM LOW		MEDIUM		MEDIUM HIGH		HIGH		MAX
May 1 to June 4	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 25	None	--	--	26 - 35	1 day	36 - 44	2 days	44 - 55	3 days	55
June 5 to End of season	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 25	None	26 - 35	1 day	36 - 54	2 days	55 - 64	3 days	65 - 80	4 days	80

Base on an average of 20 pitches per inning

- Warm-up and cool down
- Safety and game etiquette
- Basic rules
- Assuming responsibilities
- Introduction to positive thinking
- Setting and completing simple goals
- Relaxation techniques
- Basic imagery

- Maintaining focus
- Making decisions
- Team cohesion
- Arm care
- Equipment care
- Anticipation
- Sportsmanship
- Dealing with failure
- Position specific and skills awareness

EQUIPMENT
Required

- ABOUT L2T**

6 to 9

COMPETITION FORMAT

SPECIAL RULES

GAME FORMAT

SPECIALIZATION

RATIO

Train 70% **Game 30%**

1 umpire minimum
No scorers
No stats recorded
EDUCATE AND ENFORCE



STAGE 4

TRAIN TO TRAIN



Ages: 12-16 Male / 11-15 Female

"BEING IDENTIFIED"

MAIN GOAL

To focus on training the whole baseball athlete based on their physical, mental, cognitive and emotional development.

SUMMARY Stage 4

At this stage, elite baseball groups may express interest in recruiting talented young players. Care must be taken to recognize and protect the long-term interests of each player. Risks and issues can be avoided by ensuring that the development model remains "player centred". The optimal window of trainability for stamina begins with the onset of Growth Spurt, more commonly known as the adolescent growth spurt. The demands of skill training as well as training loads should increase, thus encouraging improvement in mental toughness, concentration and diligence. Awareness of tactics within the game becomes an important facet of the learning process. Players tend to be self-critical and rebellious, but they have a strong commitment to the team. Athletes will be faced with the decision to either move from L2T to T2T or to move into Active for Life for more recreational participation in baseball.

Technical aspects covered:

Mental training introduces:

- Pre-competition routine
- Mental preparation
- Goal setting
- Coping with success and failure

Tactical training introduces:

- Emphasis on team work
- Developing tasks per position (defensive and offense strategies)
- Positional awareness through small-sided games and large-sided competitive matches

Technical instruction:

- Advanced techniques (to those players who are capable)
- Skills presented within a more complex environment with position-specific emphasis
- Introduction of curveball to pitchers for the first time at the age of 14



PITCH LIMITATION

	LOW			MEDIUM LOW			MEDIUM			MEDIUM HIGH			HIGH			MAX
May 1 to June 4	# of pitches	Rest		# of pitches	Rest		# of pitches	Rest		# of pitches	Rest		# of pitches	Rest		# of pitches
	1-30	None		--	--		31-40	1 day		41-49	2 days		50-60	3 days		60
June 5 to End of season	# of pitches	Rest		# of pitches	Rest		# of pitches	Rest		# of pitches	Rest		# of pitches	Rest		# of pitches
	1-30	None		31-40	1 day		41-59	3 days		60-74	3 days		75-90	4 days		90

Partners involved: NSO / PSO / Academies

Coach training required: Regional and Provincial Coach Trained or Certified

Resources: To be developed



TRAINING

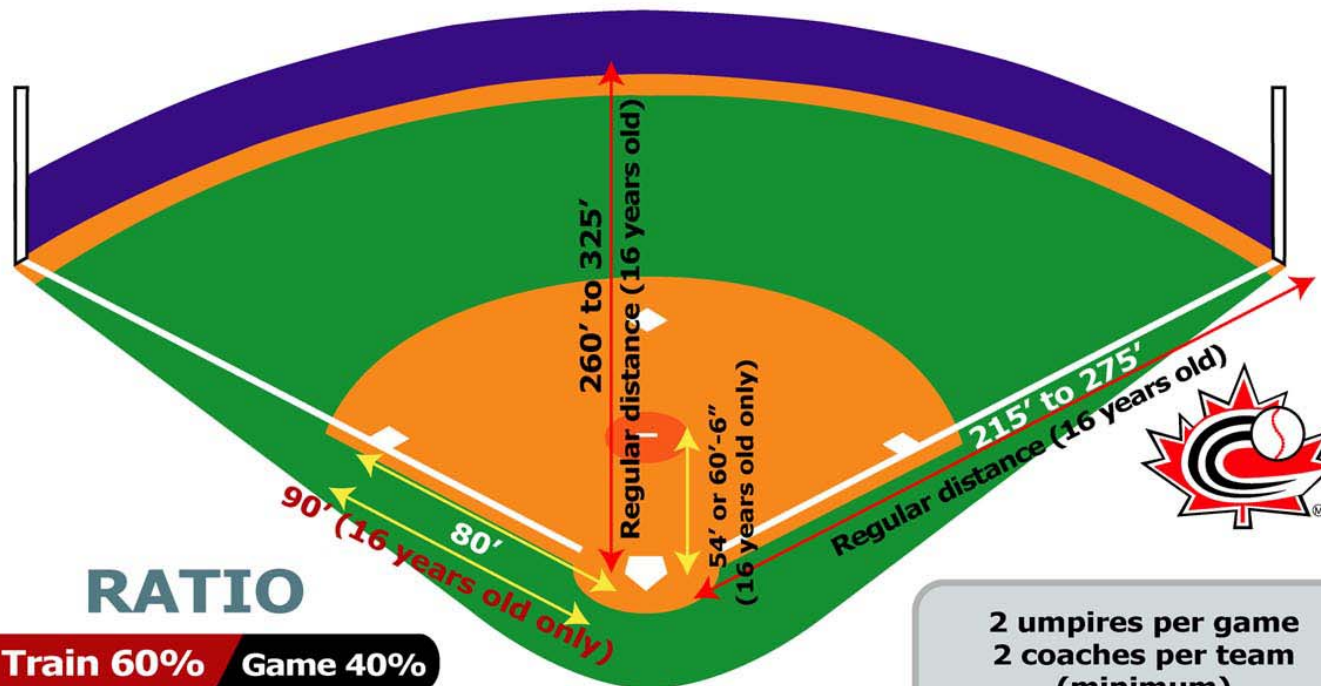
- Train aerobic fitness/endurance (at start of growth spurt)
- Train flexibility (vital during growth)
- Train speed (window based on PHV)
- Introduce free weights for strength training (window based on PHV)
- Promote proper arm and physical care (Injury Prevention and Treatment)
- Introduce individual and team tactics/strategies
- Teach progressively higher level skills throughout stage
- Continue baseball rules and game understanding
- Focus on 2-3 positions by end of stage
- Stress mental preparation and tenacity
- Introduce sports psychology
- Build team dynamics and support
- Emphasize work ethic, dedication and responsibility
- Introduce leadership
- Model respect for game and everyone involved

Athletes should now be selecting two competitive sports based on talent identification; moving toward year-round involvement at end of stage. Position specific and skills awareness are being introduced.

EQUIPMENT

Required

- Cleats (no metal)
- Team uniform
- Regular baseball size glove
- Metal bats (32 inches max.)



RATIO

Train 60% Game 40%

1 to 2 hours (5X per week) to
1-1/2 to 2-1/2 hours (6-9 sessions per
week, including complementary sports)

2 umpires per game
2 coaches per team
(minimum)

EDUCATE AND ENFORCE

ABOUT T2T

PLAYERS PER TEAM

9 players with 3-4 subs
at early stage and 5-6
subs at late stage

COMPETITION FORMAT

NATIONAL competitions held for regional all-star teams at 15U only while **NATIONAL REGIONAL** (Ontario/Quebec, Atlantic, Prairies) championships at 14U. **PROVINCIAL** championships are held for 13U. One to two **TOURNAMENTS** per season.

SPECIAL RULES

No sac bunt rule early in game, curve introduced at late stage (14 years old only), no pinch hitter allowed in regular season, replay sequence allowed during games, speed up rule in place, batting order rotation at low end.

SEASON FORMAT

7-inning games with time limit. Speed up rules enforced. Season length 15-20 weeks with pre-game practice mandatory

SPECIALIZATION

Play multiple positions and teach basic of each at early stage. Start focusing on at 2 - 3 positions at high end.



51

TRAINING

- Concentration
- Responsibility
- Discipline
- Accountability
- Goal setting

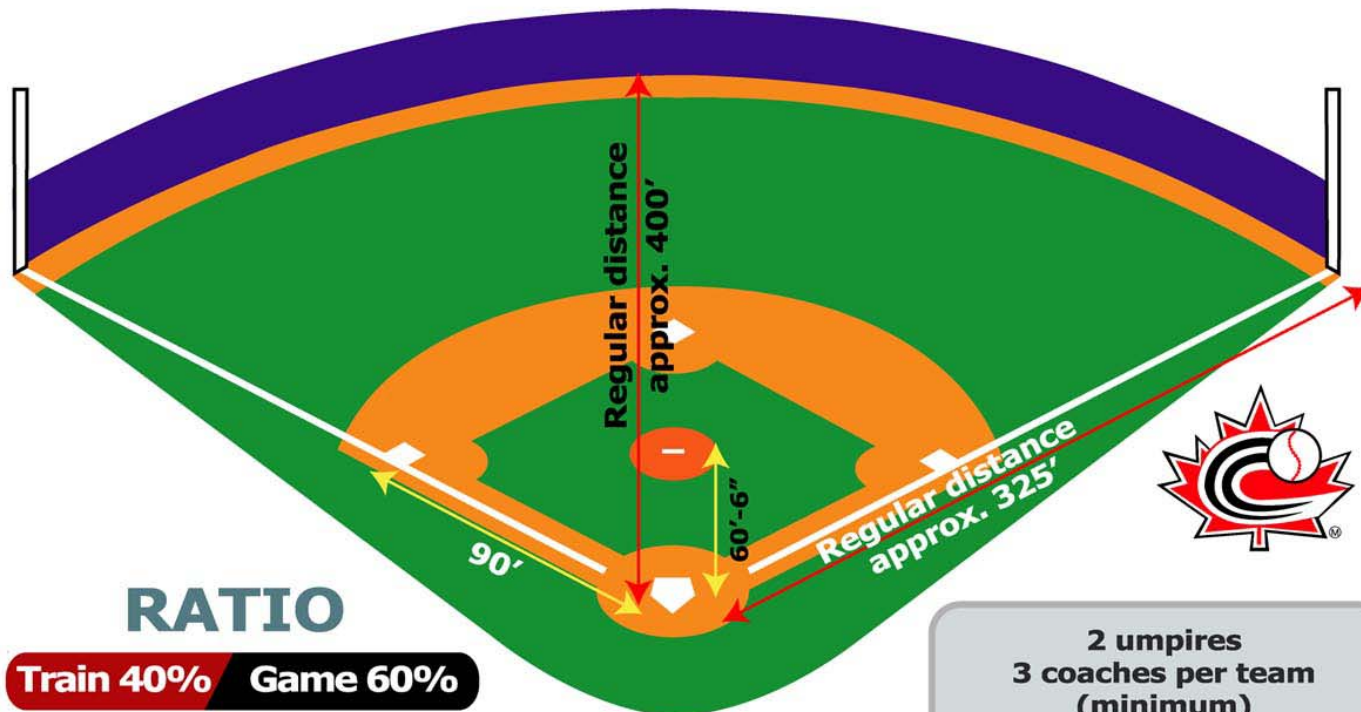
- Self-confidence
- Self-motivation
- Will to win
- Mental toughness
- Competitive mentality in practice and games

The athlete should now focus on one sport, utilizing year round training in a quality environment to reach his/her potential and move onto the next stage.

Players are taught the importance of being educated in the game, and they are encouraged to watch games on TV and National team games.

EQUIPMENT Required

- Cleats (metal)
- Specific gloves
- Own bat (wood bat)
- Personal gear



RATIO

Train 40% Game 60%

1 to 3 hours (9-12 sessions per week)

2 umpires
3 coaches per team
(minimum)

EDUCATE AND ENFORCE

ABOUT L2C

PLAYERS PER TEAM

9 players with
6-8 subs

COMPETITION FORMAT

National Championships are held for 16U and 17U (provincial teams) where Canada Cup still serves 17U National Junior Team Selection purpose.

SPECIAL RULES

Regular rules.

GAME FORMAT

Regular game format (7 innings)

SPECIALIZATION

Performing at one, maintaining others





TRAIN TO COMPETE



Ages: 23U Male / Age 16+ Female National Team

"KNOCKING AT THE PRO DOOR"

MAIN GOAL

Players apply what they've learned and refine their competitive skills as they prepare to enter the world of college and professional baseball.

SUMMARY Stage 6

Players are now highly skilled and proficient and must be exposed to quality competitive situations where they can further refine these skills under a variety of competitive situations. With the game maturity comes an increasing development of mental, emotional and cognitive skills to allow the athlete to apply advanced techniques and skills, both technical and decision-making.

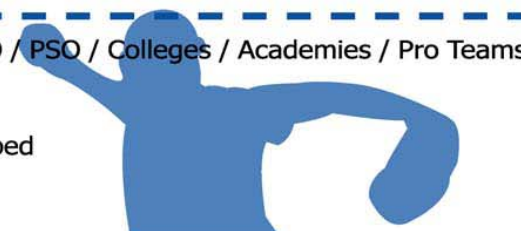
Technical aspects covered:

Technical training emphasizes the refinement of core skills, position specific skills and advance techniques and skills are introduced as appropriate.

Tactical instruction teaches decision-making tactical awareness, game appreciation, game analysis, productivity and competitive proficiency.

Partners involved: NSO / PSO / Colleges / Academies / Pro Teams / National Teams

Resources: To be developed



PITCH LIMITATION

	LOW		MEDIUM LOW		MEDIUM		MEDIUM HIGH		HIGH		MAX
May 1 to June 4	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 30	None	--	--	31 - 44	1 day	45 - 54	2 days	55 - 65	3 days	65
June 5 to End of season	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 30	None	31 - 44	1 day	45 - 64	2 days	65 - 79	3 days	80 - 100	4 days	100

Base on an average of 20 pitches per inning



TRAINING

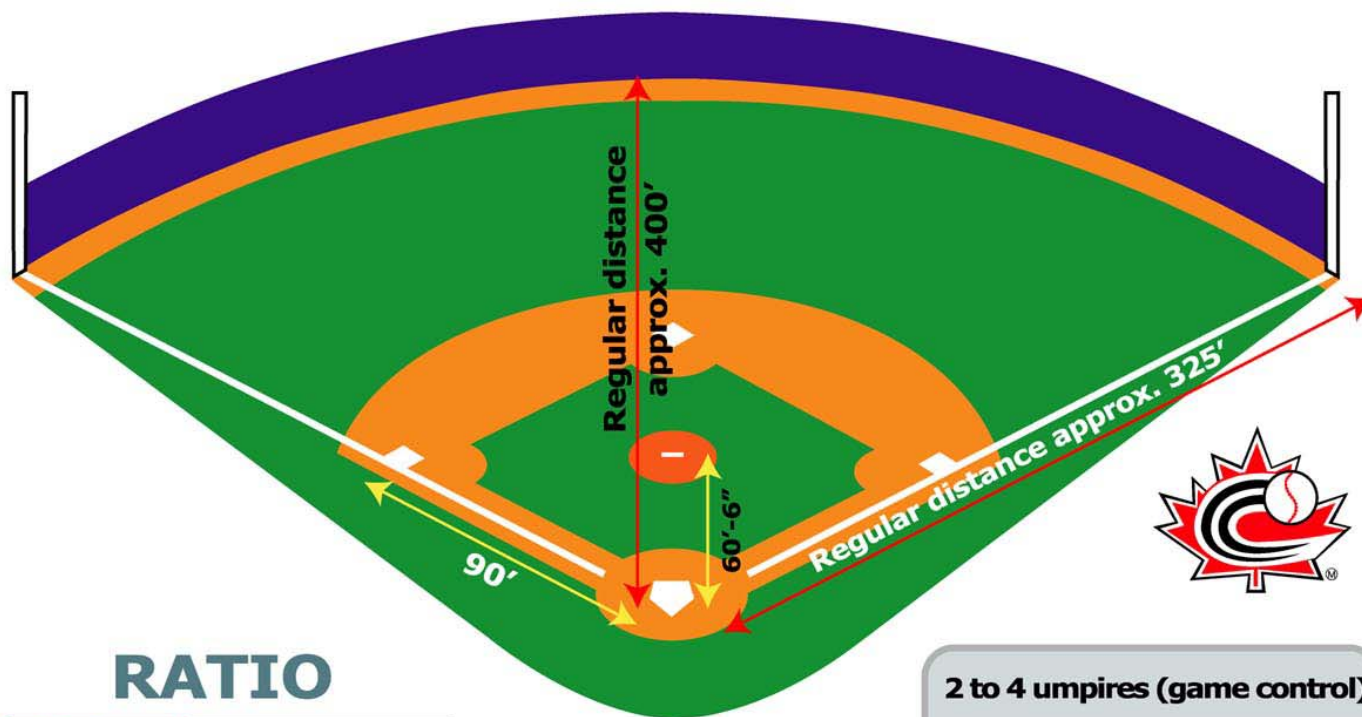
- Concentration
- Responsibility
- Discipline
- Accountability
- Goal setting

- Self-confidence
- Self-motivation
- Will to win
- Mental toughness
- Competitive mentality in practice and games

* Players are taught the importance of being educated in the game, and they are encouraged to watch games on TV and National team games.

EQUIPMENT Required

- ALL personal gear



RATIO

**Train
30%**

Game 70%

9-12 sessions per week

2 to 4 umpires (game control)

4 coaches per team
(minimum)

ABOUT T2C

PLAYERS PER TEAM

21 to 25
including subs

COMPETITION FORMAT

NATIONAL Championships are held for 20U and 23U (provincial teams) in alignment with the college start dates.

SPECIAL RULES

Regular rules.

GAME FORMAT

Regular game format (9 innings)

SPECIALIZATION

1 position, maybe 2



STAGE 7

>>>> LEARN TO WIN



Ages: Professional Male 18+
"FINALLY DRAFTED"

→ MAIN GOAL

Focus on development and high performance as player refines skills in order to perform at the college level and to start his professional career.

SUMMARY Stage 7

Multiple periodization is used to provide sport specific technical, tactical and conditioning training. Programming training maximizes ancillary capabilities and includes preventative breaks for recovery and injury prevention. Coaching support is provided by national team staff, professional baseball and the major college systems.

Technical aspects covered:

- Further development of technical, tactical and playing skills.



PITCH LIMITATION

	LOW		MEDIUM LOW		MEDIUM		MEDIUM HIGH		HIGH		MAX
All season	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 30	None	31 - 44	1 day	45 - 64	2 days	65 - 79	3 days	80 - 100	4 days	100

Pitch counts are still highly followed at LEARNING TO WIN Stage by pitching coaches and managers

Base on an average of 20 pitches per inning

Partners involved: MLB, National Teams, US Colleges

Coach training required: Ex-pro athletes

Resources: To be developed



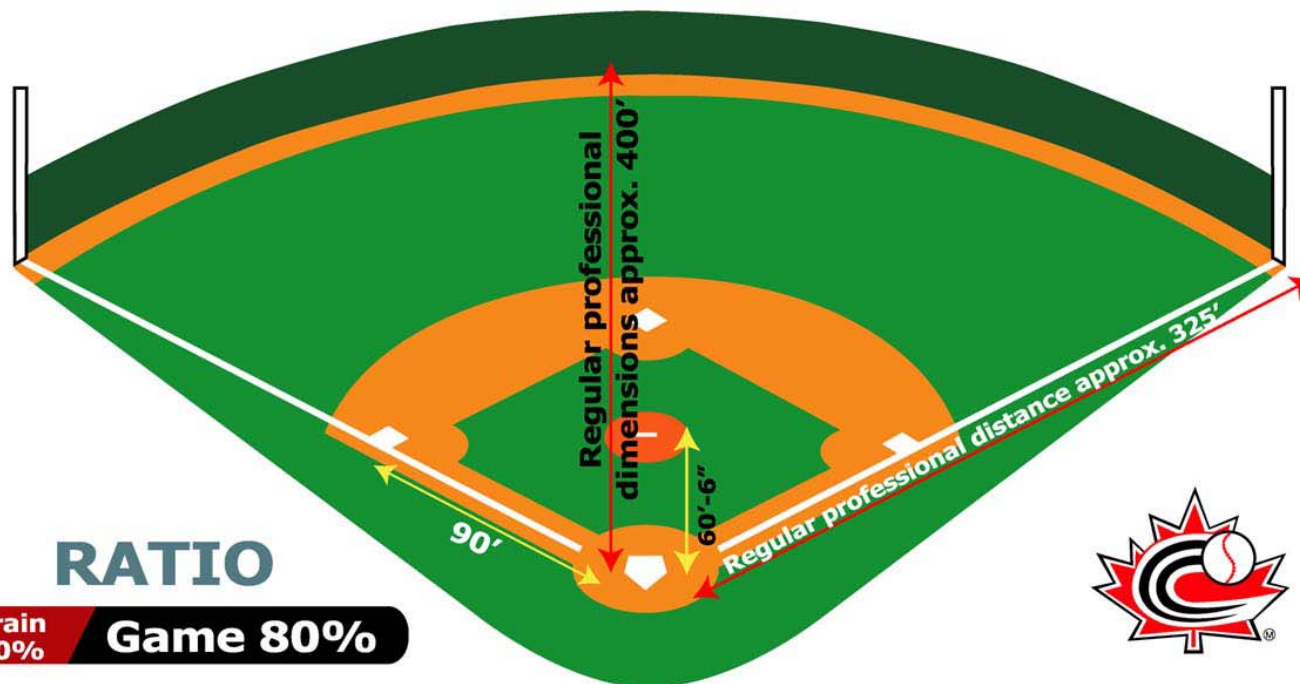
TRAINING

Recovery program for pitchers (5 day cycle), pre-game training, post-game training. Pre-game included.

EQUIPMENT

Required

- All personal gear



RATIO

Train
20%

Game 80%



3 to 6 umpires per game,
depending on leagues,
regular season, playoffs...
GAME CONTROL
Approx. 6 coaches per team

ABOUT L2W

PLAYERS PER TEAM

25 including
all subs

COMPETITION FORMAT

Spring training camp, short/long season, playoff, tours, winter leagues, instructional leagues, fall leagues, national teams for international competitions, other competitions (Team Canada international competitions).

SPECIAL RULES

DH for American League teams.

SEASON FORMAT

Game format: 9-inning games

SPECIALIZATION

Pitching specialization (starter, set-up, closer), pitchers don't train at hitting (maybe they should...), all other play only 1 position or play 2 similar (middle infielders, outfielders)





TRAIN TO WIN



Ages: Professional Male 18+

"IN THE SHOW"

MAIN GOAL

Consistent high performance and winning competitive experiences at the sport's elite level.

SUMMARY Stage 8

High performance and maintenance of finely developed technical, tactical and playing skills at the elite professional levels. Multiple periodization continues with sport specific technical adjustments and refinements as required to maintain skill proficiency. Preventative breaks for recovery and injury prevention are very important and players focus on the capabilities that refine their competitive advantages and roles within the game.

Technical aspects covered:

- Further development of technical, tactical and playing skills.



PITCH LIMITATION

	LOW		MEDIUM LOW		MEDIUM		MEDIUM HIGH		HIGH		MAX
All season	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches	Rest	# of pitches
	1 - 30	None	31 - 44	1 day	45 - 64	2 days	65 - 79	3 days	80 - 100	4 days	100

Pitch counts are still highly followed at LEARNING TO WIN Stage by pitching coaches and managers

Base on an average of 20 pitches per inning

Partners involved: MLB, National Teams (Olympics and WBC)

Coach training required: Ex-pro athletes

Resources: To be determined



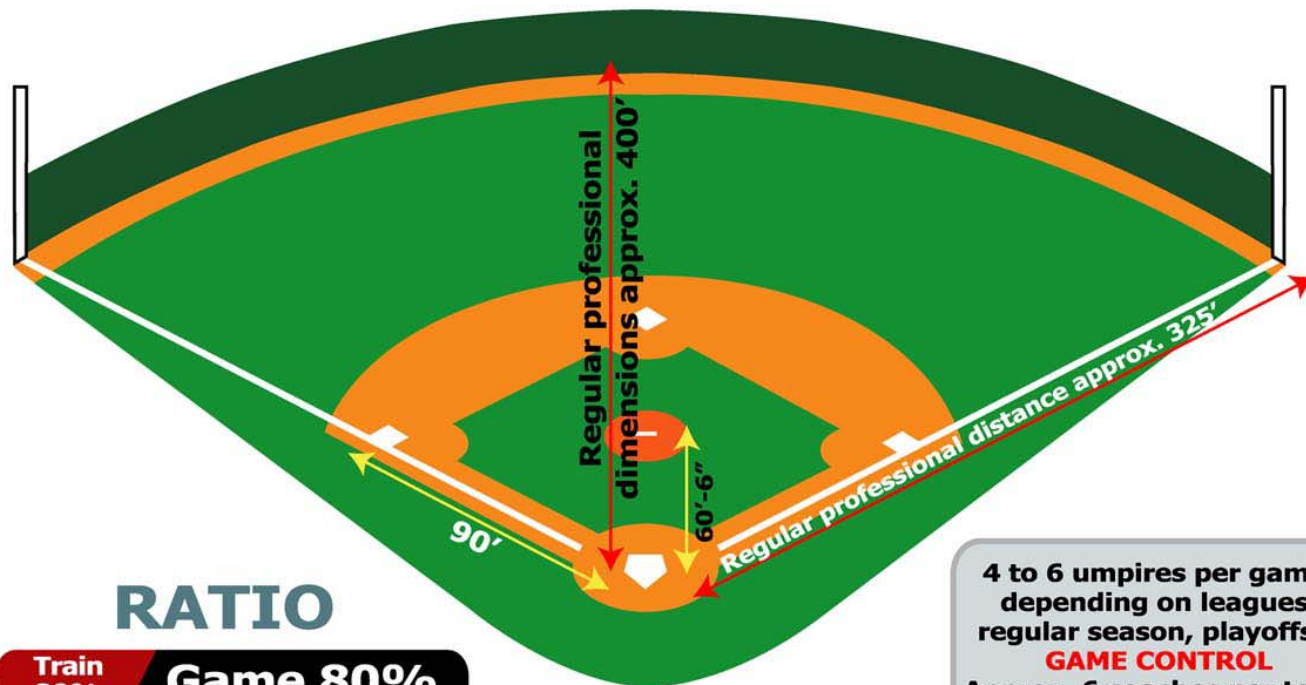
TRAINING

Recovery program for pitchers (5 day cycle), pre-game training, post-game training. Pre-game included.



EQUIPMENT Required

- All personal gear



RATIO

Train
20%

Game 80%

4 to 6 umpires per game,
depending on leagues,
regular season, playoffs...
GAME CONTROL
Approx. 6 coaches per team

ABOUT T2W

PLAYERS PER TEAM

25 including
all subs

SEASON FORMAT

Spring training camp, short/long season, playoff, tours, winter leagues, instructional leagues, fall leagues, national teams for international competitions, other competitions with Team Canada (World Baseball Classic)

SPECIAL RULES

DH for American League teams.

GAME FORMAT

Regular

SPECIALIZATION

Pitching specialization (starter, set-up, closer), pitchers don't train at hitting (maybe they should...), all other play only 1 position or play 2 similar (middle infielders, outfielders)





»»» ACTIVE FOR LIFE



Females and males - All ages
"YOUR HALL OF FAME"

➔ MAIN GOAL

Provide opportunities at each level to be involved at any capacity (player, coach, umpire, volunteer)



Players per team: Varies from one age to another

Technical aspects covered: Varies from age group to another

Training include: Recreation

Competition format: Competitive format at higher level of play. Fantasy camps.

Partners involved: PSO / LBA / Umpire committees, CAC

Coach training required: Community - On going Context

Special rules: Varies from age group to another

Game format: Varies from age group to another

Specialization: Play multiple positions

Distance field: Varies from age group to another

Pitch limitation: Varies from age group to another

Umpires: 1 or 2

Coaches per team: 2 minimum

EQUIPMENT Required

Varies from age group
 (from provided equipment
 to own equipment)

RATIO

Train 80% **Game 20%**

to


Train 10% **Game 90%**



STAKEHOLDERS ROLES

Outline of roles and responsibilities of the different levels



 STAGES	Baseball Canada		Pro Teams		PSO		Region		Associations		Schools	
	Leadership	Programs	Leadership	Programs	Leadership	Programs	Leadership	Programs	Leadership	Programs	Leadership	Programs
Active for Life (A4L)	✓				✓					✓		
Training to Win (T2W)	✓	✓	✓	✓								
Training to Compete (T2C)	✓	✓	✓	✓								
Training to Train (T2T)	✓				✓	✓		✓		✓		✓
Learning to Train (L2T)	✓				✓	✓	✓	✓	✓	✓	✓	✓
FUNDamentals (FUN)	✓				✓		✓		✓	✓	✓	✓
Active Start (AS)	✓				✓		✓		✓	✓		✓
✓ Responsible												


The system of leadership and program delivery of Canadian baseball is often complex. This chart simply outlines an example of the shared leadership in many areas and the collaborative model of programming.

BASEBALL CANADA – Provides leadership and program development and design at all levels, delivers programs at T2C, T2W ...

PSO's and Regions– Provides leadership (administration and support) at A4L, AS, FUN, L2T, T2T and delivers programs at L2T and T2T ...

Local Associations – Provide direct delivery and Implement programs at A4L, AS, FUN, L2T, T2T ...

Coaches – Teach and provide appropriate direct support to players at all stages ...

A close-up photograph of a red baseball helmet with a black chin strap, resting on a dirt field. The helmet is positioned next to a metal fence post. The background is a blurred view of a baseball field.

Implementing LTAD will require changes to the every level of baseball governance in Canada, and it will require a concerted effort to educate parents, coaches, and administrators in its principles.

RECOMMENDATIONS AND IMPLEMENTATION



The LTAD Project team held a number of sessions, both with their full group and in working sessions with stakeholders from provincial baseball associations, in order to examine existing systems and the issues and challenges facing athlete development for baseball players in Canada.

This process included issue identification, examination of sport science / research impacting athlete development and rationalization / prioritization of potential solutions and initiatives. The development of an enduring and effective process that meets the core principles and goals will require a commitment to continuous improvement and an ongoing reach for excellence in all programs we adopt.

Our core principles in this journey will be:

- ➔ To develop the optimal training, competition and recovery program for Canadian baseball players that meet the needs of our athletes at each stage of their biological development and maturation
- ➔ To provide equal opportunity for all our players to participate and develop to their maximum potential
- ➔ To provide a program of excellence that will be coach-driven and supported by administration, sport science and sponsorship that is world-class

The immediate steps to be taken are the following:

- Adoption of the core principles as outlined
- Consideration of the changes in governance and financial framework as recommended in this report in order to commence the implementation of the strategic initiatives

Progress will be ongoing and continuous and this initial report identifies and prioritizes key strategic initiatives for consideration by the governing board of Baseball Canada. This will be followed by the development of the tactical plans related to each initiative. Part of this process is an outline of the respective roles and responsibilities of the stakeholders involved.

Concurrent with this adoption of Strategic Initiatives will be the approval of a Communication Plan (including tools and resources) to engage and inform stakeholders of progress as the project moves forward.



LTAD provides a rational and complete approach to reaching the spectrum of goals between player achievement and lifelong wellness, and it is based on the LTAD model that has already gained support internationally. However, it is clear that LTAD has significant implications for every facet of the Canadian sports system relating to baseball.

Implementing LTAD will require changes to the every level of baseball governance in Canada, and it will require a concerted effort to educate parents, coaches, and administrators in its principles. Leagues will need to change game formats in some jurisdictions for some age

levels, coaches will need to adjust attitudes and philosophies, administrators will need to demonstrate more accountability in their roles, and more money will be needed to drive all programs. Support for LTAD implementation will need to come from diverse stakeholders who may have to set aside personal interests for the greater success of Canadian baseball as a whole. For these reasons and many more, the implementation of LTAD must be approached with patience, understanding, resolve, and a firm sight on the end goal of strengthening Canadian baseball.



LTAD STRATEGIC INITIATIVES



1 Develop and implement a fundamental baseball program (Rally Cap)

- 1.1. Ensure available nation-wide
- 1.2. Link Rally Cap to coach training
- 1.3. Create a Rally Cap guide for parents
- 1.4. Create a training guide for coordinators

2 Create a financial framework to initiate and sustain programs nationally, provincially and locally that is required for proper implementation of LTAD

- 2.1. Determine appropriate national membership strategy
- 2.2. Market (Brand) all programs - develop marketing

3 Develop a comprehensive matrix of what capabilities are required at all stages of a baseball players development (including guidelines for off-season, pre-season and in-season training plans for each stage)

4 Complete a competition review to include

- 4.1. Stream players during and after Peak Height Velocity
- 4.2. Ensure appropriate training to competition ratio

- 4.3. Review rules considering LTAD and alignment of rules nationally
- 4.4. Ensure appropriate level of competition at each stage by designing competitions appropriate to stream and age. Regional – 12 years to National – 15 years
- 4.5. Realign competition to address streaming which includes more regional events so more athletes are involved in the national training pool

5 Develop and implement a Learning to Train baseball program to complement and carry-on from Rally Cap (including increasing penetration of Winter Ball program in schools and branding of new program)

- 5.1. Determine appropriate national membership strategy
- 5.2. Market (Brand) all programs - develop marketing expertise in-house

6 Clarify program development and delivery roles, responsibilities and linkages between primary Baseball stakeholders

- 6.1. Develop programs through NSO, support and accreditation by PSO of local associations, implementation by clubs
- 6.2. Create partnerships with elementary schools (boards) and municipalities to increase accessibility (Winter ball)

7 Increase quality and availability of coaches

- 7.1. Hire TDs / regional coaches / mentors to develop local coaches
- 7.2. Compensate Technical directors: 1-Local 2-Regional 3-Provincial
- 7.3. Address individual skills development - position specific programs and strategies session through NCCP Instructor stream

Develop Training to Train and Learning to Compete training opportunities through Baseball Canada leadership

8

- 8.1. Create regional training centers
- 8.2. Develop sports academies / sport-études (national program and curriculum)
- 8.3. Develop Clubmark system (accredited as meeting LTAD quality standards)

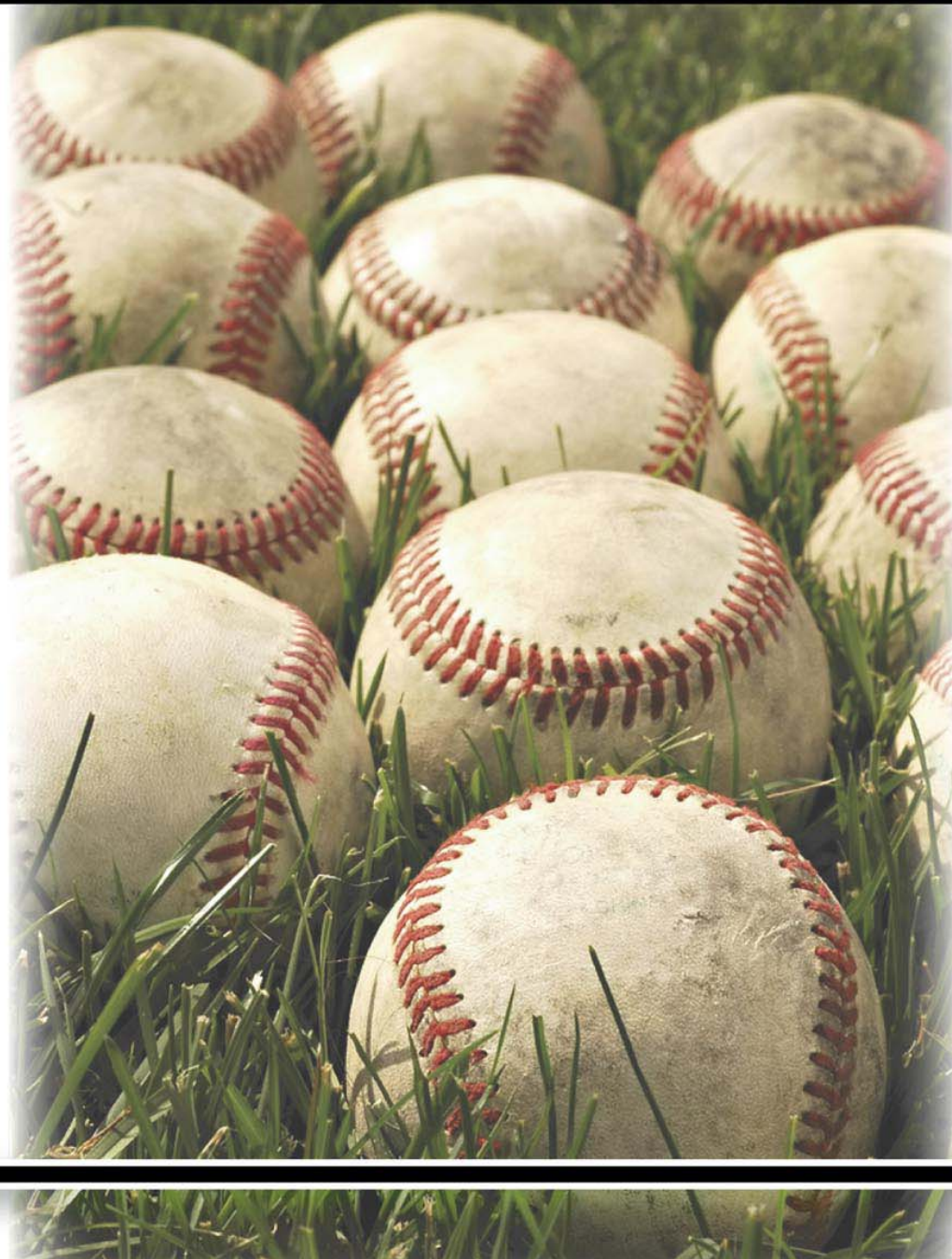
9 Work with baseball stakeholders to develop a national facilities strategy

- 9.1. Increase numbers of indoor facilities
- 9.2. Develop a baseball specific urban planning facility

Encourage physical literacy

10

- 10.1. Partner with multi – sport activities; camps, clinics, sessions
- 10.2. Encourage parents to get involved - Backyard play-book for parents
- 10.3. Publish Parents information piece on how to be involved (not necessarily only Baseball)



APPENDIX 1 - GLOSSARY OF TERMS



ADAPTATION

Adaptation refers to a response to a stimulus or a series of stimuli that induces functional and/or morphological changes in the organism. Naturally, the level or degree of adaptation is dependent upon the genetic endowment of an individual. However, the general trends or patterns of adaptation are identified by physiological research, and guidelines are clearly delineated of the various adaptation processes, such as adaptation to muscular endurance or maximum strength.

ADOLESCENCE

Adolescence is a difficult period to define in terms of the time of its onset termination. During this period, most bodily systems become adult both structurally and functionally. Structurally, adolescence begins with an acceleration in the rate of growth in stature, which marks the onset of the adolescent growth spurt. The rate of statural growth reaches a peak, begins a slower or decelerative phase, and finally terminates with the attainment of adult stature. Functionally, adolescence is usually viewed in terms of sexual maturation, which begins with changes in the neuroendocrine system prior to overt physical changes and terminates with the attainment of mature reproductive function.

ANCILLARY CAPACITIES

Ancillary capacities refer to the knowledge and experience base of an athlete and includes warm-up and cool-down procedures, stretching, nutrition, hydration, rest, recovery, restoration, regen-

eration, mental preparation, and taper and peak. The more knowledgeable athletes are about these training and performance factors, the more they enhance their training and performance levels. When athletes reach their genetic potential and physiologically cannot improve anymore, performance can be improved by using the ancillary capacities to full advantage.

CHILDHOOD

Childhood ordinarily spans the end of infancy — the first birthday — to the start of adolescence and is characterized by relatively steady progress in growth and maturation and rapid progress in neuromuscular or motor development. It is often divided into early childhood, which includes preschool children aged 1 to 5 years, and late childhood, which includes elementary school-age children, aged 6 through to the onset of adolescence.

CHRONOLOGICAL AGE

Chronological age refers to “the number of years and days elapsed since birth.” Growth, development, and maturation operate in a time framework; that is, the child’s chronological age. Children of the same chronological age can differ by several years in their level of biological maturation. The integrated nature of growth and maturation is achieved by the interaction of genes, hormones, nutrients, and the physical and psychosocial environments in which the individual lives. This complex interaction regulates the child’s growth, neuromuscular maturation, sexual maturation, and general physical metamorphosis during the first 2 decades of life.

➤ CRITICAL PERIODS OF DEVELOPMENT

Critical periods of development refers to a point in the development of a specific behaviour when experience or training has an optimal effect on development. The same experience, introduced at an earlier or later time, has no effect on or retards later skill acquisition.

➤ DEVELOPMENT

Development refers to "the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes the social, emotional, intellectual, and motor realms of the child." The terms "growth" and "maturation" are often used together and sometimes synonymously. However, each refers to specific biological activities. Growth refers to "observable, step-by-step, measurable changes in body size such as height, weight, and percentage of body fat." Maturation refers to "qualitative system changes, both structural and functional in nature, in the organism's progress toward maturity; for example, the change of cartilage to bone in the skeleton."

➤ PEAK HEIGHT VELOCITY

Peak height velocity (PHV) is the maximum rate of growth in stature during growth spurt. The age of maximum velocity of growth is called the age at PHV.

➤ PEAK STRENGTH VELOCITY

Peak strength velocity (PSV) is the maximum rate of increase in strength during growth spurt. The age of maximum increase in strength is called the age at PSV.

➤ PEAK WEIGHT VELOCITY

Peak weight velocity (PWV) is the maximum rate of increase in weight during growth spurt. The age of maximum increase in weight is called the age at PWV.





➤ PHYSICAL LITERACY

Physical literacy refers to the mastering of fundamental motor skills and fundamental sport skills.

➤ POST-NATAL GROWTH

Post-natal growth is commonly, although sometimes arbitrarily, divided into 3 or 4 age periods, including infancy, childhood, adolescence, and puberty.

➤ PUBERTY

Puberty refers to the point at which an individual is sexually mature and able to reproduce.

➤ READINESS

Readiness refers to the child's level of growth, maturity, and development that enables him/her to perform tasks and meet demands through training and competition. Readiness and critical periods of trainability during growth and development of young athletes are also referred to as the correct time for the programming of certain stimuli to achieve optimum adaptation with regard to motor skills, muscular and/or aerobic power.

➤ SKELETAL AGE

Skeletal age refers to the maturity of the skeleton determined by the degree of ossification of the bone structure. It is a measure of age that takes into consideration how far given bones have progressed toward maturity, not in size, but with respect to shape and position to one another.

➤ TRAINABILITY

Trainability refers to the genetic endowment of athletes as they respond individually to specific stimuli and adapt to it accordingly.

APPENDIX 2 - SAMPLE SKILL CHECKLIST



Sample Skill Checklist for FUNdamentals Stage Program - Rally Cap

Level/Ability	White Cap	Grey Cap	Black Cap	Green Cap	Blue Cap	Red Cap
THROWING	1) Able to throw a ball 5 feet	2) Able to throw 7 of 10 balls to partner from 10 feet	3) Able to throw the ball 25 feet	4) Able to throw 9 of 15 balls to a 4'x 4' target hung on the backstop of fence from 20 feet	5) Able to throw the ball at a distance of 50 feet	6) From a fielding position, I can throw 10 of 15 balls to 1st base from short-stop
RECEIVING	7) Able to catch a ball thrown from 5 feet	8) Able to field 10 of 15 ground balls from 15 feet	9) Able to catch 10 of 20 fly balls from a height of 15 feet	10) Able to catch 5/5 ground balls, 5/5 fly balls, 5/5 balls thrown by a partner from 15 feet	11) Able to catch 12/15 fly balls not directly hit to me (20 feet in front and 5-10 feet left and right)	12) Able to field 5/5 grounders to the left and 5/5 grounders to the right (regular distance)
HITTING	13) Able to hit a ball off a tee	14) Able to hit 10 of 15 balls off a tee	15) Able to hit 7 of 15 balls thrown underhand	16) Able to hit 7/15 balls past the base paths, rolling or in the air	17) Able to hit 12/15 balls at least 75 feet in distance	18) Able to hit 10/15 balls between cones
BASE RUNNING	19) Know what direction to run after hitting the ball	20) Know what the bases are called (1st, 2nd, 3rd and home)	21) Able to run around the bases without stopping	22) Know how to make a banana turn at 1st base	23) Able to run from 1st to 2nd and slide at 2nd base	24) Able to run from 1st to 3rd with a correct slide at 3rd base
GENERAL KNOWLEDGE	25) I know my team's name, coach's name and names of 3 teammates.	26) Able to name all the position numbers	27) I know 3 different ways to get a player out	28) I know where to throw the ball when I field it.	29) I know the difference between a hit and an error; a strike and a ball; safe and out; a single, double, triple and HR; fair and foul	30) I know where to position myself depending on the hitter

APPENDIX 3 - PROFILE OF BASEBALL PLAYERS IN CANADA



October 2006 - During October of each year, the Major Baseball League's end of season series reach their pinnacle. Very soon now, all winning teams from both our National and the American League will be pitched against each other and a single champion will emerge victorious from this World Series.

Therefore, this month's column will sketch a profile of those Canadians who play baseball.

This profile was generated using the 3SC, a CROP study that segments the population and certain groups according to their values and attitudes by annually measuring a wealth of information about Canadians.

More than 1 Canadian out of 10 plays baseball regularly (3%) or occasionally (8%) while 71% of Canadians never practice this sport.

Here's a socio-demographic portrait of Canadians who regularly or occasionally play baseball:

- ▶ This sport is more popular among men (15%) than women (8%)
- ▶ A youthful sport: Baseball is particularly more favoured by 15-24 year-olds (18%).
- ▶ Middle-class: We find greater proportions of players among households with yearly incomes of \$40,000 to \$60,000 (14%).

- ▶ *More Anglophones: Baseball is more popular among English-speaking Canadians (12%) than among their French counterparts (9%).*
- ▶ *College level: Canadians who have limited their schooling to college level (14%) display greater interest in this sport than the university-level cohort who practice it in lesser numbers (8%).*
- ▶ *In rural areas: Baseball counts more practitioners in rural areas (16%) where the size of urban communities does not exceed 10,000 inhabitants.*
- ▶ *Less popular in Quebec: We find greater numbers of baseball players in Manitoba and Saskatchewan (16%) as well as the Atlantic Provinces (15%) while they are significantly less present in Quebec (8%).*

It is also possible to outline the values and attitudes that are particular to baseball players. The following elements unveil certain aspects that characterize the people who play this sport:

- ▶ *Canadians who play baseball constantly seek intense experiences that fulfill their need for strong emotions. This sport represents for them an outlet that not only helps them release any pent-up emotions but also enables them to feel more connected to society.*
- ▶ *Consequently, they also like to share emotions and public events with a whole crowd. So, hanging out with friends at a baseball game or savouring a juicy hot dog over a professional game help them fulfill this need.*





- ▶ *Well able to cope with unforeseen events and change their goals accordingly, they are distinguished by their great flexibility. Such a trait proves very useful during a baseball game where the pitcher chooses his pitch depending on which hitter he is facing and the number of base runners in any particular game.*
- ▶ *Baseball players are athletes with conformist values who seek the company of like-minded people. They tend to retrench within their own group and consequently display little sensitivity for social issues and cultural diversity.*
- ▶ *Accordingly, they are also suffused with a fervent desire to demonstrate that their very own group, whether it is their baseball team, their school or their country, is superior to any others.*
- ▶ *Being young people in the main, they advocate equality with their elders. However, this does not keep them from favouring rigid frames of reference and displaying great respect for authority. Within a team, they tend to respect their coach and teachers and will try their best to follow the proposed strategy and any advice they are given.*
- ▶ *Athletes they may be, but Canadian baseball players expend little effort to stay healthy. They do not go out of their way to stay in shape by practicing intense physical exercises and do not try to eat quality food.*
- ▶ *And lastly, they are strategic consumers who seek out the best deals and favour usefulness over aesthetics in the products they buy. In addition, their purchase habits are not driven by any environmental or social considerations. They do however like to display their social standing through their material possessions and the goods and services they consume. They can be easily reached through advertising as it is a medium that holds their favour.*

➤➤➤ APPENDIX 4 - SUMMARY OF CHALLENGES, OPPORTUNITIES, PROPOSED INITIATIVES



During our meeting and sessions, the project team, in conjunction with stakeholders invited to the planning sessions, developed a list of challenges we face, statements on where we would like our system to be and how we were going to get there. From these lists, we developed a priority list of Strategic Initiatives and recommendations for this report.

The following is a list of those statements for each of the key components (in no particular ranking or scaling).

➔ PLAYER DEVELOPMENT

Challenges we face in PLAYER DEVELOPMENT

- No training and competition guidelines exist for child players
- Basic movement and sports skills are not emphasized during childhood.
- FUN is not always included in the training environment.
- The pool of players being developed is reduced by poor playing experiences (players quit).
- Contact time between player and coach is often too brief (short playing seasons).
- Decision-making training is not emphasized.
- Clubs and provincial associations do not coordinate programs, consequently athletes can be on one program 10 months a year.
- Knowledge of training is inconsistent (windows of trainability are not understood).
- Process and criteria for identifying elite players is not nationally defined.
- Defining development programs by Provincial jurisdiction is not always effective.
- Differences between male and female athlete development are not addressed.
- Training is delivered according to chronological age, not biological age (maturation level).
- Enterprising coaches sometimes bias their player selection.
- Player access to high-level training facilities is limited (travel and accommodation costs).
- Players participate in competitions that conflict (or overlap should we say?) (e.g. different baseball organizations such as Babe Ruth, Legion, Little League etc ...).



- Policies restrict player development (i.e. competition committees overruling technical experts).
- Quality and quantity of training is not defined (e.g. training, competition, and recovery are not periodized).
- Select teams are introduced too early, creating an exclusionary system and driving players from the sport before they have realized their potential.
- Opportunities for players to further their development are not always made available or promoted (e.g. NCAA, etc).
- Elite players have few elite playing options (e.g. pro and independent leagues).
- Elite players are not assisted in pursuing professional opportunities.

Where do we want to be in **PLAYER DEVELOPMENT**

- Player development programs, practice, and decision making are guided by a clear organizational philosophy and pathway.
- Comprehensive player development manual encompasses Baseball Canada player development philosophy.
- Guidelines are clearly stated on the balance between training and competition at the different stages of development.
- Appropriate training-to-competition ratios are practiced at all stages in all programs (clubs, Provincial and National teams).
- Recommended game formats are stipulated for all age groups.
- Talent Development Program in place at all stages in partnership with relevant affiliates.
- Policy exists for the movement of underage players – participation after PHV be based on developmental level.
- Grassroots participation increased through quality programs that involve children, schools, clubs, leagues, and players with disabilities.
- Models of best practice are understood by organizations involved in grassroots development.
- Child players practice fundamental movement skills in mini baseball programs.
- Parents, coaches, and players are educated on birth date effect.
- Players age 12 have acquired essential technical skills.
- Programs are player centred, not coach or parent centred.



- National training centre / or Baseball Academy structure provides training, education, competition, and advice to Developing High Performance players at the appropriate stages.
- Models of best practice are established for the identification and representation of talented players, and they are implemented in partnership with relevant organizations.
- "Late Entry" player identification process in place (tracking system).
- Players are advised and monitored in career development and education.
- Canadian, American, and World trends are constantly monitored within baseball and within sport in general.

What we have to do in **PLAYER DEVELOPMENT**

- Concentrate on the early – Physical Literacy stages: - stipulate no game competition before the age of 6; establish 1 with 1 curriculum for adults playing with toddlers; encourage parents to play with their children in backyards; focus on the general sport skills in FUNdamentals and the sport specific movement skills in Learning to Train (12U).
- Educate parents, coaches, and administrators in LTAD principles.
- Establish an accepted agreeable plan between all stakeholders
- Establish a structured player identification system and follow-up tracking system at all levels (i.e. associations, regions, provinces, national).
- Restructure Provincial programs according to demographics.
- Establish a committee to help elite players pursue professional opportunities.
- Adapt to the competition structures offered, and create new ones where necessary.
- Increase the number of players at the various stages at developmental levels.
- Identify and promote potential MLB players.
- Establish more regional teams.
- Create an off season for players over-training and study opportunities and/or realign programs for players under-training.
- Establish Baseball Canada Professional preparation / orientation support program.
- Establish periodized training, competition, and recovery for national team players.
- Ensure good liaison with the "significant others" in the players environment (Parents, association, coach)





- Increase feedback to players or parents/guardians
- Adoption of detailed Nationally recommended programs for the different ages
- Expand curriculum to include health, dietary, life-style, psychological factors



COACHING

Challenges we face in COACHING COMPONENT

- Quality of coaching across Canada is highly variable.
- Coach training requirements are not defined for different stages of player development.
- Impact of current coach training programs is not known.
- Parent coaches are not generally supported with training, mentoring and resources.
- Coach education and certification lacks experiential component.
- Some Coaches are not registered on CAC data base and are not registered as members of our associations.
- Many associations lack an organized coaching structure, including a Head Coach.
- No standard training program exists for association Head Coach or Technical Director.
- Inappropriate coaching creates undue emphasis on strategy rather than skill (technique).
- Many coaches promote over-specialization prematurely by limiting players to specific positions to win.
- Performance feedback to players is not given consistently.
- Coaching plans are not reviewed annually.
- Coaches do not utilize critical periods of accelerated player "trainability."
- Coaches do not understand the importance of periodization in program design.
- Coaching education covers issues of growth, development, and maturation only marginally.
- Sport science, sport medicine and sport-specific technical-tactical activities are not integrated.
- Women are a coaching minority, particularly non-existent, and female programs need more women coaches.

- Few specialist coaches exist for advanced stages of player development.
- The best coaches are with the best athletes.
- Coaches require more professional development opportunities, not simply certification.

Where do we want to be in COACHING

- More accredited and qualified coaches exist at all levels.
- Coaching competencies are defined for each player developmental stage.
- Parent coaches and P.E. teachers are applying LTAD principles.
- Coaching education courses are reviewed and re-designed where necessary in order for Coach training to be appropriate to the context being coached.
- Coach training system promotes an appropriate pathway for coaching development.
- Redundancies are eliminated between coach training levels.
- The number and distribution of coach educational opportunities around the country are increased, with a strong emphasis on local needs and delivery.
- The status of coaching qualifications is raised and opportunities for continuous professional development are provided.
- Coaches are advised and monitored in career development and education.
- Each association across Canada has professional Head Coach (accredited, educated, and compensated where appropriate).
- Coaches have increased access to coaching resources.
- Coaches are given opportunities for additional experiential education, such as seminars and elite guest coach demonstrations.
- Sport-Études prepare and mentor athletes to become coaches, reinforcing best practices.
- Formal mentoring programs exist at national, provincial, and regional levels. Mentoring tools and resources are available to coaches.
- Current and retired players are formally recruited and trained as coaches and mentors.
- Association Technical Directors have coaching competencies, administrative competencies (management, computer, technologies, and communication), leadership competencies and training competencies.
- Coaching entrepreneurs are incorporated into the LTAD framework and are recognized for meeting system goals.





- Teachers and coaches delivering baseball programs in schools are trained to introduce and train WinterBall, both in P.E. and during extra-curricular programs.
- Student baseball players are trained to be community coaches for mini and youth baseball.
- Non-P.E. specialists understand LTAD and deliver a curriculum that teaches baseball skills accurately and appropriately.
- Coaching reports and resources are available to coaches online.
- Coaching events schedule is online and updated regularly.
- Coaching symposiums provide regular opportunities for coaches to update their skills and learn on a continuous basis (French and English). Coaches attend symposiums on an annual basis.
- Symposiums are presented in western Canada, central Canada and the Maritimes.
- Regional, Provincial, and Territorial symposiums are coordinated so that coaches have more than one opportunity to attend.
- Opportunities are available for coach re-certification, professional development, re-licensing etc

What we have to do in COACHING

- Establish a consistent national delivery of coach training programs under adult training principles to NCCP contextual outcomes.
- Establish more sophisticated and wider-reaching education programs, including development for association Head Coaches and an association Head Coach blueprint/template
- Increase the quality and quantity of coaches, umpires, and administrators through an extensive program of education, training, and resources at local, regional and national levels.
- Establish formal coach mentoring programs at National, Provincial, and regional levels (can be face to face, e-mentoring, telephone, COP web-based).
- Administer mentoring programs by the appropriate level of organization.
- Expose coaches to professional environments.
- Provide novice club coaches with opportunities for baseball competition experience.
- At the Physical Literacy stages, encourage associations and organizations to utilize expertise that is available (e.g. parents who can organize kids).
- Provide LTAD-appropriate training for parent coaches in Physical Literacy stage programs.

- Develop coaching resources for Physical Literacy stages (e.g. Rally Cap play book).
- Enhance holistic teaching program
- Enhance liaison between NTC and Baseball Canada National Staff



LEADERSHIP & ORGANIZATION

Challenges we face in LEADERSHIP & ORGANIZATION

- Different organizations in Canada apply different set of rules, as many as 150 different sets.
- Associations are not always well-staffed for efficient administration.
- Administrative culture is not accountable: baseball leaders don't respond to email or phone calls.
- Coaches and officials are not involved in strategic decision making.
- Common terminology does not exist for baseball development.
- Many associations/regions do not have a Technical Director or Head Coach.
- Role and qualifications of the association Technical Director are not defined.
- Grassroots approach to baseball development is not defined.
- Coaches and officials are not involved enough in grassroots development.
- Associations are not logically structured for accountability and efficiency.
- Baseball is not marketed and cross-promoted.
- Community programs are often mediocre and focus on numbers for money.
- Communication between different stakeholders is inconsistent.
- Rules are inconsistently applied between organizations and between programs (when to introduce curveball, number of batters, size of field, etc.).
- Parents and coaches are not educated about long-term athlete development (nutrition, regeneration, maturation and psycho-social development, etc.).
- Volunteerism is not promoted or recognized sufficiently.
- Enhanced player programs (academies) are not subjected to quality control and official recognition.
- Resources are often focused on a small segment of players and programs.
- Opportunities for coach certification and education are not consistently available.
- Baseball Canada is not connected to associations through a defined governance structure.





- There is no dedicated advocacy or lobby group for baseball in Canada.
- Leadership selection lacks consistent process at all levels.
- Baseball Canada does not support players in professional transition and baseball scholarships.
- Key organizational roles in clubs are staffed by persons lacking baseball expertise.
- Lifelong playing opportunities are not consistently available.
- More volunteers are needed to staff and run programs.
- Clubs lack “cradle to grave” culture where members remain involved for life.

Where would we like to be in **LEADERSHIP & ORGANIZATION**

- Finances are available for associations to pay for needed programs and administration.
- Baseball programs are part of a National structure that has a National scope and that National structure supports technical representation.
- Funding structures are accountable.
- Governance structure ensures technical decisions are given priority.
- Elected board positions have clear criteria and Board positions have clearly defined terms (i.e. maximum number of years).
- Structure and policies are built on player-centred principles.
- Best practices for organizations exist at all levels.
- Organizations have positive relationships with communities, service organizations, funding organizations, and school boards.
- Technical experts are not absorbed in administrative duties and PSO executives support and recognize the expertise of their technical staff.
- Baseball Canada Board has technical representation with voting power.
- PSO Boards have technical representation with voting power.
- Advocates and lobbyists for baseball are active at federal and provincial levels.
- National Technical Directors have listened to the needs of the baseball community at all levels.
- Regional and club Boards of Directors embrace the National vision.
- Regional and club Boards of Directors put the needs of athletes and sport development ahead of personal agendas.
- Canadian baseball successes are celebrated and promoted in media.
- Baseball is reported regularly in all Canadian media – newspaper, TV, radio and Internet.

- Media has a strong positive relationship with baseball organizations and the game.
- Technical staff and administrators at all levels have clear roles and responsibilities for which they are accountable.
- Recognition is awarded to clubs that meet positive standards for player development, coaching and administration.
- Membership fees are established to provide additional funding for programs.
- Baseball Canada services are increased to grassroots through PSOs.
- Corporate groups support funding for grass roots baseball, coach education, LTAD, and player excellence.
- Finances are available to create and hire expertise.

How are we going to get there in LEADERSHIP & ORGANIZATION

- Establish a National structure for all baseball programs.
- Establish accountability measures for funding structures.
- Give priority to technical considerations within the governing structures.
- Establish clear criteria for elected board positions and define terms.
- Identify player-centred principles to define structure and policy.
- Identify and implement best practices for organizations at all levels.
- Promote positive relationships between baseball organizations and communities, service organizations, funding organizations, and school boards.
- Develop dedicated administrative staff so technical experts are not absorbed in administrative duties.
- Support and recognize the expertise of technical staff at all levels (association, regional, Provincial, National).
- Establish technical representation with voting powers on Baseball Canada and Provincial Boards.
- Promote baseball advocacy and political lobby at federal and provincial levels.
- Establish Provincial development plans that fit the National vision.
- Promote the National vision to regions and associations.
- Promote coordination between different groups delivering programs within the provinces.
- Promote Canadian baseball successes with media.
- Lobby media to televise more games at all levels, including youth and independent professional teams.





- Lobby media to report on baseball regularly – newspaper, TV, radio and Internet.
- Establish clear roles and responsibilities for technical staff and administrators.
- Establish Baseball Canada and PSO awards to recognize associations which meet positive standards for player development, coaching, and administration. (Club Mark)
- Increase player fees to provide additional funding for programs.
- Review player jurisdictions across Canada.
- Increase Baseball Canada services to grassroots through PSOs.
- Solicit funding from corporate groups for grassroots baseball, coach education, LTAD, and player excellence.
- Baseball Canada to develop and promote NTCs across the country
- Increase sources of funding to increase number of qualified staff
- Corporate involvement in training of players
- Appropriate program, facility and staffing for elite players



COMPETITION

Challenges we face in COMPETITION

- Competition structure is not integrated or rationalized at all levels across Canada.
- No periodization guidelines exist for player training, competition, and recovery.
- Varying climates and extreme weather hamper training.
- Length of season is inappropriate (e.g. too long vs too short).
- Organizations are not clear that baseball can have formats other than 9v9.
- Adult game structure is imposed on children (e.g. 9v9 on a full field).
- Many programs do not distinguish between recreational and elite players.
- Seasons overlap between club, select teams, resulting in over-competition and inconsistent coaching.
- Competition structures that place Ontario with its 150,000 players against P.E.I.'s 5,000 regularly on the same playing field at all stages.
- Seasons overlap with other sports, resulting in over-competition.
- Few semi-professional and professional Canadian teams exist to provide playing opportunities for elite players after adolescence (e.g. U21 not drafted have nowhere to go).
- National team program exposes a relative few players to international competition.

- Canadian players freeze when they first experience international competition; they are unaccustomed to the intensity and pace of the international game.
- Clubs and Provincial associations do not harmonize their training programs.
- Canadian players encounter timing conflicts when playing college baseball (e.g. NCAA).
- Player movement is restricted and impedes development (e.g. playing up).
- No off-season training programs are currently defined.
- Few formal partnerships currently exist with professional teams in the United States, Europe, and Latin America.

Where do we want to be in COMPETITION

- All age groups have recommended game formats.
- Existing competition model is reviewed and the recommendations implemented.
- Competition structure is defined at each stage, including training-competition ratios, periodization, season length, standings, playoffs, cup championships, and player statistics.
- Guidelines are established for the incidence of competition (e.g. tournaments).
- Appropriate levels of competition are defined for each stage.
- International normative data is collected.
- Baseball Canada guidelines prevent overplaying at each stage.
- Appropriate age groupings are defined for group training.
- Access to competition is improved, minimizing travel and costs.
- Overlap between baseball programs is reduced (i.e. other organizations, schools, regional, Provincial and National teams).
- Competition guidelines address unique geographical demands of different regions.
- Ongoing campaign promotes positive and supportive baseball culture among parents and players.
- Year-round facilities are available for U14 programs and above.
- Quality umpires work at all levels, communicating standards of conduct to players, coaches, and parents.
- Larger player pool exists for National teams.
- National scheduling plan is established to accommodate competitions.
- More age groups exist for Canada and Provincial Games, allowing more elite playing opportunities for players in Training to Train and Training to Compete stages.
- Consistent competition structure is established for different age groups across Canada, based on Baseball Canada model.





How are we going to get there in COMPETITION

- Eliminate adult game formats in children's programs.
- Provide recommendations for training and competition formats # v # across Canada.
- Established recommended game formats for all development stages (i.e. # v #).
- Create a Canadian professional league for elite players.
- Revisit the format of the Canada Cup.
- Define plans for periodized training, competition, and recovery at all levels.
- Rationalize and integrate the competition structure across Canada.
- Technical experts design and lead Canadian competition system.
- Differentiate between recreation players and performance players in programming.
- Establish programs based on biological age (physical maturation) rather than chronological age.
- Eliminate overlapping seasons between schools, clubs, and regional select teams.
- Work with other sports to reduce overlapping seasons.
- Define and implement periodization of training, competition, and recovery phases for all development stages.
- Enhance inter-NTC tournaments
- Enhance playing program for NTC's
- Clearly define the role of the different competition and organizations (University, etc...)
- Develop a guide for player development during games for every stages of development



FACILITIES

The backdrop for every playing experience is the playing surface itself, and at elite levels, available ancillary training facilities for peak fitness and performance training. The current status of baseball facilities in Canada needs to be improved.

Challenges we face in FACILITIES

- Access to programs at all ages is limited by availability of facilities.
- Facility scheduling does not share time adequately.
- Best facilities are often offered to elite teams and older teams.
- Poor facilities are offered to child and youth programs and "B" teams.
- Inappropriate facilities create incorrect game experience.
- There is a shortage of high-level training facilities (e.g. field turf, indoor, regular fields).
- Long-term strategy for infrastructure development does not exist.
- Facility needs are not prioritized.
- Sponsorship and funding is significantly less per capita than other baseball countries.

Where do we want to be in FACILITIES

- More municipal playing facilities are available for baseball programs.
- Existing municipal facilities are upgraded.
- More facilities are owned by baseball entities.
- More baseball-specific stadiums exist.
- More public-private partnerships exist to support investment in baseball-owned facilities.
- More partnerships between Baseball Canada and universities & colleges exist for development and use of facilities.
- World-class sports science, medical, and technological systems are in place to support success of International teams at major international tournaments.

How are we going to get there in FACILITIES

- Use facilities appropriately to create correct game experience.
- Create marketing strategies to offset operational costs.
- Generate relationships with municipalities to develop indoor and outdoor facilities.
- Develop a template between Baseball Canada, provinces, associations, and governments at national, provincial, and municipal levels for facility development, including indoor considerations.
- Create partnerships with communities and universities, with other sports, etc.
- Lobby government and corporate groups to create more baseball-specific stadiums.



RESOURCES SELECTED BIBLIOGRAPHY

Abbott A., Collins D., Martindale R., Sowerby K., Fundamental Movement Abilities Chart, Talent Identification and Development, An Academic Review, Sport Scotland University of Edinburgh 2002

Alpine Integration Model. Alpine Canada Alpine, High Performance Advisory Committee, 1999

Andrews JR, Chmielewski T, Escamilla RF, Fleisig GS, Wilk KE. Conditioning program for professional baseball pitchers. American Sports Medicine Institute, Birmingham, AL, 1997.

Armstrong, N. and Welsman, J. Young People and Physical Activity. Oxford University Press, Oxford, 1997.

Armstrong, N. and Welshman, J. Children in Sport and Exercise. British Journal of Physical Education, 28(2). Pp. 4-6, 1997.

Balcunas, M., Stonkus, S., Abrantes, C., and Sampaio, J., Long Term Effect of Different Training Modalities on Power, Speed, Skill and Anaerobic Capacity in Young Male Basketball Players, Journal of sports Science and Medicine (2005) 5, 163-170. www.jssm.org

Balyi, I. and Way, R. "Long-Term Planning of Athlete Development. The Training to Train Phase". B.C. Coach, 1995. pp. 2 - 10.

Balyi, I." Sport system building and long-term athlete development in Canada. The situation and solutions". Coaches Report, The Official Publication of the Canadian Professional Coaches Association. Summer 2001. Vol.8, No.1, pp.25-28.

Balyi, I., "Long-term Planning of Athlete Development, Multiple Periodisation, Modeling and Normative Data" in FHS, The UK's Quarterly Coaching Magazine, Issue Four, pp. 7 - 9. May, 1999.

Balyi, I., "Long-term Planning of Athlete Development, The Training to Train Phase" in FHS, The UK's Quarterly Coaching Magazine, Issue One, pp. 8 - 11. September, 1998.

Balyi, I., "Long-term Planning of Athlete Development, The Training to Compete Phase" in FHS, The UK's Quarterly Coaching Magazine, Issue Two, pp. 8 - 11, December, 1998.

Balyi, I., and Hamilton, A. Long-term Athlete Development, Trainability and Physical Preparation of Tennis Players. In: Strength and Conditioning for Tennis. Eds. Reid, M., Quinn, A. and Crespo, M. ITF, London. 2003. pp. 49-57.

Balyi, I., and Hamilton, A. "Long-term Planning of Athlete Development, The Training to Win Phase" in FHS, The UK's Quarterly Coaching Magazine, Issue Three, pp. 7 - 9. April, 1999.

Barrentine SW, Matsuo T, Escamilla RF, Fleisig GS, Andrews JR. Kinematic analysis of the wrist and forearm during baseball pitching. Journal of Applied Biomechanics 14(1):24-39,1998

Bar-Or, O. Developing the Prepubertal Athlete: Physiological Principles. In Troup, J.P., Hollander, A.P., Strasse, D., Trappe, S.W., Cappaert, J.M. and Trappe, T.A. (Eds.), Biomechanics and Medicine in Swimming VII., London: E & FN Spon. pp. 135- 139, 1996.

Bar-Or, O. Nutritional Considerations for the Child Athlete. Canadian Journal of Applied Physiology. 26(Suppl.), pp. 186- 191. 2001.

Bar-Or, O. (ed). The Child and the Adolescent Athlete. Balckwell Science Ltd. Oxford, UK, 1996.

Belov, E. "For Those Starting Artistic Gymnastics". Translated material of the Canadian Gymnastic Federation. 1995.

Blimkie, C.J.R and Marion, A. "Resistance Training during Preadolescence: Issues, Controversies and Recommendations". Coaches Report, Vol.1. No.4.1994. pp.10-14.

Blimkie, C.J.R. and Bar-Or, O. "Trainability of Muscle Strength, Power and Endurance during Childhood". In. Bar-Or, O. ed., The Child and Adolescent Athlete. London: Blackwell Scientific Publications, 1996. Bloom, B. Developing Talent in Young People. New York: Ballantines, 1985.

Bompa, T. From Childhood to Champion Athlete. Toronto. Veritas Publishing Inc. 1995

Bompa, T. Primer on Periodization. Available through www.sirc.ca, published in Olympic Coach, Volume 18, No. 2.

Bouchard, C., Malina, R.M., Perusse, L. 1997. Genetics of Fitness and Physical Performance. Champaign, IL: Human Kinetics.

Calgary Health Region, 3 Cheers for the Early Years (2004). Snactivity box: Activities for promoting healthy eating and active living habits for young children. Retrieved November 22, 2004, from:

www.calgaryhealthregion.ca/hecomm/nal/child/DaycareToolkit.pdf

Canadian Child Care Federation. (2001). Supporting your child's physical activity (Resource Sheet #52). Retrieved November 22, 2004, from

www.cfc-efc.ca/docs/cccf/rs052en.htm

Cluck, B., Think Better Baseball, Contemporary Books, New York, 2002.

Convergence: Building Towards 2010, Long Term Athlete Development, Speed Skating Canada, September 2005

Dick, Frank W., Sports Training Principles, London, Lepus Books, 1985

Docherty, D. Trainability and Performance of the Young Athlete. Victoria: University of Victoria, 1985.

Dorfman, H.A., and Kuehl, K., The Mental Game of Baseball. A guide to Peak Performance. 2nd Edition, Diamond Communications, South Bend, IN. , 1995.

Drabik, J. Children and Sport Training. Stadion, Island Pond, Vermont. 1996.

Dubner, S.J., and Leavitt, S.D., A Star is Made, May 2006, article available through www.freakonomics.com

Ericsson, K.A. and Charness, N. Expert Performance. Its Structure and Acquisition. American Psychologist, August 1994., pp. 725-747.

Ericsson, K.A., Krampe, R.Th. and Tesch-Romer. The role of deliberate practice in the acquisition of expert performance. Psychological Review, 1993, 100. pp. 363-406.

Escamilla RF, Barrentine SW, Fleisig GS, Zheng N, Takada Y, Kingsley D, Andrews JR. Pitching biomechanics as a pitcher approaches muscular fatigue during a simulated baseball game. Am J Sports Med 35:23-33, 2007.

Escamilla RF, Fleisig GS, Barrentine SW, Zheng N, Andrews JR. Kinematic comparisons of throwing different types of baseball pitches. Journal of Applied Biomechanics 14(1):1-23, 1998

Escamilla RF, Speer KP, Fleisig GS, Barrentine SW, Andrews JR. Effects of throwing overweight and underweight baseballs on throwing velocity and accuracy. Sports Medicine 29(4):259-272, 2000.

Fleisig GS, Barrentine SW, Zheng N, Escamilla RF, Andrews JR. Kinematic and kinetic comparison of baseball pitching among various levels of development. Journal of Biomechanics 32(12):1371-1375, 1999.

Fleisig GS, Phillips R, Shatley A, Loftice J, Dun S, Drake S, Farris JW, Andrews JR. Kinematics and kinetics of youth baseball pitching with standard and lightweight balls. Sports Engineering 9:155-163, 2006.

Fleisig GS, Kingsley DS, Loftice JW, Dinnen K, Ranganathan R, Dun S, Escamilla RF, Andrews JR. Kinetic comparison among the fastball, curveball, change-up, and slider in collegiate baseball pitchers. The American Journal of Sports Medicine 34(3):423-430, 2006

Hansford, C., Fundamental Movements, Presented British Canoe Union, National Conference, Nottingham Dec. 2004

Haywood, K.M. Life Span Motor Development. Champaign, IL. Human Kinetics, 1993.

Health Canada. (2002a, November 22). Statistics & public opinion. Canada's physical activity guides for children and youth. Retrieved December 8, 2004, from www.phacaspc.gc.ca/pau-uap/pagguide/child_youth/media/stats.html

Health Canada. (2002b, November 22). Canadian Paediatric Society, College of Family Physicians and Canadian Teachers' Federation call for urgent action to boost physical activity levels in children and youth. Canada's physical activity guides for children and youth. Retrieved December 8, 2004, from www.phacaspc.gc.ca/pau-uap/pagguide/child_youth/media/release.html and www.centre4activeliving.ca/Publications/WellSpring/2004/December.html#Snactivity accessed January 10, 2005

Honeybourne, J., Editor, Acquiring Skill in Sport: An Introduction, Routledge Publishing, London, 2006

Introduction to Long Term Athlete Development for Canadian Freestyle Skiing, Version 1.1, Canadian Freestyle Ski Association, Canada, August 2006

Jaeger, A., Why Arms are Regressing in the U.S.

Jurbala, P., Presentation on "A Clubmark for Canada: Developing a National Sport Club Accreditation System", Ottawa, June 2005

Kaye, D., runjumpthrow, Athletic Canada's Contribution to Fundamental Skills Development, Presentation to Sport Canada LTAD Symposium, January 2007.

Keskinen, K.L., Komi, P.V. and Hollander, A.P. Jyvaskyla, Gunners, 1999. Vorontsov, A.R. Multi-Year Training of Young Athlete as Potential Modifier of Growth and Development (Analysis of some biological concepts). Sport Medicine in Aquatic Sports – the XXI Century, FINA World Sport Medicine Congress, 2002.

Klawans, H.L., Why Michael Couldn't Hit and Other Tales of the Neurology of Sports, Avon Books, New York, 1996.

Knudson, D. and Kluka, D.A., The Impact of Vision and Vision Training on Sport Performance, Journal of Physical Education, Recreation and Dance, April 1997.

LeBlanc, J., and Dickson, L., Straight Talk about Children and Sport, Coaching Association of Canada, 1997.

Liski, B., Long-Term Athlete Development Plan for Rowing, Rowing Canada, Presentation, January 2006.

Long Term Athlete Development, Athletics Canada, Canada 2006

Long Term Athlete Development, The Future of Canadian Cycling, Canadian Cycling Association, January 2006

Long-Term Athlete Development, Soccer Canada, 2007

Long Term Athlete Development, Volleyball Canada, 2007

Lyman S, Fleisig GS, Andres JR, Osinski ED. Effect of pitch type, pitch count, and pitching mechanics on risk of elbow and shoulder pain in youth baseball pitchers. The American Journal of Sports Medicine 30(4):463-468, 2002.

Lynn, M. A. T., & Staden, K. (2001, Fall). The obesity epidemic among children and adolescents. WellSpring 12 (2), 5–6.

Malina, R.M. and Bouchard, C. Growth, Maturation, and Physical Activity. Champaign, Ill.: Human Kinetics, 1991.

Mandigo, J.L., and Holt, N.L., Reading the Game: Introducing the Notion of Games Literacy. Physical and Health Education Journal, 70(3), 4-10, 2004

MacKay, M., Be One, Basketball Canada, Presentation to Sport Canada LTAD Symposium, January 2006

McWhorter, W., Wallman, H. W., & Alpert, P. T. (2003). The obese child: Motivation as a tool for exercise. Journal of Pediatric Health Care, 17, 11–17.

Morris, J.G., and Nevill, M.E. "A Sporting Chance, Enhancing Opportunities for high-level sporting performance: 'Influence of Relative Age'", Sportnation, Loughborough University, Britain, 2006

National Association for Sport and Physical Education. (2002). Active start: A statement of physical activity guidelines for children birth to five years. Reston, VA: American Alliance for Health, Physical Education, Recreation & Dance.

National Coaching and Training Centre: Building Pathways in Irish Sport. Towards a plan for the sporting health and well-being of the nation. Limerick, Ireland, 2003.

Norris, S.R., & Smith, D.J. 2002. Planning, Periodization, And Sequencing of Training And Competition: The Rationale For A Competently Planned, Optimally Executed Training And Competition Program, Supported By A Multidisciplinary Team. In M. Kellmann (Ed.), Enhancing Recovery: Preventing underperformance in athletes, pp.121-141. Champaign, IL: Human Kinetics.

Olsen SJ, Fleisig GS, Dun S, Loftice J, Andrews JR. Risk factors for shoulder and elbow injuries in adolescent baseball pitchers. The American Journal of Sports Medicine 34:905-912, 2006.

One Country – One Game: Canada in Union, Long-Term Rugby Development Model (LTRD 101), Rugby Canada, January 2007

Partington, E., and Partington, S., *Mental Skills, A Guide for Badminton Coaches*, Badminton England, England, 2005

Pitch Count Publication (A downloadable PDF of "Protecting Young Pitching Arms: The Little League Pitch Count Regulation Guide for Parents, Coaches, and League Officials," posted on Jan. 5, 2007) – available at www.littleleague.org

Podium 2010, Cross Country Canada, 2005

Ready Set Go (n.d.). Ready set go: The sports web site for families. Retrieved November 22, 2004, from www.readysetgo.org

Report of the Minister of State's (Sport) Workgroup on Sport for Persons with a Disability, 2004 Ross, W.D. and Marfell-Jones, M.J. Kinanthropometry. In: Physiological Testing of the Elite Athlete. Eds. MacDougall, J.D.,

Ripken, C., Ripken, B. and Burke, L., *Play Baseball the Ripken Way. The Complete Illustrated Guide to the Fundamentals*, Ballantine Books, New York, 2004

Ripken, B., Lowe, S., Ripken, C., *Coaching Youth Baseball the Ripken Way*, Human Kinetics, 2007.

Robertson, S., and Way, R., *Long-Term Athlete Development, Coaches Report*, Vol. 11, No. 3, Canadian Professional Coaches Association, Coaching Association of Canada, Canada

Rushall, B. *The Growth of Physical Characteristics in Male and Female Children*. In *Sports Coach*, Vol.20, Summer, 1998. pp. 25 – 27.

Sanderson, L. "Growth and Development Considerations for the Design of Training Plans for Young Athletes". Ottawa: CAC, SPORTS, Vol.10.No.2.1989.

Stadler, M. *The Psychology of Baseball: Inside the Mental Game of the Major League Player*, First Edition, Gotham Books, New York, 2007.

Tanner, J.M. "Growing Up." *Scientific American*, 1973, 9.

Tanner, J.M. *Fetus into Man Physical Growth from Conception to Maturity*, Second Edition, Castlemead Publications, Ware, England, 1989

Thompson, A.H., Barnsley, R.H., and Battle, J., "The Relative Age Effect and the Development of Self-Esteem", *Educational Research*, Vol. 46, No. 3, Winter 2004

Thumm, H-P. "The Importance of the Basic Training for the Development of Performance" *New Studies in Athletics*, Volume 1. pp.47-64, 1987.

Tihanyi, J. *Long-Term Planning for Young Athletes: An Overview of the Influences of Growth, Maturation and Development*. Sudbury: Laurentian University, 1990.

USA Baseball Medical and Safety Advisory Committee, *Position Statement on Youth Baseball Injuries*, Updated: May 2004, information available through www.asmi.org

Valentine, J. (2003, Winter). Don't children get all the exercise they need from playing? *WellSpring* 14 (1), 6–8.

Viru, A. Loko, J., Volver, A., Laaneots, L., Karlesom, K. and Viru, M. Age periods of accelerated improvements of muscle strength, power, speed and endurance in age interval 6-18 years. In "Biology of Sport", Warsaw, V., 15 (4) 1998, 211- 227 pp.

Viru, A. *Adaptation in Sports Training*. CRC Press, Boca Raton, 1995. 310.p. Vorontsov, A.R. Patterns of Growth for Some Characteristics of Physical Development: Functional and Motor Abilities in Boy Swimmers 11 – 18 Years. In: *Biomechanics and Medicine in Swimming VIII*. Eds.

Vision 2020 – The Long-term Athlete Development Plan for Snowboarding in Canada, Canadian Snowboard Federation, 2007

Way, R., *Long Term Athlete Development: Playground to Podium*, Presentation to Canadian Football Forum, September 2006

Wenger, H.A., and Green, H.J. *Movement publications*, Ithaca, N.Y., 1982. pp. 75 – 104.

Rowland, T., and Boyajian, A. *Aerobic Response to Endurance Training in Children*. *Medicine and Science in Sports and Exercise*, 26(5) Supplement.

White, S., *Long Term Athlete Development*, Presentation to Surrey Sports Partnership, UK Coach, September 2006



PICTURES CREDIT

All pictures in this book are property of "Baseball Canada". They have been purchased for production of this book, or copyright was given by MLB (Major League Baseball) or by amateur baseball organizations and their photographers. No image may be reproduced without prior written permission of "Baseball Canada".



Baseball Canada

A7-2212 Gladwin Crescent, Ottawa (Ontario) K1B 5N1

Phone: (613) 748-5606 Fax: (613) 748-5767

www.baseball.ca