



Rugby Canada
Long-Term Rugby Development Model
2008

COMMUNITY AND COUNTRY





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Foreword

I am pleased to present Rugby Canada's new policy framework for how rugby will be developed across Canada over the next 10 years. We are indeed not the first Union in the Rugby World to have embarked on this pathway; Most of the major Unions in Europe and the Southern Hemisphere have embraced a similar strategic development pathway. This is a visionary approach which can radically transform rugby in Canada.

The rugby world changed forever in 1996 when it went professional. As a result, the game has risen in attractiveness for both the player and the spectator. Partly due to this Rugby Canada have not been in a position to effectively challenge the leading nations as it once did – LTRD can and will over the next 20 years go a long way to address that widening gap.

Sport Canada supports rugby immensely, they fund the Male & Female Players at the Elite level (AAP) and the National Union in terms of development administration. Our Provinces are supported through various Provincial Government Departments that are integrally linked to the National Governments development of sport and funding streams in Health and Education for the welfare of young players and adults health & welfare; Long Term Player Development will be an integral part of all funding applications by the Provincial Rugby Unions administration in the future, so it is important that we embrace and incorporate the direction that is initially been led by Sport Canada.

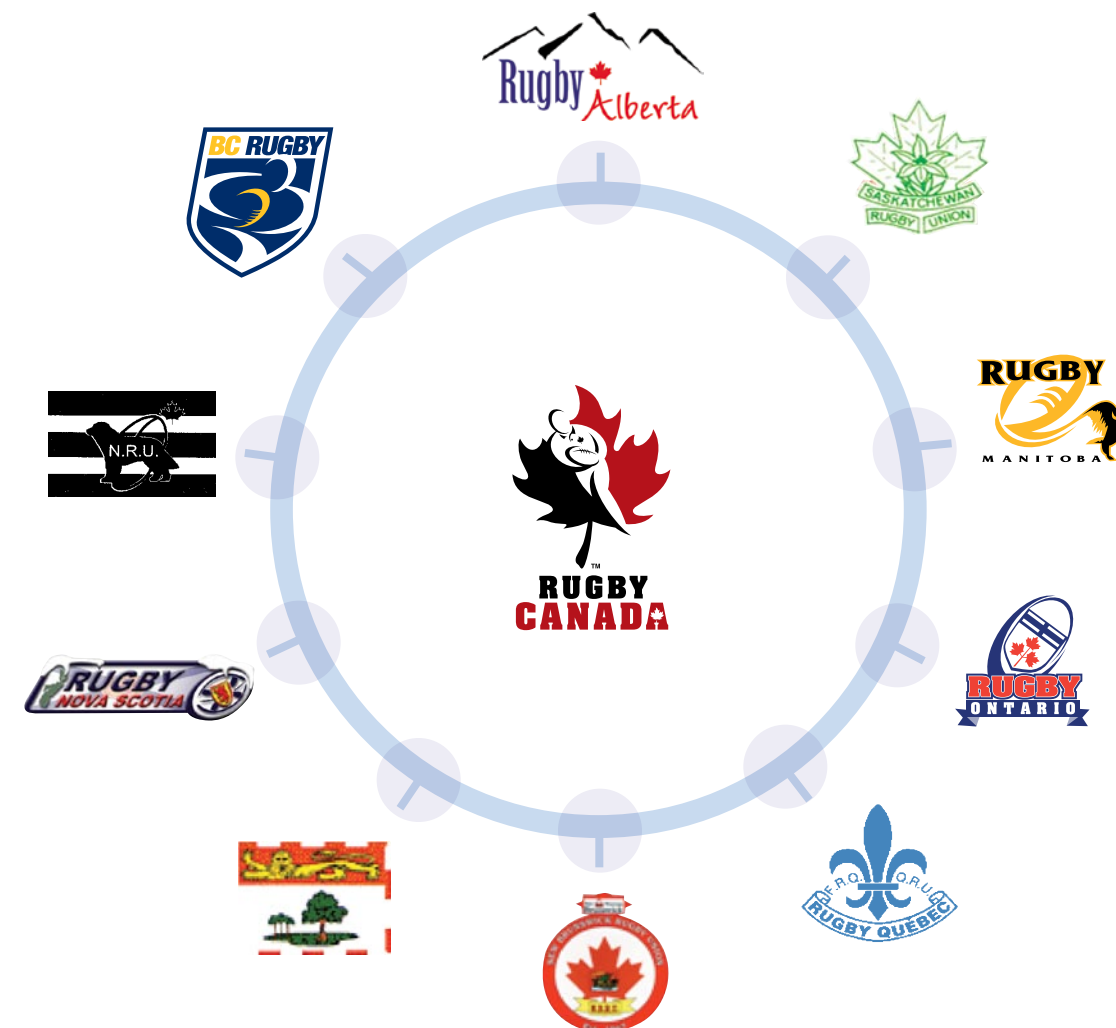
We appreciate that Rugby Canada are being directed by the sport-specific LTAD working group; undeniably their knowledge is being used in many National Sporting Organizations (NSOs) – not just in Canada – but all over the sporting world – however we have them manoeuvring us through this climate change, and I for one am looking forward to the future and the outcomes that this will produce. We are grateful for the support and assistance we have received from our colleagues in the Rugby Football Union, the Irish Rugby Football Union and the New Zealand Rugby Football Union. Finally I wish to extend my thanks to the Rugby Canada LTRD Group for their work and commitment in developing the model under the guidance of Istvan Balyi.



Graham Brown
CEO - Rugby Canada

Declaration of Adoption

The member Unions of Rugby have formally agreed that the LTRD will provide a basis for developing rugby in Canada





A New Long Term Framework For Developing Rugby In Canada

Introduction To The LTRD Programme

RUGBY CANADA IS LAUNCHING THIS LONG TERM RUGBY DEVELOPMENT (LTRD) STRATEGY providing the blueprint for all stakeholders involved with rugby players of all ages and abilities. We are doing this in conjunction with Sport Canada and believe this policy will be a significant milestone for rugby in Canada.

The Sport Canada Long Term Athlete Development model is a visionary framework for full sport system alignment in Canada, integrating health and education with sport and physical activity. It is a training, competition and recovery framework for individuals at all stages of life.

This document was developed by the Rugby Canada expert group, in consultation with Rugby Canada staff, coaches, volunteers, and other stakeholders within Canadian Rugby. Rugby Canada is not alone in developing such a policy. Every sport in Canada is engaged in a similar exercise and we have worked with them and international rugby unions to share best practice ideas and information. Once adopted LTRD will be the policy framework for how rugby will be developed across Canada in partnership with our member Unions, clubs and players.

This document outlines the key principles of the Rugby Canada LTRD model. The details of how LTRD will be implemented and the technical resources required for delivering the new model, training and supporting officials, coaches and players will be developed in the next phase - LTRD 202.

The successful implementation of the LTRD model will lead to better and more skilful players, a thriving game supported by quality coaches, officials and volunteers at all levels of the game in Canada.

A New Direction For Rugby Canada

Rugby in Canada is unique in that it has many qualities that are also evident in other sports but in combination these factors produce a social and cultural environment that is specific to the sport's national growth and development.

The International Rugby Board, the world governing body, has classified Canada as a Tier 2 Rugby nation. The IRB is working with Rugby Canada to improve our standing in world rugby and are committed to a major investment program over the next 8 years to achieve this. Rugby is vibrant and the game is entering a new era in Canada. We hosted the 2006 Women's Rugby World Cup, established the NA4 series with USA Rugby, hosted the Churchill Cup and are implementing developmental alliances with Tier 1 Rugby playing nations such as England, Ireland and New Zealand.



Keeping Canadian Rugby Competitive

Rugby Canada is at a pivotal moment. The changes and challenges of remaining competitive in world rugby, and to be positioned as a major sport in Canada, require a new way of operating and developing rugby at all levels. With that said, the vision for Canadian rugby is:

- 1. National Men’s team = Top Ten team in the world/ National Women’s Team = Top 4 team in the world, National Men’s and Women’s Sevens programs = Top 10 and Top 2 respectively**
- 2. Increasing the number and quality of players, coaches, referees and volunteers**

To achieve this, the rugby community at all levels must commit to the goals of developing rugby in Canada to its full potential through its 10 Provincial Unions, and maximizing the revenue and resource opportunities available to Rugby Canada both nationally and internationally. Rugby Canada launched a new strategic plan in 2005. The key features of the plan involve:

- Re-focusing of the Board on the strategic direction of Rugby Canada.
- Establishing a fully operational Development Department under the direction of the Director of Development to co-ordinate all aspects of rugby’s growth, planning and development.
- Establishing a High Performance team under the Director of High Performance to lead the coaching, preparation, and development of players and teams.
- Prioritizing the development of elite players in the 16-21 age groups.
- Re-structuring the National Teams’ international program with proposals to provide a minimum of 20 competitive matches for the National Men’s squad and, in particular, seeking the establishment of a new Americas Cup series with the USA and Argentina to prepare for the 2011 RWCs.
- A real emphasis on coaching and skill development.
- Re-vamping competitive rugby in Canada with the setting up of 2 new Regional teams (East and West initially) to play cross border competitions and in a Canadian national championship.
- Establishing a network of high performance development centres across Canada to implement high performance and elite player development programs in partnership with Canadian centres of sporting excellence.
- Establishing new partnerships with the 10 Provincial Unions to jointly develop and implement rugby development programs to train and support more coaches, referees, volunteers and clubs.
- Investing in new Information Technology systems to maximize communication, resource management and registration processes.

LTRD covers all aspects of rugby (15s and 7s), providing the technical framework for how the game will be played and developed. Therefore, this model represents a critical piece of the puzzle and requires the commitment of coaches, administrators, volunteers, officials, leaders, and players in the game to put the plan into action for the future.

Benefits For Rugby Canada

There are a number of benefits for Rugby Canada implementing this LTRD approach:

1. Establishment of a clear pathway for rugby players
2. Support for the development of better players and optimal performance at all levels through well-structured programs and plans
3. Implementation of integrated programs for developing rugby players and rugby in Canada
4. Provision of a planning tool, based on scientific research and sport-specific empirical experiences, for coaches and administrators
5. Creation of a platform for a better, more enjoyable and a sustainable game
6. Facilitation of new partnerships within sport, health, and education governments that will benefit rugby

Furthermore, the LTRD model is being introduced to the Canadian rugby community at a time when rugby’s significant growth potential is being recognized both within Canada and internationally. As a result, this period of growth and development presents a unique window of opportunity for positive change and impact.

LTRD provides a clear framework for how the game can develop across Canada

- it is premised on the mutual interdependency of physical education, school sports, competitive sports, and recreational activities;
- it positively affects the quality of training and competition by considering factors such as developmental age and optimal trainability; and
- it is an inclusive model that encourages individuals to get involved in lifelong physical activity.



LTRD presents a unique window of opportunity for positive change and impact.

Rationale

Major changes are occurring in the Canadian sport system. The adoption and development of this LTRD model by Rugby Canada arises chiefly in response to funding implications imposed by Sport Canada that are conditional upon each NSO's development of a long-term, systematic, and strategic approach to player development. Secondly, the need for a new approach arises in part from the declining international performances of Canadian players in some sports and the difficulty other sports are having in identifying the next generation of internationally successful players. Furthermore, there exists a decline in participation in recreational sport and physical activity and physical education programs in schools are being marginalized.

Sport organizations across Canada and around the world are utilizing a long-term player development model to reshape the development of their sport. The development and implementation of a long-term rugby development model will enable Rugby Canada to provide participants with positive experiences across a sustainable pathway.

Following is a list of shortcomings that exist:

- Developmental players over-compete and under-train
- Adult training and competition programs are superimposed on developing players
- Training methods and competition programs designed for male players are superimposed on female players
- Preparation is geared to the short-term outcome of winning, and not to the process
- Chronological rather than developmental age (maturity) is used in training/competition planning
- Coaches largely neglect the critical periods of accelerated adaptation to training
- Fundamental movement skills and sport skills are not taught properly
- The most knowledgeable coaches work at the elite level; volunteer coaches work at the developmental level where quality, trained coaches are essential
- Parents are not educated about LTRD
- Developmental training needs of players with a disability are not well understood
- The competition system hinders player development
- There is no talent identification system
- There lacks integration between physical education programs in the schools, recreational community and club programs, and elite competitive programs
- Limited integration of national teams

“The health and well-being of the nation and the medals won at major Games are simple by-products of an effective sport system.” Istvan Balyi

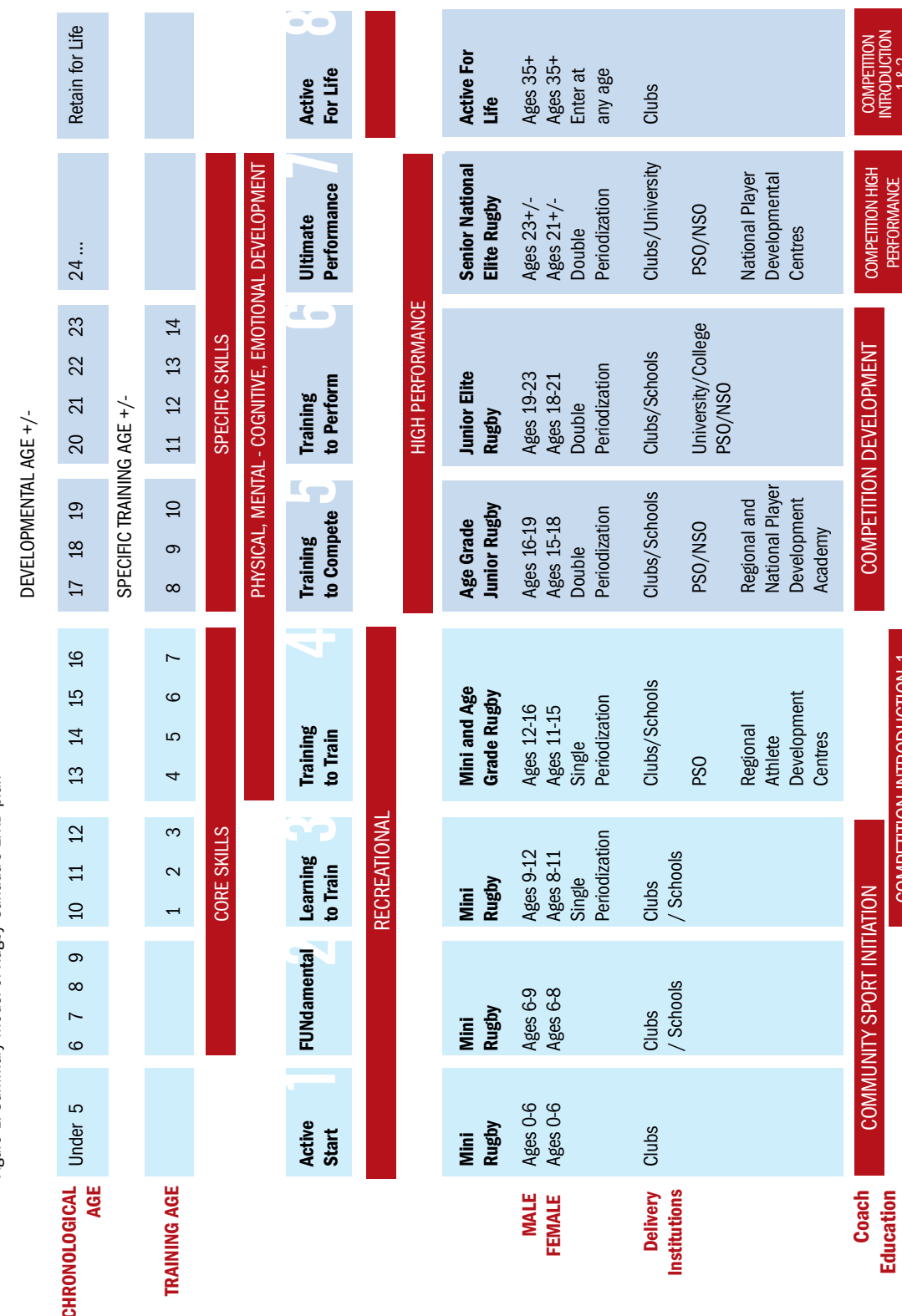
**What is Rugby Canada's
Long Term Rugby Development programme?**



The next four stages (4, 5, 6, and 7) focus on excellence with more emphasis on building, optimizing and maximizing rugby-specific skills in a competitive, well-structured environment. Stage 8 encourages life-long physical activity and involvement in rugby. Players can enter this stage at any time. Note: A more complete explanation of each stage appears in Appendix 2.

Long-Term Rugby Development Plan

Figure 1. Summary model of Rugby Canada's LTRD plan



Basic Components of Training (Stamina, Strength, Speed, Skill and Suppleness) Planning, Quantification and Implementation

Key Outcomes To Be Achieved From Rugby Canada LTRD Programme

The LTRD process identified issues, challenges and key outcomes relating to the implementation of the ideal rugby environment for athlete development across the 8 stages of LTRD. Below is a summary of those key outcomes to be achieved by Rugby Canada in conjunction with member Unions and stakeholders.

Active Start

1. Rugby Canada will explore innovative methods of forging stronger links with existing and new minor rugby delivery institutions to grow the sport of rugby in Canada

FUNdamentals

2. Rugby Canada will take a leadership role in coordinating the implementation of a national non-tackle rugby program
3. The LTRD and associated documents will be designed in a user-friendly manner for use by individuals both familiar and NEW to rugby
4. Supporting resources (information pamphlets, web tools, coaching resources etc.) will be formulated to compliment and further explain aspects of the LTRD
5. National consensus will be achieved and documented regarding:
 - a. the basic components of rugby to be taught
 - b. the rule and game variations of non-tackle rugby
 - c. the version s of non-tackle rugby to be played
 - d. the age/time when contact can be introduced and how to incorporate the teachings of contact in the game without emphasizing competition
6. Rugby Canada will generate coaching resources that provide ideas for skill/game progressions for grassroots coaches
7. Resources to educate Parents and Coaches will be developed by Rugby Canada
8. A concentrated effort by Rugby Canada and its member Provinces will be devoted to the implementation/development of non-contact rugby in all ten provinces at the elementary school level. Resources will be developed and administrative support provided to increase the number of rugby festivals for youth across the Nation delivered by schools, communities, and clubs. Provincial festivals will culminate in National Rugby championships.

Learning to Train

9. Game format will reflect either minor flag rules or the minor tackle rules ONLY in accordance with the laws of the game.

Training to Train

10. Stronger age-grade competitions will be established across the country at the club level through joint administrative efforts between Rugby Canada and its member Provincial Unions
11. National recovery protocol will be devised and implemented throughout rugby and disseminated to athletes and coaches

Training to Compete

12. The development of the complete person will be supported (athletics, education, social)
13. Overall training objective will be athletic aptitude in a variety of rugby situations
14. Creativity and decision-making will be trained
15. Structure of sessions will focus on multiple outcomes
16. Special attention will be paid to technical speed of Canadian rugby players
17. Information technology will be utilized with all national and age-grade athletes for monitoring and evaluation purposes
18. National benchmarks will be established for athletes, coaches, officials, administrators

Training to Perform

19. Players will be trained to peak for major competitions
20. Training will be characterized by high intensity and volume
21. Frequent breaks will be built into the training schedule to prevent burnout
22. Single, double periodization will be utilized as the optimal framework for preparation
23. Training to competition ration will be 25:75, with competition percentage including competition-specific training activities
24. Utilization of 7s rugby as a player development program

Ultimate Performance

25. (All of the key outcomes from Training to Perform with the addition of...)
26. National competition structure will be reviewed, revised to increase the potential player pool for the national squads
27. Initiatives will be implemented to provide more players with the opportunity to play elite and professional rugby.

Active for Life

28. Rugby Canada and its member Provinces will ensure that at all stages of the rugby participant's experience will be positive
29. Rugby Canada will devise supporting resources to provide parents, coaches, officials, volunteers, athletes with a pathway for their involvement in the sport of rugby, that emphasizes the various options available to actively participate in rugby at any age
30. Rugby Canada will ensure that a process to guide national level athletes into their next phase in athletics after a competitive career in rugby is eminent throughout its age-grade and national team programs
31. Rugby Canada will continuously update and align its policies, programs, and actions with the general healthy lifestyle initiatives of government agencies such as Sport Canada and Health Canada

Rugby Development In Key Areas

Rugby in Schools

High School Rugby

High school rugby presents a vital consideration when looking at rugby development opportunities to strengthen the sport overall. It was estimated that approximately 60,000 high school students are participating on school rugby teams across the country. Currently, high school rugby operates independent of Rugby Canada; translating into approximately 60,000 non-registered rugby players in Canada. The current participation rates combined with the exponential growth in the sport over the last five years make it imperative that Rugby Canada and its Provincial Unions devise strategic initiatives to forge new partnerships with this community to promote and grow the game of rugby in Canada. Key outcomes to initiative new partnerships in this domain include:

1. Rugby Canada will investigate the parameters for running a national high school championship competition
2. Rugby Canada will work with its Provincial Unions to meet with Superintendents of Physical Education programs across the country to discuss the sport of rugby in schools
3. Rugby Canada will generate greater awareness of the sport of rugby through regional marketing initiatives

Figure 4. Estimated number of high school rugby programs by Province operating in Canada, December 2006

PROVINCE	BOYS	GIRLS
British Columbia	180	90
Alberta	44	29
Saskatchewan	3	35
Manitoba	-	53
Ontario	400	230
Quebec	55	60
New Brunswick	8	8
Nova Scotia	30	30
Newfoundland	8	8



Approximately 60,000 high school students are participating on school rugby teams in Canada.

Elementary School Rugby



There are enormous benefits to exposing children to the game earlier.

LTRD emphasizes the introduction of rugby skills at earlier stages relative to the late introduction to the sport that typically occurs in Canada today. Although rugby can be classified as a late specialization sport, there are enormous benefits to exposing children to the game earlier, particularly those linked to increasing the number of rugby participants within the club system and the associated opportunities for greater financial resources to develop the game as a result. Growth in participation numbers and funding are paramount when considering the key outcomes in stages 1, 2, and 3 of LTRD such as the development of parent/teacher-friendly supplementary resources to implement LTRD within the schools system.

Furthermore, the recent nation-wide focus on health and wellness has showcased physical education and initiated a great response to type and quality of physical education to which Canadian youth are exposed. Taking into account the growth potential for rugby within elementary schools, several key considerations must be examined:

- First, rugby must be presented as a logical link to the elementary Health and Physical Education curriculum across the country. To do so, Rugby Canada must develop a Rugby-specific unit, which consists of progressions and age appropriate material that teachers can easily implement in their Physical Education classes. This Rugby-specific unit must align the key aspects of the corresponding LTRD stage to the curriculum for students in Grades 1 through Grade 8.
- Second, the Health and Physical Education curriculum varies in each Province; therefore, for any rugby material to be adopted in the elementary system, specific rugby units for each Province must be developed relative to the various provincial standards (i.e. the rugby unit for the Province of Manitoba will be different then the proposed unit for Ontario).

Note: Elementary school curriculum information can be found at www.Activ8.org

LTRD For Officials, Coaches, Administrators and Parents

While the basis of any player development plan is founded upon the needs of the players as they develop over time there is an accompanying requirement for these players to be supported by appropriate volunteer and professionally based structures. Rugby Canada's proposal addresses this issue by identifying the progressive developmental needs and then identifying an accompanying matrix for referees, coaches, administrators and parents that modifies as the specific profiles of the players develops over time. Individuals bring a variety of skills, knowledge and experiences to their roles. While these experiences vary greatly the specific skills, knowledge and experiences that players require from their support structures varies as these players progress through the continuous improvement continuum.

The support pathways in Appendix 3 are based upon the premise that all Parents, Administrators, Coaches and Match Officials come to rugby with limited or no knowledge and experience within the sport. In general they all commence their involvement with the sport as volunteers but alternative paths become available to them as they progress along the pathway. Within the LTRD model, a pathway for Coaches and Match Officials has been devised to suggest minimum accreditation requirements at each stage. On the other hand, the pathways for Parents and Administrators emphasize recruitment, retention and in-service education.

LTRD and Women In Rugby



To initiate change, the values of Rugby Canada have to compel the best behaviour from its members. Let's make success inevitable for our female players, not a surprise.



The largest growth in Canada is women's rugby.

Undeniably, the largest growth in the sport of rugby in Canada has occurred on the female side of the game. Currently, Rugby Canada runs four national level programs for females including U19, U23, Senior Women, and Sevens. The growth of rugby for females has been synonymous with success at the international level; however, aspects such as administration, program funding, marketing, coach development, and equitable programming and opportunities for females at the club level have not followed suit. To continue to improve and achieve greater success on a world stage, Rugby Canada must first acknowledge the growing profile of female rugby in Canada, and support opportunities related to its development as a result. Within the LTRD model, several key outcomes advocating for an investment in change to raise the profile of the women's game have been identified particularly within the pillars of administration and decision-making, marketing, funding, and coach development.

Implementation Strategy

Implementation of the Rugby Canada LTRD policy will be completed in 2 main phases:

Phase 1 - LTRD 101

THE POLICY FRAMEWORK AND KEY PRINCIPLES

- LTRD 101 debated and presented for adoption at the Winter AGM in January 2007.
- The final report for publication will then be prepared and approved by the Board of Rugby Canada
- Rugby Canada's governance and operational models will be aligned to achieve the LTRD framework
- Detailed operational, business and communications plans to implement LTRD will be developed in consultation with Sport Canada, Coaching Association of Canada and other national/provincial agencies.

Phase 2 - LTRD 202

DEVELOPMENT OF TECHNICAL RESOURCES, TRAINING PROGRAMS AND IMPLEMENTATION TOOLS

- Resources and technical materials to implement LTRD will be produced in 2008 and implemented in 2009.
- Review of the domestic competition model will commence in 2007 with implementation planned for 2010
- LTRD resources will be designed specifically for parents, coaches, and administrators
- Quality standards and an implementation program for club rugby will be introduced.
- A review of all local/provincial rugby programs will be undertaken and standardized with the LTRD model
- Technology and data collection strategies will be devised to monitor the implementation of LTRD
- A facilities strategy will be developed – to examine the requirements to implement the LTRD model
- Partnerships will be established with Provincial governments and other government ministries such as Health and Education
- Annual reviews of the policy and the implementation of the framework will be undertaken by Rugby Canada
- Integration of coach education and accreditation program



A winning strategy will produce a positive result for community and country



Ten Key Factors Influencing LTRD

The following factors are the research, principles, and tools upon which LTRD is built.

1. The FUNdamentals

Fundamental movement skills should be introduced through fun and games. Fundamental sport skills should follow and include basic overall sport skills.

- Fundamental movement skills and Fundamental sport skills = physical literacy
- Physical literacy refers to competency in movement and sport skills and reading the game
- Physical literacy should be developed before the onset of the adolescent growth spurt

The basic movement skills of 3 activities provide the base for all other sports

- Athletics: run, jump, throw, and wheeling for wheelchair sports
- Gymnastics: ABC's of athleticism – agility, balance, coordination, and speed
- Swimming: for water safety reasons, for balance in a buoyant environment, and as the foundation of all water-based sports

Without the basic movement skills, a child will have difficulty participating in any sport. For example, to enjoy baseball, basketball, cricket, football, netball, handball, rugby, softball, the simple skill of catching and passing must be mastered.

2. Specialization

Sports can be classified as early or late specialization. Early specialization sports differ from late specialization sports in that very complex skills are learned before maturation since they cannot be fully mastered if taught after maturation. If physical literacy is acquired before maturation, players can select a late specialization sport such as rugby when they are between the ages of 12 and 15 and have the potential to rise to international stardom. Specializing before the age of 10 in a late specialization sport contributes to:

- One-sided sport specific preparation
- One-sided fitness preparation
- Lack of basic movement and sport skills
- Overuse injuries
- Early burnout
- Early retirement from training and competition

Early involvement in the FUNdamentals stage is essential in late specialization sports. Many sports resort to remedial programs to try to correct shortcomings.

3. The 10-Year Rule

Scientific research has concluded that it takes a minimum of 10 years and 10 000 hours of training for a talented player to reach elite levels. For player and coach, this translates into slightly more than 3 hours of training or competition daily for 10 years.

This factor is supported by The Path to Excellence, which provides a comprehensive view of the development of U.S. Olympians who competed between 1984 and 1998. The results reveal that

- US Olympians begin their sport participation at the average age of 12.0 for males and 11.5 for females
- Most Olympians reported a 12-13 year period of talent development from their sport introduction to making an Olympic team
- Olympic medallists were younger- 1.3 to 3.6 years – during the first 5 stages of development than non-medallists, suggesting that medallists were receiving motor skill development and training at an earlier age. However, caution must be taken not to fall into the trap of early specialization in late specialization sports

4. Developmental Age

LTRD requires that developmental age be distinguished from chronological age when designing appropriate training and competition programs in relation to optimal trainability and readiness. In particular, the beginning of the growth spurt and the peak of the growth spurt are very significant in LTRD applications.

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 changes in quantity and measurable changes in body size such as height, weight, and fat percentage. Maturation refers to qualitative system changes, both structural and functional, in the body's progress toward maturity such as the change of cartilage to bone in the skeleton.

Development refers to “the interrelationship between growth and maturation in relation to the passage of time. The concept of development also includes social, emotional, intellectual, and motor realms of the child” (Malina and Bouchard, 1991).

Chronological age refers to the number of years and days elapsed since birth. Children of the same chronological age can differ by several years in their level of biological maturation.

Developmental age refers to the degree of physical, mental, cognitive, and emotional maturity. Physical developmental age can be determined by skeletal maturity or bone age after which mental, cognitive, and emotional maturity is incorporated.

Currently, most athletic training and competition programs are based on chronological age. However, players of the same age between ages 10 and 16 can be 4 to 5 years apart developmentally. Thus, chronological age is a poor guide to segregate adolescents for competitions.

Training age refers to the age where players begin planned, regular, serious involvement in training. The tempo of a child's growth has significant implications for athletic training. For example, children who mature early have a major advantage in the Training to Train stage compared to average or late maturers. However, and most notably, it is often late maturers who have greater potential to become top players provided they experience quality coaching throughout that period.



Fundamental movement skills should be introduced through fun and games.

5. Trainability

The terms “adaptation” and “trainability” are often used interchangeably in coaching. However, the difference between them is significant. Adaptation refers to changes in the body as a result of a stimulus that induces functional and/or morphological changes in the organism. The degree of adaptation is dependent on 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.

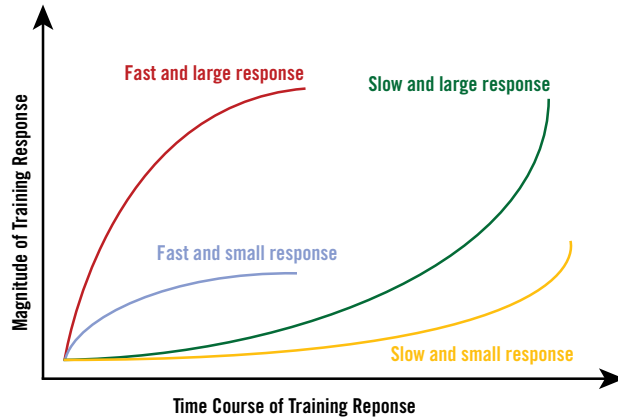


Figure 6. Variation in Trainability (Adapted from the Canadian Sport For Life document, 2005)

Trainability refers to the faster adaptation to stimuli and the genetic endowment of players as they respond individually to specific stimuli and adapt to it accordingly. Training has been defined as the responsiveness of developing individuals to the training stimulus at different stages of growth and maturation. There exists a **critical period of development** where there is a point in development of a specific capacity when training has an optimal effect. Other factors are readiness and critical periods of trainability during growth and development of young players, where the stimulus must be timed to achieve optimum adaptation with regard to motor skills, muscular, and/or aerobic power.

The 5 basic S's of training and performance are Stamina (Endurance), Strength, Speed, Skill, and Suppleness (Flexibility). (Dick, 1985)

1 Stamina (Endurance)

The window of optimal trainability occurs at the onset of PHV. Aerobic capacity training is recommended before players reach PHV. Aerobic power should be introduced progressively after growth rate decelerates

2 Strength

The window of optimal trainability for girls is immediately after PHV or at the onset of the menarche, while for boys it is 12 to 18 months after PHV.

3 Speed

For boys, the first speed training window occurs between the ages of 7 and 9 years and the second window occurs between the ages of 13 and 16. For girls, the first speed training window occurs between the ages of 6 and 8 years and the second window occurs between the ages of 11 and 13 years.

4 Skill

The window for optimal skill training for boys takes place between the ages of 9 and 12 and between the ages of 8 and 11 for girls.

5 Suppleness (Flexibility)

The window of optimal trainability for suppleness for both genders occurs between the ages of 6 and 10. Special attention should be paid to flexibility during PHV.

Figure 7 illustrates the Windows of Optimal Trainability for Females and Males. Two windows – stamina and strength – are based on the moving scales of the onset of the growth spurt and PHV. The other 3 windows – speed, skill, and suppleness – are based on chronological age.

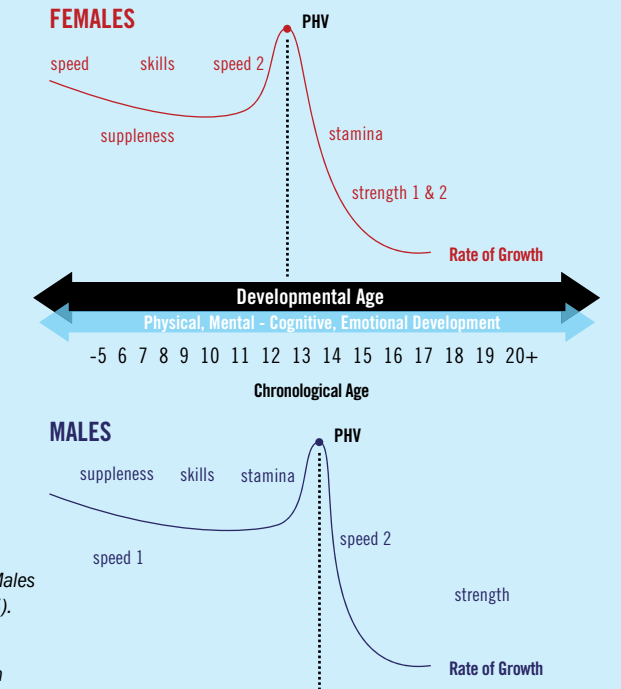


Figure 7. Windows of Optimal Trainability for Females and Males (Adapted from the Canadian Sport For Life document, 2005).

PHV is the major growth spurt and rate of height increase in adolescence.

For further reading on the windows of optimal trainability see Bar-Or and Rowland (2005); Kobayashi, (1978); Rushall, (1998); Stafford, (2005); Viru (1995); and Viru et al, (1998)

6. Physical, Mental, Cognitive, and Emotional Development

A major objective of LTRD is a holistic approach to player development. Training and competitive and recovery programs should consider the mental, cognitive, and emotional development of each player. Furthermore, there should include an emphasis on ethics, fair play, and character building throughout the various stages.

7. Periodization

Periodization is essentially time management. As a planning technique, it provides the framework for arranging the complex array of training processes into a logical and scientifically –based schedule to bring about optimal improvements in performance.

Periodization sequences the training components into weeks, days, and sessions. It is situation specific depending upon priorities and the time available to bring about the required training and competition environment. Furthermore, periodization organizes and manipulates aspects of modality, volume, intensity, and frequency of training through long-term (multi-year) and short-term (annual) training, competition, and recovery programs to achieve peak performances when required.

In the LTRD context, periodization connects the stage the player is in with the requirements of that stage. Single, and double periodization formats follow the same principles with frequently introduced prophylactic breaks; that is, programmed and prioritized recovery and regeneration elements. Rugby programs at every stage of player development need to adhere to logical, scientific insights for the benefit of the player.

Illustrated below are phases of an annual plan for a single or double periodization.

FIVE PHASES OF A SINGLE PERIODIZED PLAN

- 1 General Preparation Phase (GPP)
- 2 Specific Preparation Phase (SPP)
- 3 Pre-Competition Phase (PCP)
- 4 Competition Phase Peak (CP)
- 5 Transition Phase (TP)

EIGHT PHASES OF A DOUBLE PERIODIZED PLAN

- 1 General Preparation Phase (GPP)
- 2 Specific Preparation Phase (SPP) 1
- 3 Pre-Competition Phase (PCP) 1
- 4 Competition Phase Peak (CP) 1
- 5 Specific Competition Phase (SPP) 2
- 6 Pre-Competition Phase (PCP) 2
- 7 Competition Phase (CP) 2 Peak Two
- 8 Transition Phase (TP)

8. Calendar Planning for Competition

The system of competition makes or breaks players. The competition system and calendar must align with the LTRD model because optimal competition schedule planning at all stages is critical to player development. At certain stages, developing the physical capacities take precedence over competition. At later stages, the ability to compete well becomes the focus. Within the LTRD framework, general recommendations for the ratio of training to competition and competition specific training have been identified for the various stages of development.

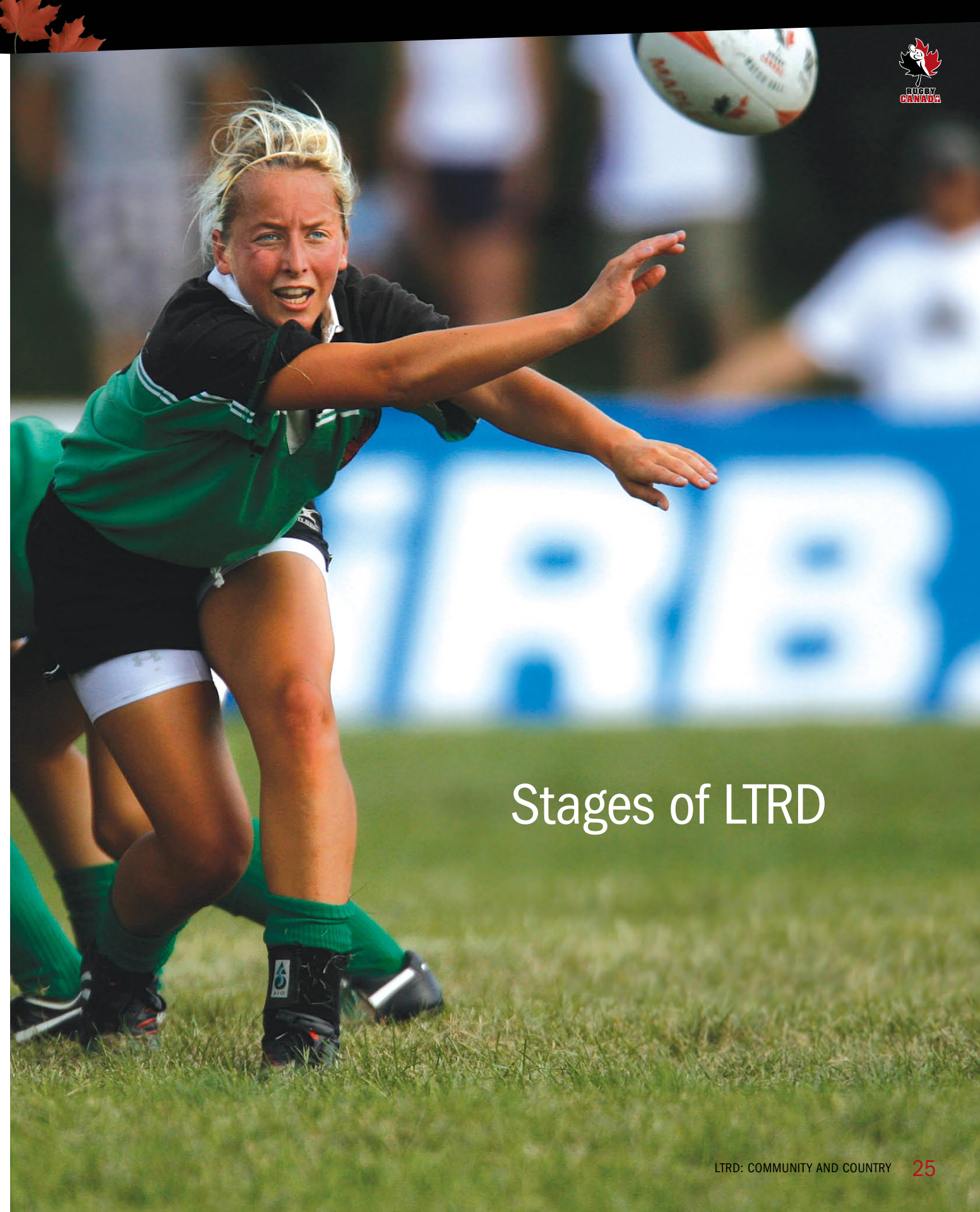
It is important to remember that long-term objectives in development should not be compromised for short-term success!

9. System Alignment and Integrationn

LTRD provides the opportunity to develop and build an integrated sports system that aligns the needs of young people's development to the elements of the system that are being provided (e.g. coaching, competition, club structures etc.) Therefore, the key elements of the rugby system that are integral to delivery must be challenged, adapted, and developed against the LTRD model with the needs of the player fundamentally central to all discussions. It is imperative to player development that the different elements and groups involved in the delivery of rugby integrate, are mutually supportive, and possess clearly defined roles and responsibilities. Furthermore, rugby requires a clearly defined, logical structure that is based upon consistent core principles. All members of the rugby community should easily identify the pathways and opportunities available to them and based on their objectives within the sport as they move through the various stages of LTRD.

10. System Alignment and Integrationn

LTRD is based upon scientific data and best practice. LTRD will respond to new research and rugby-specific innovations to ensure a continuously evolving model. Ongoing education, promotion and advocacy in player development will be driven by LTRD with the government, media, educators, parents, coaches, administrators, and sport scientists.



Stages of LTRD

Stage 1 – Active Start



Chronological Age: Males: 0-6 / Females: 0-6

Objectives:

- Learn fundamental movements through fun and games (deliberate play)
- Physical activity is fun and becomes part of daily routine
- Physically active family

Summary:

- Provide unstructured physical activity every day regardless of weather for at least 30 minutes a day for toddlers and at least 60 minutes a day for preschoolers. Toddlers and preschoolers should not be sedentary for more than 60 minutes at a time except while sleeping.
- Starting in infancy, provide infants/toddlers/preschoolers with opportunities to participate in daily physical activity that promotes fun and physical, mental and emotional development.
- Provide parents and care givers with age-appropriate information.
- Ensure that children acquire movement skills that build towards more complex movements. These skills help lay the foundation for lifelong physical activity.
- Encourage basic movement skills such as running, jumping, twisting, kicking, throwing, catching, and wheeling. These develop depending on a child's heredity, activity experiences, and environment.
- Design activities that help children to feel competent and comfortable participating in a variety of fun and challenging physical activities.
- Ensure that games for young children are child-centred and focus on participation.
- Ensure gender-neutral activities and inclusive activities so that active living is equally valued and promoted for all children.

Active Start for Rugby:

- Mini rugby provides children with a form of organized healthy activity that focuses on physical, mental, cognitive and emotional development and particularly skills such as running, jumping, twisting, kicking, catching, throwing and wheeling.
- It is vital that coaches of mini rugby take into account the learning capacities of children when designing programs. In particular, the following general physical and visual characteristics should be taken into consideration:

PHYSICAL CHARACTERISTICS:

- Boys are often more forceful than girls, but do not move as well
- Ability to pass a ball with correct weight transfer
- Better balance but still cannot complete complex balancing acts

VISUAL PERCEPTION

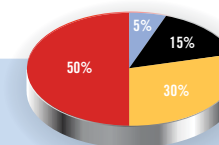
- Tendency to overestimate speed of objects and movements
- Consequent difficulty in catching moving objects. About the age of six, children will be able to catch about two out of every five balls thrown at them when standing still

Considerations for an ideal structure of a mini rugby coaching session are:

The Participants	<i>Soon become tired, cannot concentrate for long periods, tend to play on their own and do not combine well. They have difficulty catching balls that have been kicked.</i>
Equipment	<i>There should plenty of equipment readily available with one ball of suitable size for each participant.</i>
The Session	<i>Length should not exceed 20 to 35 minutes with each specific skill practice lasting for about 5 minutes.</i>
The Overall Goal	<i>Individual skills training passing, catching, and running to assist the development of balance, agility, co-ordination and speed.</i>
The Coach	<i>Each session should be FUN!</i>

Recommended time allocated to training components in the FUNdamentals stage of development.

● Tactical (Individual/Team)
 ● Technical
 ● Fitness Match
 ● Play / Scrimmage



Stage 2 – FUNdamentals



Chronological Age: Males: 6-9 / Females: 6-8

Objectives:

- Develop FUNdamental movement skills - Agility, Balance, Coordination, Speed, Running, Kicking, Throwing, Jumping - in a well-structured, positive, and FUN environment!

Summary:

- Fun, inclusion for all (child-centred)
- Purpose is a kick-off to rugby!
- Focus on recruitment and retention of participants and volunteers to build a structure to support growth
- Tactical developed through fun/modified games. Modified games must be designed so that the participant is learning.
- Educated coaches and parents are the key here
- Introduction to simple rules of the game and of ethics and fair play in sport
- Basic skills of rugby should be trained, including kicking, running, throwing, jumping, tumbling, ball handling, evasion skills
- Concept of "confidence in contact" should be emphasized
- All physical activity performed for general aerobic and anaerobic alactic development whether at school, clubs or community centers should be in a safe, fun environment.
- Activities should be all-inclusive with no formal competition or periodization at this stage
- Five hours of physical activity per week in different sporting activities

Current Issues:

- A standardized program is not played in all provinces
- Only some provinces have been successful at implementing flag rugby in schools and clubs
- Core rugby skills are not emphasized
- No consensus as to the age when tackling should be introduced as part of the game
- Rugby is an alternate choice sport
- Negative/Positive consequences of participation when tackle is introduced

Ideal:

- The Rugby Canada "FLAG RUGBY" program be the accepted version of non-tackle rugby
- Implemented in schools and club rugby system based upon the unique criteria within different school systems to be more widely accepted
- Participation, recruitment and retention of participants in the game
- Less emphasis on competition and more emphasis on skill development and participation
- Establishment of club rugby infrastructure that supports tackle and non-tackle rugby
- Programs designed for parental involvement with kids – performing basic skills together = recruitment of athletes and parents/volunteers in the future
- Play the game, score does not matter!

Key Outcomes:

- Rugby Canada will take a leadership role in coordinating the implementation of a national non-tackle rugby program
- The LTRD and associated documents will be designed in a user-friendly manner for use by individuals both familiar and NEW to rugby
- Supporting resources (information pamphlets, web tools, coaching resources etc.) will be formulated to compliment and further explain aspects of the LTRD
- National consensus will be achieved and documented regarding:
 - the basic components of rugby to be taught
 - the rules of flag rugby
 - the version of flag rugby to be played
 - the age/time when version of rugby includes tackling and how to incorporate the teachings of tackling in the game without emphasizing in competition
- Rugby Canada will generate coaching resources that provide ideas for skill/game progressions for grassroots coaches
- Resources to education Parents and Coaches will be developed by Rugby Canada

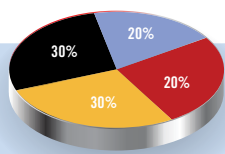
Stage 3 – Learning to Train



Chronological Age: Males: 9-12
Females: 8-11

- Objectives:**
- Enhance and develop ABCs and overall sport skills
 - Develop core rugby skills
 - Integrate physical, mental, cognitive and emotional training components within a well-structured program
 - Develop physical literacy

Recommended time allocated to training components in the Learning to Train stage of development.



3

Summary:

- Emphasis is on the refinement and maintenance of players’ physical capacities, fundamental movement skills, and the acquisition of core rugby skills
- Players are encouraged to participate in other sports and/or activities
- An understanding and appreciation of the laws of the game are developed
- Schools and Clubs represent the primary delivery institutions at this stage

Current Issues:

- Very limited availability of rugby programs
- Flag rugby programs operating scarcely and in some provinces
- Club rugby not available to participants in this stage
- Different rules of the game being taught through variations of minor rugby
- 2:1 competition to training where rugby is offered

Ideal:

- Refine fundamental movement skills
- Develop overall sport skills including rugby skills
- Develop confidence in contact
- Participation, fun, and enjoyment emphasized
- Development of an understanding and appreciation of the laws and playing charter of rugby
- Encourage participation in other complimentary sports
- Equal playing time and playing a variety of positions for player development
- Skill development sessions should be repetitious, challenging, stimulating, and fun!

Key Outcomes:

- Game format should be either minor flag rules or the minor tackle rules in accordance with the laws of the game

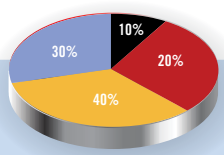
Stage 4 – Training to Train



Chronological Age: Males: 12-16 / Females: 11-15

- Objectives:**
- Develop endurance, strength, and speed
 - Develop and consolidate rugby-specific skills, fitness, and tactics
 - Identify rugby-specific talent

Recommended time allocated to training components in the Training to Train stage of development.



4

Summary:

- The most critical stage of LTRD as it encompasses both opportunity and vulnerability in terms of growth and development
- Critical training window for player development for both male and female rugby players
- Major opportunity for accelerated improvement in speed and endurance
- Developmental age, rather than chronological age, is emphasized in the design of training regimes
- Gender differences are also important in program design
- General development responsibilities include training and competition for rugby players, with the major focus on learning the basics as opposed to competing.
- Performance enhancement education is provided to rugby players at this stage through representative level rugby at the regional, provincial and national levels.
- National Rugby High Performance Centres will provide structured programs for monitoring and tracking elite level players
- Optimal aerobic trainability begins with the onset of PHV (major growth spurt during maturation); therefore, PHV must be regularly monitored and training needs should be identified accordingly
- Further integration of physical, mental, cognitive, and emotional training should occur
- 10-12 hours per week of training in more structured programs including frequent evaluation, modification, and recovery

The following training considerations should be regarded for rugby players in the Training to Train stage:

1. Full advantage of developing the aerobic and speed systems;
2. Continued core skill development to combat significant changes in bone structure and muscle and fat tissue;
3. Strength training towards the end of the stage;
4. Maintaining core strength stability;
5. Specific flexibility training during PHV
6. Maintaining individualized training programs (especially players identified as elite players).

Current Issues:

- Adult programs imposed on young players
- Males and females are subjected to the same training prescriptions
- Males and females enter rugby later in the stage
- Limited club programs for players
- Club system is the primary delivery institution

Ideal:

- Training regimes are aligned with reference to the optimal windows of trainability and differ for males and females
- Major focus in training is on learning basic rugby-specific skills and not competition
- Mental and physical competencies are trained in the player
- Train
- Rugby is the primary sport, but involvement in one other complementary sport is supported
- Multiple delivery institutions

Key Outcomes:

- Appropriate and quality age-grade competitions will be established across the country at the club level through joint administrative efforts between Rugby Canada and its member Provincial Unions
- National recovery protocol will be devised and implemented throughout rugby and disseminated to athletes and coaches
- Additional LTRD resources that are coach/parent friendly will be developed to allow for the proper delivery of LTRD at the grassroots level of rugby

Stage 5 – Training to Compete

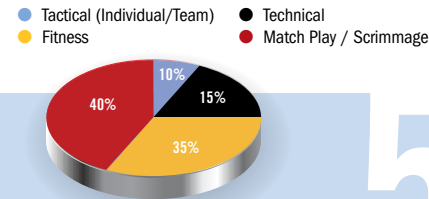


Chronological Age: Males: 16-19 +/-
Females: 15-18 +/-

Objectives:

- Rugby Specialization and position specific
- Optimize the engine and learn to compete
- Identify position specific skills and individual preparation to identify strengths and weaknesses
- Integrate physical, mental, cognitive and emotional development

Recommended time allocated to training components in the Training to Compete stage of development.



5

Summary:

- Provincial junior representative athlete
- All of the objectives of Training to Train must be achieved before the objectives of Training to Compete can begin.
- Players must focus on rugby solely at this stage
- More specialization and competition occur in this stage. Players should be streamlined into specific positions.
- Single and double periodization is typically used; however, coaches should evaluate and modify as needed.

Current Issues:

- Rugby is secondary sport not the chosen sport particularly at the beginning of the stage
- Creativity, decision/making skills necessary to compete at higher levels internationally not being trained
- Lack of emphasis on support play
- Physical attributes above average in Canadian players
- Strong national pride

Ideal:

- Rugby is the sport of choice for players
- Increased speed of play and execution
- Solid individual skills within a team environment
- Variable tactics from players
- Self-management tools/Information Technology use and access readily available and more advanced
- Recycling of information pertaining to learnings and experiences

Key Outcomes:

- The development of the complete person will be supported (athletics, education, social)
- Overall training objective will be athletic aptitude in a variety of rugby situations
- Creativity and decision-making will be trained
- Structure of sessions will focus on multiple outcomes
- Special attention will be paid to technical speed of Canadian rugby players
- Information technology will be utilized with all national and age-grade players for monitoring and evaluation purposes
- National benchmarks will be established for players, coaches, officials, administrators

Stage 6 – Training To Perform

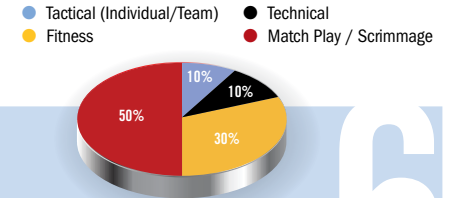


Chronological Age: Males: 19-23 +/-
Females: 18-21 +/-

Objectives:

- Further physical improvement
- Position-specific skills
- Appropriate level of competition
- Full-time elite contracts (professional)
- Managed environment
- Core skills
- Focus on speed, strength and agility
- Experience – tactical and analytical
- Intense/High level application of skills
- Life skills and life programs (education)

Recommended time allocated to training components in the Training to Perform stage of development.



6

Summary:

- University, College, RCSL, NWL, NA4 athlete
- This is a preparatory stage for Ultimate Performance (stage 7)
- Training (season, sessions, hours, length) should almost reflect that of a senior national athlete
- Maximize player capacities, rugby specific-skills, position specific-skills, and performance
- Skills should be performed under a variety of competitive conditions
- Players are in a rugby environment full-time
- Fitness, recovery, mental, and technical development programs are individually tailored to develop individual strengths and work on weaknesses
- The sport environment surrounding these athletes should consist of highly trained coaches, officials, administrators

Current Issues:

- No appropriate elite environment
- Lack of elite competition
- Coaching gap (general and specialist)
- Massive financial short-fall
- Lack of facilities
- Lack of volume of players to play at this level
- Lack of rugby culture and media exposure
- Gap in match officials

Ideal:

- International competition (age-grade IRB approved)
- Canadian players in full-time rugby environment
- Appropriate elite competition
- Appropriate integrated and sequenced high performance development opportunities
- 500 – 600 full-time rugby players from Canada playing world-wide - 120 playing in 4, 6, or 8 teams in professional league in N. America
- Appropriate coach/referee high-performance development opportunities
- Centralized Union contracts + individualized managed program
- Guaranteed access to facilities
- 1 rugby-specific facility (National Training Centre for rugby)
- Research and Development, Information Technology resources
- 7s rugby provides a good development opportunity
- Necessary finances to support a high level competition structure (facilities, matches, training environment, professional leagues)
- Raised profile of Rugby in Canadian culture
- Highly trained support personnel such as coaches, officials, volunteers, administrators

Key Outcomes:

- Players will be trained to peak for major competitions
- Training will be characterized by high intensity and volume
- Frequent preventative breaks will be built into the training schedule to prevent burnout
- Single, double, periodization will be utilized as the optimal framework for preparation
- Training to competition ration will be 25:75, with competition percentage including competition-specific training activities

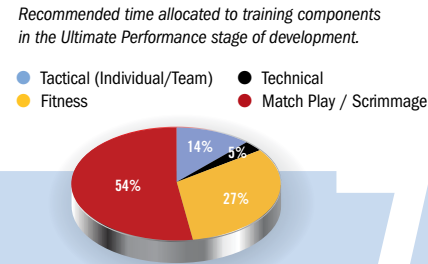
Stage 7 – Ultimate Performance



Chronological Age: Males: 23 +/-
Females: 21 +/-

Objectives:

- Maintain, Sustain, Apply, Recover
- Adaptability – technically and physically as the game changes
- Sound technical skills
- Body Management
- “Rugby smarts”
- Maximize ancillary capacities
- Maximize applied sport science



Summary:

- National Senior representative (RCSL, NWL, NA4), national teams 7s, 15s athlete
- Training stage for national level rugby players competing internationally
- Training to competition ration 25:75
- Double periodization is the optimal framework for preparation
- Ultimate fitness preparation and sport, individual, and position-specific skills and performance
- Fully established player capacities (physical, mental, technical, tactical, decision-making, personal and lifestyle)
- Ample pool of highly certified coaches, officials
- Well developed operational and administrative structures to support athlete success
- Fully commercial environment to maximize revenue generation opportunities

Current Issues:

- No appropriate elite environment
- Lack of elite competition
- Coaching gap (general and specialist)
- Massive financial short-fall
- Lack of facilities
- Lack of volume of players to play at this level
- Lack of rugby culture and media exposure
- Gap in match officials

Ideal:

- 80 - 100 long listed athletes
- International competition (IRB approved)
- 12-15 IRB test matches per year
- 15 elite games per year
- 15-20 full-time coaches / 5-10 full-time referees
- Centralized Union contracts
- Guaranteed access to facilities
- 1 rugby-specific facility (NTC for rugby)
- Research and Development and Information Technology
- Fully commercial environment
- Obtainment of the necessary finances to support high level competition structure (facilities, matches, training, environment, professional leagues)
- Raised profile of Rugby in Canadian sport culture
- Highly trained support personnel such as coaches, officials, volunteers, administrators
- 7s rugby provides a good development opportunity

Key Outcomes:

- Players will be trained to peak for major competitions
- Training will be characterized by high intensity and volume
- Frequent preventative breaks will be part of the training calendar to prevent burnout
- Single, double, periodization will be used as the optimal framework for preparation
- Training to competition ration will be 25:75, with competition percentage including competition-specific training activities
- National competition structure will be reviewed, revised to increase the potential player pool for the national squads
- Serious consideration will be given to various options for providing more players with greater exposure to professional competition through professional leagues

Stage 8 – Active for Life



Chronological Age: Any age

Objectives:

- Smooth transition from an player’s competitive career to lifelong physical activity and participation in sport
- Retention of players in other roles
- Preparation for player EXIT from competitive sport
- Redirect players to other sports or activities when necessary

Summary:

- This may occur at any age
- Players should be encouraged to move from one sport to another, and/or from one aspect of sport to another, from competitive sport to recreational activities, from highly competitive sport through age group competition such as Master’s games
- Upon retiring, players should be encouraged to remain involved in sport either professionally or voluntarily through coaching, refereeing, sports administration, small business enterprises, media
- A positive experience in sport is the key to player retention
- In rugby, coaches should make every effort where possible to redirect players to sports where they are pre-disposed to train and perform well

Key Outcomes:

- Rugby Canada and its member Provinces will ensure that at all stages of participation, an athlete’s experience in rugby will be positive
- Rugby Canada will devise supporting resources to provide parents, coaches, officials, volunteers, players with a pathway for their involvement in the sport of rugby, that emphasizes the various options available to actively participate in rugby at any age
- Rugby Canada will ensure that a process to guide national level players into their next phase in athletics after a competitive career in rugby is eminent throughout its age-grade and national team programs
- Rugby Canada will continuously update and align its policies, programs, and actions with the general healthy lifestyle initiatives of government agencies such as Sport Canada and Health Canada
- Rugby Canada will explore opportunities to develop and/or grow Masters level rugby to expand the recreational pathway for senior players

Recreational:

- Quality, tiered competition structure/pathway
- 18-25 matches per season
- Experienced coaches, officials, administrators
- Guaranteed access to facilities
- CIS/CCAA rugby programs and championships



LTRD and Female Rugby Players

The following table reflects the current and proposed ideal view for women in rugby in Canada as reflected on page 28 of the main document. Key outcomes to grow female rugby and ensure the ultimate development of all female athletes for future success are presented.

Objectives:

- Infrastructure for female rugby at all levels
- Inevitable success for female rugby
- Specific attention and curriculum development with unique female attributes (mental, emotional, physical, communication) addressed

Summary:

- Females are seen as players first, females second, and administrators/coaches use appropriate behaviour to enable females to succeed.
- Identify conditions by which females are successful in team sports, and analyze what behaviours are necessary to create optimal conditions for female players and teams to perform at optimal levels
- Additional resources and infrastructure is needed to support the growth and success of female rugby at all levels

Key Outcomes:

- Late introduction to the sport (Training to compete stage) in all aspects, physical, mental, emotional, recovery
- Rugby is alternate sport of choice
- 10 different provinces = 10 different models being used
- Relatively low number of high school programs offering rugby for females
- Club system lacks structure/programs for females
- University system is best structure for female rugby
- National programs have high level of commitment/structure
- Players not physically prepared to play at elite level
- Lots of resources for CIS, National level rugby
- Good coaches but not great
- No clear player pathway to elite level rugby
- Players not sufficiently prepared to market themselves, and for their EXIT from competitive sport
- World Cup 2006– not able to execute play, not able to create play against stronger competition, lack decision-making skills, greatest asset is physical presence
- Poor tactical development – too little rugby exposure both in playing and seeing
- Mental training aspects are not given enough emphasis
- Poor national training and periodization regimes
- Not enough emphasis on coach development and recruitment, insufficient delivery of coach certification courses beyond level 3
- School system is independent of greater rugby system
- System of mini rugby for females not present


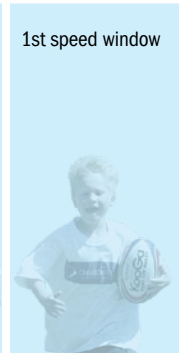



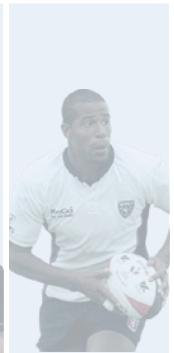


Ideal:

- Sufficient resources available to support successful women's rugby at the national level (financial, structural, coaching)
- Raised profile of women's rugby in Canadian and sport culture
- Female rugby infrastructure and administration established to service all levels of rugby
- Increased quality, quantity of coaches, administrators, officials (both genders)
- Clear player pathway
- Fully operational National Women's League as the training ground and recruitment of national team athletes
- Coaching methods are inclusive of female learning models that support independent critical thinking and creative solution finding
- National vision established for female players at age group levels
- Player-centred coach led model
- Communications that integrate national, provincial, and interbranch coaches

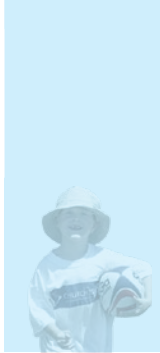
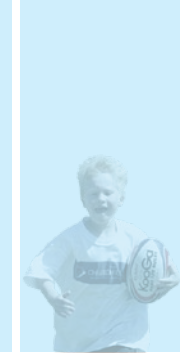



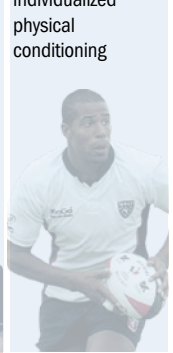


Key Outcomes:

- Formulation of a Women in Rugby Strategic Plan
- Rugby Canada will build an infrastructure to support the growth of female rugby
- Rugby Canada will devise resources pertaining to learning frameworks to accommodate unique differences in communication and cooperative styles between genders
- Rugby Canada will deliver National workshops on coaching female players (Male/Female coaches coaching females)
- Rugby Canada will devise a National coach mentorship program to recruit more females into coaching in rugby
- Rugby Canada will formulate strategic partnerships with Provincial Unions and rugby clubs to encourage and support the growth of female rugby through the devising sustainable structures and new initiatives
- Technical analysis of WWC 2006 of top 4-6 teams, look at strength of those teams to enhance competencies
- More marketing and promotion of the women's game – CIS rugby comprises promotion of female game right now
- Brand of rugby for parents, kids
- More female influence in decision-making processes
- Earlier introduction to rugby
- Website improvements to include more information on getting involved, programs offered, opportunities, player pathway

LTRD Matrix

	ACTIVE START 1	FUNdamental KICK OFF to Rugby 2	LEARNING TO TRAIN DEVELOP the Basics 3	TRAINING TO TRAIN BUILD the Rugby Hard Drive 4	TRAINING TO COMPETE OPTIMIZE Rugby Potential 5	TRAIN TO PERFORM MAXIMIZE Rugby Performance 6	ULTIMATE PERFORMANCE OPTIMAL Rugby Performance 7	ACTIVE FOR LIFE Rugby For Life 8
DELIVERY INSTITUTION	Parents, Daycares, Kindergarten, Community Programs	School PE & Rugby Clubs = Mini and Minor Community Programs	School PE & Rugby Clubs = Mini & Minor Community Programs	School PE, and Rugby Program, Rugby Club age grade programs, Introduction to Representative Teams, Intro to High Performance	School PE, Rugby Program, Rugby Club age grade programs, University/College programs, Representative teams, High Performance Programs U16-U21, RCSL/NWL	Rugby Clubs, RCSL, Universities/Colleges, PSO's, NSO, CCG, Sport Canada	RCSL/NWL PSO's, NSO, CCG, Sport Canada, Professional League, National Program	All
AGE	Males: 0-6 Females: 0-6	Males: 6-9 Females: 6-8	Males: 9-12 Females: 8-11	Males: 12-16 Females: 11-15	Males: 16-19+/- Females: 15-18+/-	Males: 19-23+/- Females: 18-21+/-	Males: 23 +/- Females: 21 +/-	All ages
PURPOSE	Fun, Participation, Development of Movement skills	Kick-off to Rugby! Overall sport skills development	Enhance overall sport skills including core rugby skills	Sport specific skill development	Rugby specialization and position-specific skills	Core skills and position specific skills	Achieve optimal performance	
PHYSICAL	Continually active without being sedentary for more than 60 minutes; exposed to fundamentals	Develop FUNdamental movement skill in rugby environment, the ABC's of Athleticism (Agility, Balance, Coordination, Speed)	Refine fundamental movement skills and develop fundamental sports skills including Rugby skills	Aerobic and speed window, Strength towards the end of the stage ABCs, core stability, specific flexibility training during the growth spurt, personalized program	Recreational - generalized conditioning program for match fitness Performance - Refinement of individualized fitness and conditioning program Based on diagnostic	Position specific preparation; integrated strength & conditioning program with sport specific movement /situation enhancement based on diagnostic	Further refinement of individualized fitness and conditioning program Based on diagnostic	Healthy lifestyle for life, Active involvement in rugby (retention)
		1st speed window 	Major skill learning window 	Strength window towards end of stage for females 	Strength window 			

LTRD Matrix

	ACTIVE START 1	FUNdamental KICK OFF to Rugby 2	LEARNING TO TRAIN DEVELOP the Basics 3	TRAINING TO TRAIN BUILD the Rugby Hard Drive 4	TRAINING TO COMPETE OPTIMIZE Rugby Potential 5	TRAIN TO PERFORM MAXIMIZE Rugby Performance 6	ULTIMATE PERFORMANCE OPTIMAL Rugby Performance 7	ACTIVE FOR LIFE Rugby For Life 8
RECOVERY	« Water bottle ethic » full water bottle at all time	Sleep, nutrition/ hydration	Sleep, nutrition/ hydration	Intro to recovery methods	Individualized recovery protocols	Individualized recovery protocols	Individualized recovery protocols	Individualized recovery protocols
TECHNICAL	N/A	Introduce skills: Passing and catching, evasion, handling, kicking	Develop core skills, introduce contact and unit skills towards end of stage	Recreational/ performance Further development of core, contact unit/ sub-unit skills Learning multiple positions and specific training	Recreational/ Performance Refinement of core, contact and sub-unit skills Refinement of specific individual positional skills	Performance refinement of core technical skills under increased time, space, field location and game situation pressure. Begin position/role specific development program	Maintenance and further development of core, contact and unit-sub unit skills Individualized position specific skill development program	
TACTICAL	No introduction to coaching; some organized physical activity	Fun games to develop spatial awareness and evasion skills Modified games	Intro to organizational structure - attack and defense	Understanding and application of principles of play and development of game sense	Understanding and application of individual roles and responsibilities in all game scenarios Advanced tactical understanding and application of principles of play and game planning	Understanding, application and consistent execution of effective tactical principles of play in variety of game situations	Increased level of tactical understanding, leadership, accountability and responsibility Increased level of awareness and application of tactical decision-making	
TEAM PREPARATION		Participation, fun, and enjoyment e.g. track # of tries scored vs. Win/Loss	One team training session per week	Recreational - 2 sessions per week + game Performance - 3/4 rugby specific sessions per week + 3 monitored, individualized physical conditioning	Recreational - 2 sessions per week + game Performance - 6 rugby specific sessions + 3 monitored individualized physical conditioning	Performance - 4 rugby specific sessions 2 individual position/role technical sessions + 3 monitored individualized physical conditioning	Depending on the periodised program/seasonal distributions 10-12 sessions per week	
								

LTRD Matrix

	1 ACTIVE START	2 FUNdamental KICK OFF to Rugby	3 LEARNING TO TRAIN DEVELOP the Basics	4 TRAINING TO TRAIN BUILD the Rugby Hard Drive	5 TRAINING TO COMPETE OPTIMIZE Rugby Potential	6 TRAIN TO PERFORM MAXIMIZE Rugby Performance	7 ULTIMATE PERFORMANCE OPTIMAL Rugby Performance	8 ACTIVE FOR LIFE Rugby For Life
MENTAL	N/A	Introduction to simple laws and ethics of sport	Development of laws and ethics of sport	Introduction to mental preparation Staff at early stage, specialist towards the end of the stage	Recreational - individualized mental skills for participation Performance - individualized mental skills for peak performances with specialists	Develop mental skills training optimizing arousal, anxiety control strategies & enhance self-confidence. Develop leadership and team member characteristics with head coaches and specialists	Further development of individualized mental; skills, with specialists Group dynamics	
COMPETITION	Unlimited FUN competitions and experience in different sports	Unlimited FUN competitions and experience in different sports	2:1 training to competition ratio Participation in other sports	One match per week in season Recreational length of the season 12-15 weeks, 2 :1 training to competition ratio Participation in other sports Performance 21-24 weeks, 5 :1 training to competition ratio	One match per week in season Recreational length of season 12-15 weeks (age grade) 15-22 weeks Senior, 2 :1 training to competition ratio, Performance 30 to 40 weeks	22-28 elite games per season 52 week program with 2 weeks transition	22-28 elite games per season 52 week program with 2 weeks transition	
TOTAL HOURS (PER WEEK)	Encourage lots of activity	Daily physical activity, 1 hour of rugby participation	Daily physical activity, 2-3 hours of rugby specific training/day x 3 times per week	Recreation - 4/5 Performance - 10/12	Recreation - 4/5 Performance 15-21	23-25 hours	23-25 hours	Double periodization
PERIODISATION	Active movement environment combined with well-structured gymnastics and swimming programs	No Periodisation - well structured programs	Single or double periodization; well structured programs within a defined season Participation in complementary sports	Recreation BC Double/Rest Single periodisation Performance - Double BC/Rest Single periodisation	Recreation BC Double/Rest Single periodisation Performance - Double BC/Rest Single periodisation National teams - double or triple	Double periodization depending on international calendar	Double periodization depending on international calendar	

* Periodisation will be re-evaluated

* Competition model to be finalized and produced separately

Glossary of Terms

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 genetical 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 is a difficult period to define in terms of its onset and termination. During this period, most bodily systems become adult both structurally and functionally. Structurally, adolescence begins with 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 refer to the knowledge and experience base of an athlete and includes warm-up and cool-down procedures, stretching, nutrition, hydration, rest, recovery, restoration, regeneration, mental preparation, and taper and peak. The more knowledgeable athletes are about these training and performance factors, the more they can 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 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 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 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 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 the 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 (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.

PHYSICAL LITERACY refers to the mastering of fundamental motor skills and fundamental sport skills.

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

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 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 refers to the genetic endowment of athletes as they respond individually to specific stimuli and adapt to it accordingly. Malina and Bouchard (1991) defined trainability as “the responsiveness of developing individuals at different stages of growth and maturation to the training stimulus.”

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