




Handball Australia  
Performance Pathway Framework

Development – Coaching – Athletes

2020-2023  
Guideline & Advisory Document  
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## FOREWORD

### SPORT 2030

In August 2018, the Australian Government launched Sport 2030 with a clear objective – to ensure Australia is the most active and healthy nation, known for its integrity and sporting success.

Sport 2030 has four key priority areas which will, when fully implemented, create a platform for sporting success through to 2030 and beyond.

The priorities are:

1. Build a more active Australia — More Australians, more active, more often;
2. Achieving sporting excellence — National pride and inspiration through international sporting success;
3. Safeguarding the integrity of sport — A fair, safe and strong sport sector free from corruption; and
4. Strengthening Australia’s Sport Industry — A thriving Australian sport and recreation industry.

The strategic priorities are interrelated to ensure the key relationships between participation, high performance (HP), integrity and the sport industry.

*The national high performance sport strategy has been developed to support the priorities and objectives of sport2030, with a focus on the second key priority, to achieve sporting excellence.*

In preparing this framework, Handball Australia strives to provide a strategic athlete development framework and holistic support, developmental guidelines and aspirational goals for coaches, athletes and teachers as an aide for preparing athletes from Foundation to Mastery levels of participation. This framework is supported by the research underpinning the Foundations, Talent, Elite and Mastery (FTEM) framework developed by Sport Australia (SportAus) and the Australian Institute of Sport. The framework provides a practical tool to assist stakeholders in reviewing, planning and supporting athlete pathways. Additional support for exercises and drills can be found in the *HA Basic Exercises* document, *HA Performance Pathway Framework* document and the links provided in this document. Please feel free to contact us regarding the information provided or any updates that you may consider worth sharing to improve the level of Handball in Australia.

We trust that this framework and corresponding links will contribute to the quality of your lesson plan or coaching session. Handball Australia strives to add value for Handball with a holistic approach in a long-term vision for our sport.

Handball Australia would like to acknowledge Björn Galjaardt, Board of Directors Handball Australia (Queensland Director) as the developer of this document. We would also like to acknowledge the invaluable input of national team coach Juan Santiago Diaz Granada and the contribution of national team coaches, in alphabetical order: Andrew

Kelso, Ricki Lyngsøe, and Adrian Van Bussell; Caleb Gahan – Queensland Handball Director of Coaching and player representative to the Handball Australia High Performance Committee and Susan Wilson-Gahan, Chairperson of the Handball Australia High Performance Committee.

A reference list can be found on the page forty-three of this document.

Kind regards,

**Handball Australia Board of Directors**

## **Table of content:**

Athlete Progression: Overview	4
Athlete Progression: Factors	7
Demands of Handball Players at the High-Performance Level	10
Desirable Skills for Handball Players	13
Technical and Tactical Demands	15
Key Growth and Maturation Concepts in Review	17
Guidelines for Growth and Development	20
Stages of Development	22
Influences on Growth and Training	34
Handball Australia Recommendation 4-Year Plan	36
Handball Australia Skills Suggestion	37
Links and References	42

## **ATHLETE PROGRESSION: OVERVIEW**

The progression of Handball players can be described using four (4) key aspects:

1. Categories and age groups
2. Structures
3. Competitive networks
4. Stages of development, and available programs at each stage

Such an approach makes it possible to determine where a particular athlete stands in the path towards high performance, if desired. A brief description of the various aspects of this diagram will therefore be provided in the following pages.

### **CATEGORIES AND AGE GROUPS**

There are 6 main age group categories in Handball:

<b>Age groups (years)</b>
<b>12 and less FUNdamentals</b>
<b>12-13 Learn to Train</b>
<b>14-15 Train to Train</b>
<b>16-17 Train to Compete</b>
<b>18-21 Train to Win</b>
<b>22 and over Active for Life</b>

*\*In this document and the Player Pathways, the colours represent stages and progression, as matched by the FTEM model.*

### **STRUCTURES**

In team sports, the term ‘structures’ generally refers to the organisations within which athletes train, compete, and develop.

The primary ‘structures’ in Handball are:

1. School/HPE/Come ‘n try days
2. Clubs/Come ‘n try days or new to handball recruitment
3. Club teams competing at a national level competition
3. State representative teams
4. National Teams
5. Club teams competing at an international level, for example in the Super Globe tournaments
6. Individual athletes pursuing careers with professional or semi-professional teams based primarily in Europe and Asia

Depending on (1) the nature of the programs that are offered/available, and (2) their actual level of performance, athletes may be part of such ‘structures’ depending on team selections, tournament availability and HA decisions about participation in international competition.

### **COMPETITIVE NETWORKS**

Competitive networks can be considered ‘entry or community level’ if they evolve around school teams that are non-representative. Players usually take part in invitational, regional, or state tournaments. However, even in such introductory competitive networks, some form of selection identification may take place, and a few identified athletes may have the opportunity to participate in national or international events.

From school competitions or handball try outs, the clubs can be considered as the ‘development level’. The players have further opportunity to be picked for state or territory representative teams and eventually junior and later senior National Teams.

At the Junior and Senior levels, athletes continue to compete locally. The most competent and committed will aim to transition through State Squads to State teams, to National Squads and ultimately National Teams. At this level, players can be considered as ‘advanced level’. Depending on their performances and age, they can be classified as either ‘elite’ or ‘excellent’. For those athletes who reach the senior national teams, the expectation is that preparation is extensive and demanding. The level of competition is the highest available in Australia and Oceania. Seniors representing Australia will be classified as ‘elite level’ with some athletes moving overseas to play in stronger competitions more regularly. Juniors are considered emerging athletes and do not have the elite status for podium potential yet.

For more information about the different level, please refer to the AIS FTEM model: <https://ais.gov.au/ftem>



An international example can be found here:

<https://www.englishhandball.com/uploads/ETP%20FTEM%20Stages.pdf>

## STAGES OF DEVELOPMENT AND AVAILABLE PROGRAMS

To ensure a better understanding of the various concepts, the information dealing with the *stages of development* and the *programs available for athlete development* will appear in the same section. The information below is intended as a guideline.

- 1) The ‘FUNDamental’ stages can appear at different age levels, as early or late starters with Handball. This does not mean that they are not important; rather, this reflects the fact that these stages do not correspond to the traditional Handball age group categories or pathways that are on offering in Each state or territory.
- 2) The ‘Learn to Train’ stage corresponds to 12 and under ages.
- 3) The ‘Train to Train’ stage corresponds to two age group categories that are critical for the development of successful Handball players for ages 12 to 16.
- 4) The ‘Train to Compete’ stage involves athletes from the 16-17 age groups. Compared to the younger age groups, programs offered to these athletes as part of the emerging elite development stream are more extensive, and their impact on player development is therefore greater. The best athletes of this category are considered as the emerging athletes of Handball Australia’s ‘high performance programs’. Some forms of direct support from the federation and/or each state or territory are available to these players (e.g. regional grants, or travel allowance grants).
- 5) The last stage, ‘Train to Win’, involves athletes from the Junior (18-21) and Senior (22 and over) categories identified as emerging elite or elite athletes, depending on their level of representation and performance. Some athletes may have the option to compete for internationally based semi-professional and professional teams.

Please refer for any updates to: <https://handballaustralia.org.au/>

## ATHLETE PROGRESSION: FACTORS

### Factor 1: Development

Some scientific research has shown that it takes approximately 10 years or 10,000 hours of training for a talented athlete to develop to his or her full potential and reach the highest-performance levels. An equal amount of research refutes this idea but acknowledges that success is the end-product of sustained hard work and commitment. There are no shortcuts: the development of successful elite performers is a long-term process. If the goal is to produce successful players, focusing on short term performance objectives may not be advantageous.

### Factor 2: The ABCs of movement

Children must develop fundamental movement capabilities such as agility, balance, coordination (the ABCs of athleticism), as well as basic skills that are useful in most sports, such as running, jumping, throwing, catching, striking, swimming, and kicking. These skills are fundamental to movement competence and movement competence is essential in athlete development and the maintenance of an active lifestyle through regular physical activity for life.

### Factor 3. Specialisation

Sports can be divided into two broad categories: early and late specialisation. Handball falls in the latter category in Australia. Multiple research sources support the preference for late specialisation, maintaining that children will develop into more proficient athletes if they are exposed to and participate in, a variety of sports and physical activities during the development years.

### Factor 4. Stages of Development

The Long Term Athlete Development (LTAD) model is based on the developmental age of an athlete, not on his or her chronological age. Most people progress through the same developmental stages from early childhood to adolescence, but the time at each stage, the rate of change, and the overall scope of development are not the same for everyone. During puberty and adolescence, athletes of the same chronological age may differ by as many as 4 or 5 years in terms of physical or mental development. Coaches must understand and appreciate these differences and take them into account when they design their programs.





### **Factor 5. Trainability**

All physiological systems can be improved through training – but there are critical periods of life when the response to specific forms of training is optimal. To achieve their full physiological potential, an athlete must therefore train the right performance factors at the right time.

### **Factor 6. Global approach**

When working with athletes, coaches must take a global approach. At each stage, they must pay attention to the emotional, mental, and cognitive development of the athlete, in addition to the physical and technical aspects. Coaches must also realize that recovery plays an important role in the athlete's developmental process.

### **Factor 7. Periodisation**

Simply put, *periodisation* is the effective management of the time available for the athlete's preparation. Periodised programs outline training and competitive activities within a logical schedule, in order to bring about optimal improvements in performance at the right times, while minimising the risks of injury, overtraining and burnout. Periodised plans connect the LTAD stage of the athlete with the training and development requirements of that particular stage. They also take into account the athlete's own training background and capabilities.

### **Factor 8. Planning the competitive calendar**

At each stage of the LTAD, sound competitive planning is critical. During the early stages, the development of physical abilities should have priority over competition. However, during the later stages of development, quality competitive opportunities become increasingly important.

### **Factor 9. Systemic integration and alignment**

LTAD initiatives and support programs must be designed and implemented with a focus on the needs of athletes, and a commitment to cross-sectorial collaboration and cooperation. LTAD calls for system alignment and integration by bringing together all the stakeholders at State and National levels (athletes, coaches, clubs, school sports, recreation, State and National Sporting Organisations), to build an integrated and aligned sport system.

### **Factor 10. Ongoing improvements**

An athlete development plan must be fluid and flexible. Rather, the coaches, athletes, sport scientists, administrators, and policy makers closest to LTAD must constantly seek ways to improve and refine individual athlete plans as well as team and programs plans.

## **DEMANDS OF HANDBALL AT THE HIGH- PERFORMANCE LEVEL**

### **Athlete profile**

Handball is a team sport in which two groups of participants test their technical and tactical skills in both offensive and defensive situations, within the limits imposed by the rules. Two fundamental yet complementary facets of the game are constantly at work: attack and defence.

For each facet of the game the development and mastery of a variety of techniques, strategies and tactics are vital to success. High level performance of technical skills is not sufficient for athletes to achieve top level performances; athletes must also exhibit an adequate degree of physical preparation, team cohesion, strategic and tactical knowledge.

Depending on their position, Handball players can display a wide range of morphological and physiological characteristics. This being said, it remains possible to draw the general profile of a successful international player, based on the demands of the game at that level. As is the case in many other sports, performance in Handball is determined by a series of factors which are related to - and even influence - each other: physical abilities, technique, tactical sense, and mental skills.

The rest of this section will outline the profile of a successful international-level Handball player.

- **Strategy** defines the long-term goals and how the team plan to achieve them. The strategy provides the pathway need towards achieving the team goals.
- **Tactics** are more concrete and are oriented toward smaller steps and a shorter time frame along the way. They involve best practices, specific plans, resources, etc. They're also called "initiatives."
- **Strategy is based on extensive research, planning, and internal reflection.** It's a long-term vision, whereas tactics are short-term actions.
- **Strategy and tactics work together as means to an end.**
- **The best strategy and tactics still won't cover everything.**

## **Physical demands**

Including the goalkeeper, a team can have seven players on the court. The requirements of each position are highly specific and this, in turns, influences what might be considered the “optimal” height and weight.

As a general rule, international Handball players are tall and powerful. Height is, of course, genetically determined, but it represents a significant asset in modern play. For this reason, body size is a factor, and coaches seek to work with relatively tall players whenever the opportunity arises. The player’s weight may also become a factor, particularly in the case of the pivot. For this reason, body mass index (BMI) is often taken into account.

In general, but not as a rule, arm span is another important morphological variable, as it has a direct impact on the power and velocity of shots: the longer the arm, the longer the radius of the arc generated when shooting, and therefore the greater the acceleration imparted to the ball. Long limbs are also advantageous for the goalkeeper, as this allows him/her to cover more space in the net. Lastly, hand size is another morphological factor that may impact performance: indeed, the larger the hand, the easier it is for the player to grab the ball and to handle it during play.

## **Flexibility**

Elite handball players show a high degree of suppleness and, as is the case in every sport, this ability gets developed in a way that is highly specific to the discipline. As a general rule, Handball players display: a wide range of motion in the shoulder of the dominant arm, which is useful when shooting (i.e., more options and greater power); and good lateral flexion of the spine, which allows them to execute various types of shots with the trunk bent sideways (e.g., sidearm shot)

In the case of goalkeepers, one also generally observes the ability to spread the arms and the legs very wide when jumping forward towards a shooter.

Joint mobility or flexibility are often used as synonyms for suppleness. The mobility of an articulation (i.e., the degree with which “it works”) and the ability to stretch the related muscles, tendons, ligaments and cartilage, are sub-categories of the general concept of mobility. This represents a prerequisite for the correct execution of movements. The development of a “Handball-specific mobility” has positive repercussions on the athlete’s performance, as this allows him or her to generate more power (speed-strength) and enhances the execution of specific skills or techniques during play.

## **Athletic capabilities**

From an athletic point of view, high-level Handball players tend to exhibit high levels of: Speed + Power + Endurance

**Speed:** Players must be able to perform specific actions very fast.

**Power:** In order to achieve a high degree of power when shooting and a good height when jumping, the player's speed must be coupled to his/her strength and agility. According to James C. Radcliffe (High Powered Plyometrics, 1999):  
$$\text{Power} = \text{Speed} \times \text{Strength} \times \text{Agility}.$$

**Endurance:** in order to sustain the required intensity for the entire duration of the game and delay the onset and the negative effects of fatigue on performance, the players' energy systems must be developed to an optimal level.

During a game, Handball players must perform many short and explosive efforts, followed by less intense periods during which recovery is possible. The duration of these high-intensity actions rarely exceeds 2 or 3 seconds and, overall, they represent only 10% or so of total playing time during a game. Nonetheless, the ability to produce such efforts repeatedly is critical to performance, as they coincide with the most critical phases of play (fast breakaway leading to a goal; powerful defensive actions to stop an attacker; etc).

Energy Systems are chemical pathways in our body that resynthesise adenosine triphosphate (ATP) for everyday activities. The three energy systems are; the ATP-PC or 'alactic' energy system, the anaerobic glycolysis or 'lactic' energy system and the aerobic energy system.

### **ATP/PC (Adenosine Tri-Phosphate/Phospho-Creatine) energy system or 'alactacid' energy system**

*Efforts lasting 1 to 15 seconds*

This energy system comes into play in the following game situations: shooting, jumping, one-on-one situations, acceleration phase during a fast break, and defensive actions between the 6m and the 9m lines. Because such efforts are for the most part intermittent and their length shorter than 10 seconds, and because many must be performed during a typical game, **Handball players must seek to develop both the power and the endurance of their anaerobic a lactic system.**

### **The anaerobic glycolysis or 'lactic' energy system**

*Efforts lasting 15 seconds to 2 minutes*

The lactic acid energy system is the dominant system in sports, which require a high intensity for longer than 10 seconds. During a high-level competition, there will likely be several instances during which efforts will have to be sustained for longer than 10 seconds. For instance, this would be the case if there were a series of fast breaks followed by back-checking and dynamic defensive actions with limited recovery opportunities in-between. In such cases, the anaerobic lactic energy system would come into play.

## **Aerobic Energy System**

### ***Efforts lasting 2 minutes and more***

The aerobic system is the dominant system for any sport or activity that lasts more than 3 minutes. This includes most team sports. Aerobic endurance allows an athlete to sustain a relatively high pace for extended periods, as is sometimes required during play. At high levels of competition, heart rate values measured during play often reach values ranging between 150 and 200 beats per minute (M. Nedef cited by Yourtchenko).

## **SKILLS FOR HANDBALL PLAYERS**

### **Motor Skills**

In order for players are to achieve and be successful at the highest levels of competition, a sound psychomotor development is critical throughout childhood (i.e. until the age of 12 or so). Fundamental movement skills are important to:

- Acquire a good dynamic balance, which will allow the player to run, change direction, and jump effectively.
- Develop dexterity, which is a prerequisite to acquiring effective ball handling skills.
- Develop the ability to perform distinct actions simultaneously with the upper and the lower body, for instance running and throwing, or running and catching.
- Feel, adjust, and control the amount of tension in the hands while performing specific actions with the ball, for instance relaxing when the ball comes into contact with the hands, and increasing the amount of tension when shooting.
- “Feel the rhythm” of certain game actions in which muscle tension may fluctuate quickly during the execution of specific movements.

The development of Handball-specific skills will evolve naturally from the fundamental movement skills acquired during childhood: players with a good “motor and physical literacy” usually exhibit a better technique and superior perceptual abilities. Indeed, a Handball player must be perfectly at ease with a ball in his or her hand, control his or her movements at all times, and master a vast repertoire of techniques. In addition, as the player acquires and develops such a range of game-specific actions, he or she will have to execute them faster and in more difficult conditions – for instance, while his or her movements are restricted by the action of defenders.

### **Coordination**

Coordination, or the ability to perform movement correctly and in the right sequence, is governed by the various neuromuscular processes that control and regulate movement. This ability allows the player to execute both planned and unplanned actions. There are two aspects to consider:

General coordination – which is the product of a broad range of motor experiences and allows the player to be creative while performing a variety of tasks.

Specific coordination – which is acquired through the sport itself and allows the athlete to master a variety of techniques and select the ones that are best adapted to the conditions emerging during play.

Developing coordination is a complex process which requires to identify the various aspects that need to be developed first, and then establish the proper sequence in which each should be emphasised (e.g., ability to combine different movements, ability to analyse a specific situation, balance, spatial orientation, rhythm, reaction time, and ability to adjust to different situations on an ongoing basis).

Speed

Speed is important both on offense and on defence. According to Frey (1977), speed is “the ability to perform specific actions in the shortest possible time, in a given set of conditions; it is determined by both neuromuscular factors and the intrinsic properties of the muscles to generate tension”.

It is generally agreed that, as a performance factor, speed can only be improved slightly through training, contrary to other factors such as aerobic endurance or maximum strength which show a far greater potential of trainability. As athletes get older, speed is also the first performance factor to regress markedly (Hallmann and Hehinger, 1998).

### **Speed Strength/Power**

Speed-strength is perhaps the single most important performance factor in Handball. This ability comes into play in all actions involving pushing, shooting, jumping, or an acceleration of some sort (e.g., during a fast break).

## **TECHNICAL AND TACTICAL DEMANDS**

Handball has evolved considerably over the past decades and has become an increasingly fast and spectacular game. We now see a wider range of techniques and tactics performed at dazzling speeds, and players display unprecedented levels of skills and power when they attempt to overtake an opponent or shoot on goal.

At the highest levels, Handball is characterised both by its fast pace and the technical proficiency of the players, who are more powerful and athletic than ever before.

The physiological demands of high-performance competition are determined by factors such as the rules of the game, the format and scheduling of competition,

the overall number of games, the opponents' style and level of preparation, as well as the general trends outlined above. As a result of these factors, games are now being played at a higher intensity and, to be successful on the international scene, players must constantly work at the limit of their potential.

## **Technique**

High level Handball players display a vast technical repertoire which is supported by abilities such as coordination, balance, agility, as well as quick reaction times and high speeds of execution. The ball must never become a distraction, and the athlete must be able to move quickly in any direction with or without it.

Arguably, the better the player is technically, the easier it becomes for him or her to read cues and make decisions in game-like situations: indeed, he or she no longer has to pay attention to the execution component and can therefore focus on how the play is evolving. Such a high degree of "handball-specific motor skills" allows the player to execute complex actions at progressively higher speeds, and in conditions where some constraints may apply - for instance, when movements are restricted by the action of defenders. However, this does not need to be the case.

## **Tactics**

Typically, high level players demonstrate a superior "game intelligence" or "game awareness" in competition. This is determined primarily by two factors: Very strong perceptual abilities - which allow them to focus on variables other than the ball; in turn, this makes it possible for them to detect relevant cues, and process information concerning how the play is developing quickly and efficiently.

An in-depth knowledge of the game - which comes from the experience of having been exposed to a variety of situations, including the most complex ones that can arise during play. As a result, top-level athletes are capable of (1) recognising specific game situations quickly, and (2) making effective decisions to solve the problems they face during play. Decision making strategies might need to be put in place by the coach for each individual player, as each player has different learning abilities, as well as (natural) development stages.

## **KEY GROWTH AND MATURATION CONCEPTS IN REVIEW**

Before getting into the various facets of Handball training, it appears important to first provide a brief review of some key growth and development concepts.

During play, a player's behaviours is influenced by a range of factors (physical: general and specific; technical; tactical; psychological; etc.) as well as by the information and the stimuli he or she is exposed to. Because Handball can be considered a "late specialisation sport", young players must go through a series of stages before reaching the highest levels of competition. Typically, Handball players can be considered 'fully developed' around the ages of 23-25. Taking into account the "LTAD 10-year rule" regarding the development of international calibre athletes, a child should therefore specialise in the sport around the ages of 13-15 assuming that he or she has acquired all the general sport skills and abilities during the earlier stages of his/her athletic development.

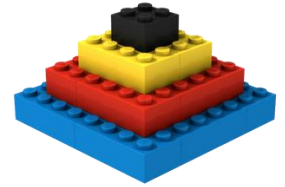
Specialising sooner might be detrimental to the player's progression. When this occurs, the best results are often achieved too early in the athlete's career, performances can be inconsistent, the risks of injuries increase, and the drop-out rate before the age of 18 is often high.

It is also important to note that each athlete progresses through the various stages of development at his or her own pace. Consequently, some athletes simply will not "fit" into the model proposed for their age group. Research has clearly shown that chronological age is not a good point of reference for athlete development models: indeed, between the ages of 8 and 16, skeletal, muscular and emotional development can vary greatly from one participant to another within the same age group. As much as possible, training should therefore be based on the guidelines corresponding to the athletes' biological'/maturation levels.

Late specialisation sports such as Handball could benefit from a rather general approach during the first few years of training. Activities must focus on general athletic and motor development, and on the acquisition of basic techniques. Skill training should represent the major component of training until the athlete reaches the period of accelerated growth during puberty. It is also important to stress that athletes must acquire and master certain skills at specific times during their development. Failure to do so may prevent the athlete from reaching his or her full potential later – thus directly impacting his or her ability to perform in the long term.



All Stages: Matching colours with page 5 of the HA Pathways document)



## **FUNdamentals**

### **F: 6-8 years / M: 6-9 years**

This stage of development is still characterised primarily by fun. Most of the time must be spent on games and activities that promote motor development. During childhood, bones and cartilage are fragile, and can be damaged if exposed to excessive mechanical stress and tension. Some strength training can be done, but loads must be light, thus allowing a high number of repetitions to be performed. Around age 8, muscle mass only represents 27% or so of the child's total body weight. It is therefore unproductive to do extensive strength training. Rather, the emphasis should be on the development of quickness in the hands and in the feet – two performance components that are very important in Handball, as well as on coordination, agility, and balance. Some flexibility training can also be included, but progressively and with a certain moderation.

### **Learn to Train**

### **F: 8-11 / M: 9-12 years**

From ages 8 to 11 (girls) and 9 to 12 (boys), children are ready to begin training based on more conventional methods. This period covers the few years before the rapid growth phase (or peak height velocity) that occurs during adolescence. This being said, training should still focus on general sport skills. This period coincides with an accelerated development of coordination and fine motor skills, so this is the perfect time to work on basic techniques. It is also important to introduce aerobic training at that time, for instance through various forms of relay games, and to prioritise flexibility training. The development of the brain is almost complete in terms of size and complexity, and the child is therefore capable of performing more advanced cognitive tasks. The end of this period corresponds to the first stage of puberty and is characterised by important changes in the child's body size (height, weight, body fat).

### **Train to train**

### **F: 11 to 15 / M: 12 to 16 years**

This is the period during which sexual maturation occurs progressively. It is characterised by significant gains in muscle mass and, as a result, the athlete can begin a more systematic training of performance factors such as strength endurance, maximum strength, and speed strength. Activities aimed at developing both aerobic and anaerobic a lactic endurance can be integrated progressively into the athlete's program, and anaerobic lactic power training can

also be initiated. The development of flexibility should remain a priority in order to account for the rapid growth of bones, tendons, ligaments, and muscles. This period is also ideal for players to work on abilities such as spatial orientation, as well as cue reading and decision-making – which both relate to the tactical aspects of the game. During this period, a greater emphasis should be given to psychological preparation, in particular to aspects such as focus and control of distractions. The range of ages used to define this particular period typically reflects the beginning and the end of the growth spurt. Arguably, this is the most crucial age group. Aside from internal and external influences, it is also a time where the 4 C's are built in. Competence, confidence, connection and character. A great document can be found [here](#).

### **Train to Compete**

**F: 15 to +/- 21 years / M: 16 to +/- 23 years**

This is the time when athletes of both genders tend to specialise in one sport and at a specific position. It will also be the time when players chose to commit to handball despite further interests.

### **Train to Win**

**F: 18 years and + / M: 19 years and +**

Those who have the potential to perform at higher levels of competition also begin training on a year-round basis in programs featuring increased volume and intensity. All performance factors must be carefully planned, and periodised in a way that promotes optimal development and recovery.

### **Active for Life**

**F + M: all ages**

## GUIDELINES FOR GROWTH AND DEVELOPMENT

Athletic Abilities		10	11	12	13	14	15	16	17	18	19	20
Aerobic Endurance (prolonged efforts)	F	☹	☹	☹	☹	😊	😊	😊	😊	☹	☹	☹
	M	☹	☹	☹	☹	☹	😊	😊	😊	☹	☹	☹
Aerobic Power (5-15 min efforts at higher intensities,)	F	☹	☹				😊	😊	😊	😊	😊	☹
	M	☹	☹	☹			😊	😊	😊	😊	😊	☹
Speed-Endurance	F	☹					😊	😊	☹	☹	☹	☹
	M	☹					😊	😊	☹	☹	☹	☹
Strength-Endurance	F					😊	😊	😊	😊	😊	😊	☹
	M					😊	😊	😊	😊	😊	😊	😊
Maximum Strength	F	☹	☹	☹	☹	☹	😊	😊	😊	😊	😊	☹
	M	☹	☹	☹	☹	☹	😊	😊	😊	😊	😊	☹
Speed-Strength (Muscular Power)	F	☹	☹	☹	☹	😊	😊	😊	😊	😊	☹	☹
	M	☹	☹	☹	☹	😊	😊	😊	😊	😊	😊	☹
Flexibility/Suppleness	F	☹	☹	😊	😊	😊	😊	😊	😊	☹	☹	☹
	M	☹	☹	😊	😊	😊	😊	😊	😊	😊	😊	☹
Speed - Efforts lasting 8 sec or less	F	☹	☹	☹	😊	😊	😊	😊	😊	☹	☹	☹
	M	☹	☹	☹	😊	😊	😊	😊	😊	😊	☹	☹
Speed - High Frequency of Movements	F	😊	😊	😊	☹	☹	☹	☹	☹	☹	☹	☹
	M	😊	😊	😊	☹	☹	☹	☹	☹	☹	☹	☹
Coordination/Agility  Balance	F	😊	😊	😊	😊	😊	😊	☹	☹	☹	☹	☹
	M	😊	😊	😊	😊	😊	😊	😊	☹	☹	☹	☹

Basic Techniques	F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>															
	M	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>														
More advanced Techniques	F					<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
	M								<input type="checkbox"/>	<input type="checkbox"/>										
Tactics and Decision-Making	F																			
	M																			

- Optimal training period    Can be trained, but moderately
- Training should be avoided    Can be trained as required by the sport
- Improvements may be observed through training, yet this factor should not be emphasised.



## STAGES OF DEVELOPMENT

<b>Stage of Development: FUNdamentals</b>	
<p>In each country the core movement fundamentals may be presented differently. For example, in Australia fundamentals of movement are introduced in primary schools or special children programs and not necessarily in Handball sport clubs. During the “FUNdamentals” stage, the focus must be on motor learning. Children must be involved in a wide range of fun activities that will help them develop basic motor skills. Such skills are critical to the future stages of athletic development, and the best time to work on them is between ages 6 and 9. Unfortunately, this stage is often overlooked. Throughout this stage, programs and activities must continue to focus on fun, and formal competitions are clearly not a priority. Rather, competition should be introduced very gradually and represent only a small component of the programs; the focus must remain participation and initiation to various sport activities.</p>	
Typical chronological ages	F (6-7 → 7-8) M (6-7 →8-9)
Key words	General development
General objective(s)	Initiation to and development of motor skills
Objectives - physical	<p>To develop basic sport skills (running, jumping, throwing)</p> <p>To acquire fundamental motor skills (agility, speed, coordination, balance)</p> <p>To develop general fitness through games featuring speed, power, endurance, and flexibility components.</p> <p>To initiate participants to basic ball handling skills.</p>
Objectives - tactical	To introduce the key rules of the game.
Objectives - technical	<p>To initiate participants to basic Handball techniques through various forms of adapted games and activities.</p> <p>To initiate participants to dribbling.</p> <p>To emphasise correct execution.</p>
Objectives - psychological	<p>To develop self-esteem through positive feedback.</p> <p>To learn the importance of working hard while having fun.</p> <p>To in still the love of sport.</p>

Training volume Annual/seasonal/weekly	A season typically lasts a few weeks (up to a few months) No periodisation whatsoever at this stage 2 Handball sessions per week, and 2 sessions featuring other sports
Volume and level of competition	Some forms of low-level local or regional competitions

**All Stages: Matching colours with page 5 of the HA Pathways document**

## Stage of Development: Learn to Train

The focus of this stage is to provide participants with the opportunity to acquire general sport skills that are essential to a sound athletic development. Basic Handball skills should also be introduced, but children should still participate in other sports. Children of this age group love to apply what they learn and to measure their progress. Handball-specific skills must be learned correctly right from the start, and children should have the opportunity to play at every position.

Typical chronological ages	F (8-9 → 10-11) M (9-10 → 11-12)
Key words	Introduction
General objective(s)	To learn the basics skills of Handball, as well as the skills of other sports
Objectives - physical	<p>To develop general fitness. The primary physical abilities to develop through training should be:</p> <ul style="list-style-type: none"> <li>Muscular and Cardio-vascular Endurance</li> <li>Strength (using exercises with own body weight)</li> <li>Speed and reaction time</li> <li>Flexibility</li> </ul> <p>To acquire a sound running technique.</p> <p>To become familiar with basic ancillary training components (warm-up; cool-down; stretching; etc.)</p>
Objectives - technical	<p>To learn various types of shots: basic (overhand) shot; jump shot; running shot; sidearm shot, and to emphasize a sound technique with the dominant arm</p> <p>To expose players to various forms of defensive systems: 6-0/5-1/ 4-2/ 3-2-1/ 3-1-2</p> <p>To learn the basics of counterattacks (speed)</p> <p>To develop a good sense of timing</p> <p>To develop the ability to execute quick changes of direction while running</p>

Objectives - tactical	To introduce participants to general sport tactics, through speed, endurance, etc. To learn the concepts of marking an opponent, and breaking free from the defensive coverage To recognise if the best option is to shoot or to pass
Objectives - psychological	To introduce participants to basic mental preparation concepts To emphasise a sound mental, cognitive and emotional development To initiate participants to “tactical thinking”
Training volume Annual/seasonal/weekly	Typically, the length of a season will range from a few weeks to a few months No periodisation at this stage.  2 Handball-specific sessions per week + 2 or 3 additional sessions involving other sports
Volume and level of competition	School and regional leagues; a few tournaments during the year.

**All Stages: Matching colours with page 5 of the HA Pathways document**



## Stage of Development: Train to Train

During the Train to Train stage (females 11-15, males 12-16), young athletes need to consolidate their Handball- specific skills. The ages that define this stage are based on the approximate onset and end of the adolescence growth spurt. At this stage, athletes are ready to consolidate their basic sport-specific skills and tactics and learn more advanced ones. It is also a major fitness development stage. In particular, aerobic training should be emphasised at the onset of the growth spurt; the development of performance factors such as strength, speed, and flexibility must also continue. Athletes may exhibit special talent and play to win, but they still need to allocate more time to training skills and physical capacities rather than to compete in formal settings. This approach is critical to the long-term development of top performers and lifelong participation in sport and physical activities. It is also important to take into consideration the level of maturation of each participant, as this will impact the degree to which aerobic stamina and strength training should be emphasised. Identification of the most talented athletes usually begins towards the end of this stage.

Typical chronological ages	F (11-12 → 14-15) M (12-13 → 15-16)
Key words	Identification
General objective(s)	Development of Handball-specific skills
Objectives - physical	<p>To achieve significant fitness gains in the following areas: stamina, strength, speed.</p> <p>To continue the development of flexibility, coordination, and reaction time.</p> <p>To improve jumping and running abilities.</p> <p>To refine the use of ancillary training components (warm-up; cool-down; stretching; hydration; etc.).</p>
Objectives - technical	<p>To master the most important types of shots relevant to the position played.</p> <p>To learn and apply the technical aspects related to:</p> <p>Counter attacks (direct and indirect); moving the ball quickly towards the offensive zone.</p> <p>Defensive systems: 6-0 / 5-1 / 4-2/ 3-2-1/ 3-1-2.</p> <p>Effective interactions at 2 or 3 players.</p>

Objectives - tactical	<p>To learn and apply:</p> <p>Motor skill development</p> <p>Team tactics</p> <p>Systems of play on offense and on defence</p> <p>To begin some form of specialisation at a particular position.</p>
Objectives - psychological	<p>To work on aspects such as:</p> <p>Mental preparation</p> <p>Abstract thinking capabilities</p> <p>Acknowledging the demands of high level of competition, and the sacrifices required to perform at this level</p> <p>Stress management</p>
Training volume Annual/seasonal/weekly	<p>Length of the season: 30 to 34 weeks</p> <p>Youth: 4 to 10 hours per week (90 - 120 min) + physical preparation (2 X 60 min)</p> <p>Junior: 6 to 16 hours per week (90 - 120 min) + physical preparation (3 X 60 min) Some athletes will be involved in schools programs.</p>
Volume and level of competition	Inter-school, regional, and State competition

**All Stages: Matching colours with page 5 of the HA Pathways document**

## Stage of Development: Train to Compete

Typically, athletes enter this stage if they have chosen to specialise in their sport and excel at the highest level of competition. In the Train to Compete stage (females 15-21, males 16-23), athletes will train to consolidate their Handball-specific and position-specific skills, as well as all the required fitness components. These athletes seek to optimise their performance and to achieve results in provincial and national level competitions; for these reasons, their training becomes increasingly geared towards success in competition.

The training to competition ratio should be approximately 50:50. The training component should be used primarily to refine technical and tactical aspects, while the competition percentage includes competition-specific training activities and the use of minor competitions as a form of preparation. At this stage, training must also become increasingly individualised, and reflect the athlete's own strengths and weaknesses.

Typical chronological ages	F (15-16 → 20-21) M (16-17 → 22-23)
Key word	Specialisation
General objective(s)	To develop physical athletic abilities to an optimal level, and to learn how to perform in competition.
Objectives - physical	To: Achieve an optimal level of Handball-specific fitness Refine Handball-specific skills Begin plyometric training
Objectives - technical	To master all skills and techniques of Handball.
Objectives - tactical	To improve the player's ability to: Read cues and make effective decisions in a timely manner. Adapt his or her tactical actions based on the opponents' strengths and weaknesses. Execute while in motion and/or within a restricted space: quicker decisions and execution at higher speeds.

Objectives - psychological	<p>To apply mental imagery and emotional control techniques.</p> <p>To improve concentration.</p> <p>To consolidate players' ability to use mental skills effectively as part of pre- game preparation.</p> <p>To offer customised programs reflecting the position and the specific needs of each athlete (recovery; mental preparation; resistance training).</p>
Training volume Annual/seasonal/weekly	<p>Length of the season: 34 to 40 weeks</p> <p>Youth: 8 to 16 hours per week (90- 120 min) + physical preparation (3 X 60 min)</p> <p>Junior: 8 to 16 hours per week (90- 120 min)+ physical preparation (3 X 60 min)</p>
Volume and level of competition	<p>1-2 games per week (provincial or national levels of competition), as well as a few international competitions during the year</p>

**All Stages: Matching colours with page 5 of the HA Pathways document**

<b>Stage of Development: Train to Win</b>	
<p>At this stage, athletes have realised their full genetic potential. They must now train to maximise and maintain their competitive performance at the highest levels of competition. The emphasis is on a high degree of specialisation and the ongoing improvement of performance. Physical, technical, tactical and psychological abilities must be developed to an optimal degree given the demands of Handball, and all ancillary factors that contribute to performance must be integrated optimally into the training and competition program. Regular exposure to international competition is also critical. Training is both very specialised and individualised, and both volume and intensity are high. Carefully planned recovery is therefore critical to avoid burn out and overtraining.</p> <p>The training to competition ratio is now reduced to 30:70. The training component is used primarily to refine technical and tactical aspects, while the competition percentage includes competition-specific training activities and the use of minor competitions as a form of preparation. Ancillary/peripheral support services now play a critical role in allowing athletes to achieve their high-performance objectives.</p>	
Typical chronological ages	F (18+) M (19 +)
Key words	Performance
General objective(s)	To perform in top-level competitions
Objectives - physical	To ensure all physical abilities are developed to an optimal level given the demands of international Handball competition.
Objectives - technical	To refine the various techniques and skills and make adjustments as necessary to compete successfully against specific opponents.
Objectives - tactical	To master the most complex systems of play.
Objectives - psychological	<p>To prepare specifically for selected competitions.</p> <p>To establish short- and long-term objectives.</p> <p>To take ownership of self-performance and of the outcome of games.</p>

Training volume Annual/seasonal/weekly	Length of the season 35 to 45 weeks  12 to 16 hours per week (90 - 120 min) + physical preparation (4 X 60 min)
Volume and level of competition	National / International

**All Stages: Matching colours with page 5 of the HA Pathways document**

## INFLUENCES ON GROWTH AND TRAINING

<b>Sensitive periods of trainability</b>	
<p>Trainability refers to the “response” or the “degree of adaptation” resulting from training. Even though some improvements or training effects can be observed at any age when working on a performance factor, there are <b>sensitive periods of accelerated adaptation to training</b>, sometimes referred to as “windows of trainability.” The sensitive periods vary between individuals according to their genetic makeup and different rates of development. However, focusing on the right training variables at the right time during the athletic developmental process is critical to maximise the chances that athletes will improve to their full genetic potential. While the sensitive periods follow general stages of human growth and maturation, research shows that humans vary considerably in the magnitude and rate of their response to different training stimuli at different ages. This reinforces the benefit of and the need for a long-term approach to athlete development. The five basic athletic abilities generally referred-to in LTAD models are stamina, strength, speed, skill and suppleness. For both stamina (aerobic endurance and power) and strength, the sensitive periods of adaptation are best defined by biological age (maturation level), more specifically, by the beginning and the end of the growth spurt that takes place during adolescence. For the other factors (speed, skill and suppleness), they should be based on chronological age. As a general rule, the sensitive periods of adaptations occur sooner in girls compared to boys.</p>	
<b>Aerobic stamina</b>	<p>The sensitive period of accelerated adaptation for training stamina begins when Peak Height Velocity (PHV) is reached, or the maximum rate of growth during the adolescent growth spurt. Athletes need increased focus on aerobic capacity training as they enter PHV, and they should be progressively introduced to aerobic power as their growth rate decelerates.</p>
<b>Speed</b>	<p>In both boys and girls, there are two sensitive periods of accelerated adaptation for training speed.</p> <p>For girls, the first sensitive period occurs between ages 6-8 years, and the second occurs between 11-13 years.</p> <p>For boys, the first sensitive period occurs between ages 7-9 years, and the second occurs between 13-16 years.</p> <p>During the first sensitive period, training should focus on developing agility and quickness; during the second sensitive period, training should focus on developing the anaerobic alactic energy system.</p>
<b>Flexibility</b>	<p>The sensitive period of accelerated adaptation for training suppleness occurs between ages 6-10 years in both girls and boys. However, attention to flexibility should continue during Peak Height Velocity (PHV) and beyond to prevent injuries as bones, muscles, tendons and ligaments grow.</p>

<b>Strength</b>	<p>Girls and boys have one sensitive period of accelerated adaptation for training strength, but they begin at different times.</p> <p>For boys, the sensitive period begins 12 to 18 months after Peak Height Velocity (PHV).</p> <p>For girls, the sensitive period begins with whichever of the following occurs first in the individual: menarche (first menstruations) or the onset of Peak Weight Velocity (PWV).</p> <p>Some girls will experience PWV prior to menarche, while others will experience menarche prior to PWV.</p>
<b>Skill development</b>	<p>Girls and boys both have one sensitive period of accelerated adaptation for training skill.</p> <p>For girls, the sensitive period is between ages 8-11 years. For boys, the sensitive period is between ages 9-12 years.</p> <p>These ages are approximate. During this period, children should develop a wide range of skills that can be used in a variety of sports. This will facilitate the acquisition and development of the various techniques in late specialisation sports such as Handball.</p> <p>For both girls and boys, the sensitive period for training skill ends at the onset of the adolescent growth spurt.</p>



## HANDBALL AUSTRALIA RECOMMENDATION FOR A 4-YEAR PLAN

<b>Types of preparation</b>				
<b>GPP</b>	<b>Year 1</b>	<b>Year 2</b>	<b>Year 3</b>	<b>Year 4</b>
	To improve individual areas of weakness.	To develop speed-strength and endurance.	To develop agility, accuracy, and speed endurance.	To develop strength, speed, and speed endurance.
<b>SPP</b>	To develop shooting power speed, jumping height, and speed endurance.	To improve defensive play, jumping height, and speed of reaction	To refine agility, accuracy, and overall work capacity during offensive play, as well as power and speed of execution when shooting	To develop the ability to perform repeated efforts at maximal intensity. To develop power and speed strength.
<b>TECH PREP</b>	To refine movements while on defence, passing, overhand and jump shots.	To refine individual skills on defence, dribbling and passing at high speeds while in movement, as well as jump shots from the wing	To improve efficiency when shooting, feinting, passing and dribbling in complex conditions.	To refine favourite individual skills on offense and on defence for optimal use during play. To improve shooting power.
<b>TACT PREP</b>	To refine individual tactics on defence and on offense, while moving the ball towards the offensive zone, as well as 3:3, 5:1, 6:0, and 3:1:2 defensive systems.	To improve play during free throws and penalty shots. To improve goaltending skills; To improve individual marking as well as the 3:2:1 system on defence. To improve 3:3 et 4:2 offensive systems.	To implement tactical systems and assess their effectiveness in competition. To refine individual and team defensive play.	To develop the effectiveness of offensive play against the following defensive systems: 6:0; 5:1; 5:0 + 1;4:2; 3:2:1; 4:1+1; 3:1:2; 3:3; and M to M; and to validate such effectiveness in competition
<b>PSYCH PREP</b>	To improve combativeness during play. To develop a sound attitude towards constructive criticism. To develop team spirit and Cohesiveness.	To consolidate and maintain basic abilities, a competitive attitude, confidence, and focus. To improve in areas such as control of distractions, time Management, and ability to sustain high training loads.	To control emotions in a variety of stressful situations. To effectively apply mental imagery, stress management and relaxation techniques in preparation for a competition.	To develop the players' ability to take responsibility for the results and for performance in competition. To enhance the sentiment of national pride when representing the country. To demonstrate a high degree of self-discipline during play.

## HANDBALL AUSTRALIA SKILLS SUGGESTION

SPECIAL FOCUS AREAS		9-10	10-11	11-12	12-13	13-14	14-15	15-16	<21	<21	>18	>18
<b>INDIVIDUAL TACTIC OFFENSIVE</b>	Ball Adaptation	5	5	5	5	5	2	1	3	2	2	2
	Pass Dominant Hand	4	5	5	5	5	4	3	5	3	2	2
	Pass Non-Dominant Hand	2	2	3	4	4	3	3	3	3	3	4
	Pronation Pass Both Hands	0	1	2	3	3	3	3	5	4	3	2
	Running Pass	1	3	4	5	5	5	5	5	4	3	2
	Jumping Pass	1	1	2	3	3	3	3	4	4	3	3
	Pass Behind The Back (Cross)	0	1	2	3	4	3	5	5	5	4	4
	Bounce Pass	3	3	4	3	3	3	2	3	3	2	2
	Catch	4	5	5	5	5	3	3	5	4	3	2
	Variation Catch (Top, Bottom, Middle)	4	5	5	5	5	4	3	5	4	3	2
	Running catch (With and Without Opponent)	2	4	5	5	5	5	5	5	4	3	2
	Bounce Dominant Hand	5	5	5	4	3	2	1	3	2	1	1
	Bounce Non-Dominant Hand	5	5	5	4	3	2	1	3	2	2	2
	Bounce, Swapping Hand To Go Past Opponent	3	4	5	4	3	2	1	2	2	2	2
	Bounce, Different Heights	4	5	5	4	3	2	1	4	3	3	3
	Jump Shot Dominant Hand	4	5	5	5	5	4	3	2	1	1	1
	Jump Shot Non-Dominant Hand	0	0	1	2	2	2	3	2	2	2	2
	Ground Shot	1	2	3	3	4	4	5	3	3	2	2
	Hip Throw	0	1	2	2	3	3	4	3	3	2	2
	Wrong Foot Shot	0	1	1	2	3	3	4	3	3	2	2
	Swapping The Ball Between Hands Mid Air	0	0	0	0	0	1	2	2	2	2	2
	Shot With Different Arm Angles	0	1	2	5	5	4	3	3	3	2	2
	Specific Shot	1	2	3	4	5	4	5	3	3	3	3
	Losing Your Marker	5	5	5	3	2	1	1	2	2	2	2
	Losing Your Marker Towards Your Goal	2	4	5	5	5	3	3	4	3	3	3
	Losing Your Marker With Free Space	1	3	5	5	5	3	3	2	2	2	2
	Steps Forward	4	5	5	5	5	4	3	2	2	1	1
	Steps Backwards	1	2	3	3	3	3	4	2	2	1	1
	Steps Different Directions	2	3	4	5	5	4	4	4	3	3	3
	Fake Strong Side	1	3	4	5	5	5	5	4	3	3	3
	Fake Weak Side	1	3	4	5	5	5	5	4	3	3	3
	Fake Turn	0	1	1	2	2	3	4	3	2	2	2
Fake Arm	0	3	4	5	5	4	4	4	3	3	3	

	Fake Pass	2	3	4	5	5	4	4	4	3	3	3
	Double Bounce	0	1	1	2	3	4	4	3	2	2	2
	Fake Second Action	0	1	1	2	3	4	4	4	3	3	3
	1vs1						5	5	5	5	5	5
	1vs Goalkeeper											
<b>INDIVIDUAL TACTIC DEFENSIVE</b>	Basic Position	1	3	5	5	5	4	3	3	2	2	2
	Orientations, Profiles	1	2	3	4	4	4	4	5	4	3	3
	Defensive Placements (Free)	2	3	4	5	5	4	3	2	2	2	2
	Defensive Placements Lateral And Forward.	1	2	3	4	5	4	3	3	2	2	2
	Distance Marking	1	3	5	5	5	4	3	3	2	2	2
	Attack The Ball (Possession)	2	3	4	4	5	5	5	2	2	1	1
	Attack The Ball (Bounce)	3	4	5	4	4	3	3	4	3	3	3
	Block	0	1	2	3	3	4	4	3	3	3	3
	Dissuasion	0	0	1	3	4	4	5	4	4	4	4
	Interception	2	4	5	3	4	4	4	3	2	2	2
	Steps Forward	0	0	1	3	4	4	4	4	3	3	3
	Steps Backwards	0	0	1	3	3	3	3	4	3	3	3
	Help (Support)	1	2	3	4	5	5	5	4	4	3	3
	Fake Support	0	0	1	2	2	3	3	3	3	3	3
	Correct Tilting Depending On The Action	0	0	0	3	5	5	4	3	3	2	2
	Swap Opponent	0	0	0	3	5	5	5	5	4	4	4
	Displacement Position	0	0	0	5	3	3	3	3	2	2	2
1vs1						5	5	5	5	5	5	
<b>TCOF</b>	<b>Attack</b>											
	Cross	0	1	2	3	4	5	5	5	4	4	4
	Pass and Go	1	3	4	4	4	4	4	3	2	2	2
	Pass and Pivot Directly	0	0	0	4	4	4	5	3	2	2	2
	Pass and go Pivot Indirectly	1	3	4	4	4	4	5	3	2	2	2
	Fast Break	2	3	4	5	5	5	5	5	5	4	4
	Block	0	0	1	2	3	4	5	4	4	4	4
	Attack 3-3	0	0	0	5	5	5	5	5	5	5	5
	Attack 4-2	0	0	0	2	3	4	5	5	5	5	5
	Attack Individual Defence	0	0	0	4	3	2	1	3	3	3	3
	Attack Mixed Defence	0	0	0			4	5				
	Combinations and Attack Principals	0	0	0	2	3	3	4	4	5	5	5
	Special Situations	0	0	0	0	0	2	3	4	5	5	5
<b>TCDE</b>	<b>Defence</b>											
	Whole Court Individual	2	3	3	2	1	1	1	1	1	1	1
	Half Court Individual	0	3	3	3	3	1	1	1	1	1	1
	Defensive System 3-3	0	0	1	4	4	4	4	4	3	3	3
Defensive System 5-1	0	0	0	2	4	5	5	5	5	5	5	

	Defensive System 6-0	0	0	1	2	4	5	5	5	5	5	5
	Defensive System 4-2	0	0	0	1	1	3	4	4	4	4	4
	Defensive System 3-2-1	0	0	0	1	1	2	3	4	4	4	4
	Mixed Defensive System											
	Defensive Balance	2	3	3	3	4	5	5	5	5	5	5
	Defensive Zone (Z) or Nominal (N)	N					Z	Z	Z	Z	Z	Z
Conditional Capacities	Coordination	5										
	Resistance	5										
	Velocity	5										
	Strength	3										
	Flexibility	5										
	Theoretical	1										
	Psychological	3										
	Strategy	1										
Coordination capacities	Differentiation	4										
	Attachment	3										
	Reaction	4										
	Orientation	3										
	Rhythm	4										
	Balance	4										

**NOTE:** Boys to Men with ages and with number of skills and level of skills.

**NOTE:** up to the age of 10 it is common practice for boys and girls to have similar skills trained.

In the tables below, specialisation for girls will have different focus areas.

## HANDBALL AUSTRALIA SKILLS SUGGESTION

SPECIAL FOCUS AREAS		10-11	11-12	12-13	13-14	12-14	14-16
		MINI BF	MINI AF	INF BF	INF AF	INF TF	CAD A
<b>INDIVIDUAL TACTIC OFFENSIVE</b>	Ball Adaptation	5	5	3	3	4	4
	Pass Dominant Hand	5	5	4	3	4	4
	Pass Non-Dominant Hand	1	1	1	2	1	3
	Pronation Pass Both Hands	1	1	1	2	1	3
	Running Pass	3	4	5	5	5	5
	Jumping Pass	1	2	1	2	1	3
	Pass Behind the Back (Cross)	0	1	1	2	1	4
	Bounce Pass	2	2	2	2	2	4
	Catch	5	5	5	5	5	5
	Variation Catch (Top, Bottom, Middle)	5	5	5	5	5	5
	Running catch (With and Without Opponent)	5	5	5	5	5	5
	Bounce Dominant Hand	5	4	4	3	4	3
	Bounce Non-Dominant Hand	4	3	4	3	4	3
	Bounce, swapping hand to go past opponent	5	4	4	3	4	2
	Bounce, different heights	5	4	4	3	4	3
	Jump Shot Dominant Hand	5	5	4	4	5	4
	Jump Shot Non-Dominant Hand	0	0	0	1	0	2
	Ground Shot	1	1	2	4	1	4
	Hip Throw	0	1	2	3	1	4
	Wrong Foot Shot	0	0	1	2	0	3
	swapping the ball between hands mid air	0	0	0	1	0	2
	Shot with Different arm angles	1	2	3	3	2	4
	Specific Shot	0	2	5	4	5	4
	Releases	5	4	3	2	3	1
	Losing Your Marker Towards Your Goal	3	4	5	5	4	4
	Losing Your Marker with Free Space	5	5	4	4	3	4
	Steps Forward	5	4	4	3	5	2
	Steps Backwards	0	0	1	2	2	3
	Steps different Directions	1	2	3	4	3	5
	Fake Strong Side	2	3	4	5	3	5
	Fake Weak Side	2	3	4	5	3	5
	Fake Turn	0	0	1	2	1	3
	Fake Arm	2	3	4	5	3	5
Fake Pass	1	2	3	5	2	5	
Double Bounce	0	0	0	1	0	2	
Fake Second Action	0	1	1	2	2	3	
1vs1							
1vs goalkeeper							
<b>TACTIC INDIVIDUAL</b>	Basic Position	2	3	3	4	5	4
	Orientations, Profiles	1	2	3	5	4	4
	Defensive placements (Free)	4	3	2	1	3	0
	Defensive placements - lateral and forward.	1	2	3	4	3	4
	Distance Marking	5	5	4	4	3	4
	Attack the Ball (possession)	5	4	4	4	3	4

	Attack the Ball (Bounce)	5	5	4	4	4	3
	Block	1	1	2	2	2	3
	Dissuasion	0	1	2	3	2	4
	Interception	4	4	3	3	4	4
	Steps Forward	0	1	3	3	4	4
	Steps Backwards	0	1	2	2	3	3
	Help (Support)	1	1	2	3	2	4
	Fake support	0	0	0	1	0	2
	correct tilting depending on the action	0	0	3	3	3	4
	Swap Opponent	0	1	2	3	2	4
	Displacement Position	5	5	4	4	5	3
	1vs1	5	5	5	5	5	4
<b>TCOF</b>	<b>ATAQUE MEDIOS COLECTIVOS</b>						
	Cross	0	0	1	2	2	3
	Pass and Go	5	5	4	3	5	3
	Pass and Pivot Directly	0	0	2	3	2	3
	Pass and go Pivot Indirectly	0	0	2	3	2	3
	Fast Break	4	4	4	4	4	5
	Block	0	1	2	3	3	4
	Attack 3-3	0	0	5	5	5	5
	Attack 4-2	0	0	1	3	1	5
	Attack Individual Defence	0	0	0	0	0	2
	Attack Mixed Defence	5	4	3	3	4	2
	Combinations and Attack Principals	0	0	0	1	0	3
Special Situations	0	0	0	0	0	3	
<b>TCDE</b>	<b>DEFENSA, SISTEMAS DEFENSIVOS</b>						
	Whole Court Individual	5	4	2	1	3	0
	Half Court Individual	0	0	3	2	3	2
	Defensive System 3-3	0	0	5	5	5	4
	Defensive System 5-1	0	0	2	3	2	4
	Defensive System 6-0	0	0	3	3	3	4
	Defensive System 4-2	0	0	1	2	1	3
	Defensive System 3-2-1	0	0	1	1	1	2
	Mixed Defensive System						
	Defensive Balance	5	5	5	5	5	5
Defensive Zone (Z) or Nominal (N)	N	N	Z	Z	Z	Z	
<b>CAPACITIES CONDITIONAL</b>	Coordination						
	Resistance						
	Velocity						
	Strength						
	Flexibility						
	Theoretical						
	Psychological						
	Strategy						
<b>ACTION COORDIN</b>	Differentiation						
	Attachment						
	Reaction						
	Orientation						

Rhythm							
Balance							

**NOTE:** Above Girls to Women with ages and with number of skills and level of skills.

**NOTE:** Up to the age of 10 it is common practice for boys and girls to have similar skills trained.

## REFERENCES AND LINKS

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2. IHF handball videos step by step: <http://ihfeducation.ihf.info/INFORMATION/Video-Library>
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4. Direct YouTube channel from IHF:  
[https://www.youtube.com/channel/UCX61L49zLU3HEpdM\\_v\\_ed1w](https://www.youtube.com/channel/UCX61L49zLU3HEpdM_v_ed1w)
5. Handball drills movement: <https://www.youtube.com/watch?v=6kaNNi9GNhU>(3 series of Handball drills inspirations)
6. Ball handling drills: <https://www.youtube.com/watch?v=9V6ry0R2zOA>
7. Handball drills mix: <https://www.youtube.com/watch?v=0dbOri9R8yM>
8. Handball drills on tablet or phone: <https://planet.training/handball/throwing-shooting-drills>
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10. Document to basic handball drills and explanation: <http://www.olympichandball.org/wp-content/Basic%20Handball%20Methods.pdf>
- 11. EHF**
- 12. Canada Sport FTEM / AIS Balyi, LTAD Model**
- 13. Jean Côté**
- 14. Wade Gilbert – coaching better every day**