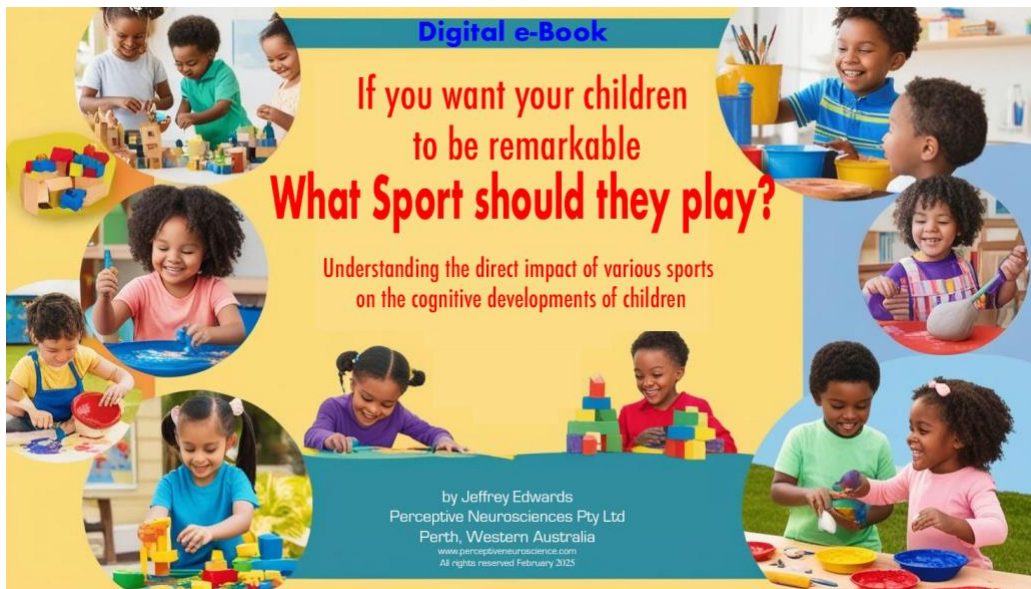


IF YOU WANT YOUR CHILD TO BE REMARKABLE, WHAT SPORT SHOULD THEY PLAY?



About this Booklet:

The Profound Link Between Sport, Cognition, and Remarkable Development

For decades, research has consistently demonstrated that physical activity is a powerful driver of cognitive development in children. Beyond the well-known benefits to physical health, engaging in sports actively shapes the brain's neural architecture, influencing intelligence, problem-solving abilities, and executive functions. Consider the way a young soccer player must assess opponents' positions, anticipate movements, and make rapid decisions—all of these demand heightened cognitive processing.

This book explores how various sports impact cognitive development, guiding parents and educators in selecting activities that align with a child's needs, strengths, and natural abilities. By understanding the science behind sport and cognition, we can make choices that set children on a path to becoming not just skilled athletes but remarkable individuals with sharp minds and resilient spirits.

by: Jeffrey D Edwards
Chief Executive
Perceptive Neurosciences Pty Ltd
www.perceptiveneuroscience.com

jedwards@perceptiveneuroscience.com

Table of Contents

Chapter One: The Development of Executive Functions and Motor Skills	Page 3
Chapter Two: Classifications of Sport and their Cognitive Benefits	Page 4
Chapter Three: Sport as a Cognitive and Social Accelerator	Page 6
Chapter Four: Matching a Sport to Their Natural Abilities	Page 9
Chapter Five: When to Introduce Children to Organised Sports	Page 12
Chapter 6 – Summary and Final Thoughts	Page 15
Chapter 7 – Real-Life Examples	Page 17
 Appendix 1: Practical Guidance for Parents	 Page 21
 Appendix 2 : Recommended articles and Further Reading	 Page 23



Chapter One:

The Development of Executive Functions and Motor Skills

Two fundamental processes underlie the cognitive benefits of sport and physical activity: the development of executive functions and the refinement of motor skills.

Executive Functions:

Executive functions are self-regulatory processes that help individuals plan, focus attention, control impulses, and execute tasks efficiently.

These skills fall into three broad categories:

Working Memory – The ability to hold and manipulate information in the mind.

Cognitive Flexibility – The capacity to adapt to changing situations.

Inhibitory Control – The ability to regulate impulses and responses.

These broad categories encompass specific abilities such as organization, attention, self-control, planning, flexibility, perseverance, time management, metacognition, and task initiation. Research suggests that strong executive function skills contribute to better mental and physical health, academic success, and overall quality of life.

Motor Skills:

Motor skills are learned through repetition and practice, enabling individuals to perform movements efficiently. Repeated neural reinforcement makes these movements automatic, allowing for efficient execution with minimal cognitive load.

Physical activity doesn't just refine these skills independently; rather, it reinforces the neural networks that form the foundations for intelligence, adaptability, and lifelong learning. Every

coordinated movement, whether dribbling a basketball or executing a precise gymnastics routine, strengthens the brain's capacity for memory, spatial awareness, strategic thinking, and self-discipline.



Chapter Two:

Classifications of Sport and their Cognitive Benefits

Sports scientists use various classifications to define distinct aspects of each sport. Each classification influences cognitive development in different ways. Below, we explore these categories and the cognitive benefits they promote.

Open and Closed Sports:



Open Skills Sports: These involve high levels of unpredictability and require players to constantly assess and respond to changing environments. Examples include soccer, basketball, and water polo.
Cognitive Benefits: Enhance executive function, cognitive flexibility, and working memory as athletes must continuously adapt and strategize.

Closed Skills Sports: These involve predictable environments where

movements have a clear start and end, such as a basketball free throw or a penalty shot in hockey.

Cognitive Benefits: Foster precision, discipline, and self-regulation, as athletes focus on executing pre-learned movements with accuracy.

Continuous, Serial, and Discrete Skills Sports:

Continuous Skills Sports (e.g., running, cycling, swimming) involve movements without a distinct beginning or end.



Cognitive Benefits: Strengthen metacognition, self-regulation, and perseverance.

Serial Skills Sports (e.g., triple jump) require a sequence of movements in a specific order.

Cognitive Benefits: Improve self-regulation, working memory, and planning.

Discrete Skills Sports (e.g., golf swing, basketball free throw) consist of single, distinct movements.

Cognitive Benefits: Enhance organization, self-regulation, and planning.

Gross and Fine Motor Skills Sports:

Fine Motor Skills Sports (e.g., archery) involve small, precise movements.

Cognitive Benefits: Strengthen self-regulation, working memory, and planning.

Gross Motor Skills Sports (e.g., weightlifting, shot put) involve large muscle movements requiring power and coordination.

Cognitive Benefits: Enhance attention, self-control, and persistence.

Self-Paced and Externally Paced Sports:

Self-Paced Sports (e.g., golf, free-throws) allow athletes to control the timing of their actions.

Cognitive Benefits: Encourage planning, working memory, and task initiation.

Externally Paced Sports (e.g., sprinting, reaction-based games) require responses to external stimuli, such as a starter pistol.

Cognitive Benefits: Improve attention, self-control, and flexibility.



Chapter Three:

Sport as a Cognitive and Social Accelerator

Sports introduce children to complex environments where they must make split-second decisions, anticipate opponents' actions, and adapt to unpredictable situations. These cognitive demands mirror the problem-solving and adaptability required in academic and professional settings.

Beyond individual cognitive benefits, sports—especially team-based ones—cultivate



critical social and emotional intelligence. Being part of a team teaches children how to work toward a common goal, communicate effectively, and develop selfless cooperation. The concept of playing it forward—sacrificing personal gain for the benefit of the team—reinforces empathy, leadership, and strategic thinking.

Children who engage in collaborative sports like

soccer, basketball, or volleyball develop an acute sense of social cognition—the ability to read teammates' and opponents' intentions, predict movements, and make real-time decisions that benefit the group. They learn when to take initiative and when to support others, a skill set that extends far beyond the playing field into classrooms, workplaces, and relationships.

Crucially, different sports cultivate different cognitive strengths. Open-skilled sports—like soccer or basketball—require constant environmental assessment, rapid decision-making, and teamwork, reinforcing cognitive flexibility and adaptability. In contrast, closed-skilled sports—such as gymnastics or swimming—hone precision, discipline, and self-regulation. By engaging in a variety of sports, children gain a rich cognitive toolkit that prepares them for the challenges of adulthood—not just as individuals, but as effective contributors to society.

Various sports can positively influence childhood cognition, each impacting different cognitive facets.

Below is a breakdown of some popular sports and their cognitive effects:

Team Sports (e.g., Soccer, Basketball, Football)

Cognitive Facets:

Social Cognition: Promotes teamwork, communication, and understanding social cues.

Decision-Making: Quick thinking and strategic planning under pressure.

Spatial Awareness: Understanding positioning and movement in relation to others.



Individual Sports (e.g., Swimming, Tennis, Gymnastics)

Cognitive Facets:

Discipline and Focus: Requires self-motivation and concentration.

Self-Reflection: Encourages personal goal-setting and assessment of performance.

Body Awareness: Enhances kinesthetic intelligence and bodily coordination.

Racket Sports (e.g., Badminton, Squash)



Cognitive Facets:

Reaction Time: Improves reflexes and quick response to changing situations.

Strategic Thinking: Develops tactics and anticipatory skills.

Concentration: High levels of focus and visualization skills are needed.

Martial Arts (e.g., Karate, Judo, Taekwondo)

Cognitive Facets:

Self-Control: Teaches discipline and emotional regulation.

Problem-Solving: Involves strategic planning against opponents.

Memory: Learning patterns and techniques enhances memorization skills.

Athletics (e.g., Track and Field)

Cognitive Facets:

Goal Orientation: Cultivates a focus on personal achievement and perseverance.

Time Management: Balancing training and competition with other responsibilities.

Mental Toughness: Enhances resilience and the ability to cope with stress.

Dance & Gymnastics

Cognitive Facets:

Creativity: Encourages

expression and innovation in movement.

Memory: Learning choreography enhances memorization and recall abilities.

Emotional Intelligence: Expresses and recognizes emotions through movement.

Engaging in sports can profoundly influence cognitive development in children, enhancing multiple facets that are crucial for overall growth. It's beneficial for parents and educators to encourage participation in a variety of physical activities to foster these cognitive benefits.



Chapter Four:

Matching a Sport to Their Natural Abilities

Understanding their Natural Abilities for Sport

The Role of Genetics in Athletic Potential

Genetics play a crucial role in how our bodies respond to exercise and the overall impact it has on our health. Certain genetic variations can determine how quickly we build muscles, how efficiently our bodies use oxygen during exercise, and how prone we are to certain injuries.

The Impact of Early

Exposure and

Environment

Balancing Natural Talent with Skill Development

Observed Abilities:

What Can We Learn from a Child's Behaviour?

Coordination and Motor Skill Proficiency

Reaction Time and

Agility

Strength vs. Endurance: Identifying Physical Strengths

Decision-Making and Cognitive Processing Speed

Interest and Motivation: What Sports Do They Gravitate Towards?



Genetic Factors: What Traits May Be Inherited?



Fast-Twitch vs. Slow-Twitch Muscle Fibers: Speed or Stamina?

Height, Limb Length, and Body Composition Considerations

Hand-Eye Coordination and Reflex Speed

The Role of Parental Athletic History

Psychological Traits and Sports Suitability

Children's personalities and psychological traits play a significant role in determining which sports they may excel at and enjoy.

Competitiveness and Drive: Some children thrive in high-pressure environments and are naturally competitive. These children may enjoy individual sports like tennis, gymnastics, or sprinting, where personal achievements are measurable. Others may prefer team sports where competition is shared and social interaction is a key motivator.

Resilience and Handling Pressure: Sports involve setbacks, from losing games to personal performance slumps. Resilient children might gravitate toward sports with continuous competition, like martial arts or soccer, while those who struggle with pressure may benefit from more structured, lower-pressure environments like swimming or track and field.

Focus and Concentration Levels: Sports requiring sustained attention, such as archery or golf, are well-suited for children with strong concentration skills. In contrast, fast-paced, dynamic sports like basketball or hockey may be better for children who thrive on constant engagement.

Risk-Taking vs. Cautious Play Styles: Some children love high-risk, high-reward scenarios, making extreme sports (e.g., skateboarding, BMX, or freestyle skiing) a good fit. Others prefer structured and predictable challenges, such as rowing or cross-country running.

Adapting Sports Choices for Different Learning Styles

Every child has a preferred learning style, which can influence how they approach sports training and performance.

Visual Learners: These children learn best by seeing demonstrations and following patterns. Sports like gymnastics, figure skating, and martial arts rely heavily on imitating movements, making them well-suited for visual learners.

Kinaesthetic Learners: Children who learn by doing and moving may thrive in physically engaging, high-action sports such as soccer, basketball, and dance, where repetition and body movement play a key role in skill acquisition.

Auditory Learners: Some children respond best to verbal instructions and coaching cues. Sports that require strategic communication, such as baseball, football, or rowing, might be ideal. These children benefit from detailed discussions and analysis of their performance.



Avoiding Common Mistakes in Sport Selection

- Pushing a Child into a Sport Based on Parental Preference
- Overlooking a Child's Personal Interests
- Focusing Too Much on Short-Term Success Over Long-Term Enjoyment



Chapter FIVE:

When to Introduce Children to Organised Competitive Sports

Determining the right age for a child to start organised competitive sports is influenced by various factors, including maturity, gender, and genetics. While many sports programs may start as early as age 6, most experts suggest that ages 8 to 13 are generally more suitable. At this range, children are often better prepared both mentally and physically to handle the stresses and potential injuries associated with competitive play.

Team sports offer numerous benefits for children, fostering physical and mental growth and teaching vital life skills. However, the decision to introduce your child to competitive sports is often guided by their own enthusiasm and eagerness to engage in fun activities with their peers.

Developmental Considerations

Every child is unique, developing at their own pace influenced by upbringing, environment, and genetics. It's essential for a child to feel "ready" before embarking on competitive sports. Typically, children will show interest in participating, though they may struggle to assess their own readiness fully.

Below is an overview of child development at two critical stages of sports engagement.

Early Childhood (3-6 years)

This period, often referred to as the preschool years, is characterised by rapid growth and exploration. Children aged three to six are continually developing physically, cognitively, emotionally, and socially.

During early childhood, kids refine their gross motor skills—running, jumping, and climbing—while also improving fine motor skills, such as holding a pencil or using scissors. The American Academy of Pediatrics (AAP) recommends that children in this age group engage in at least one hour of physical activity each day for optimal health. Cognitively, children move quickly through this stage. According to Piaget's theory, they enter the preoperational phase, where they begin to use symbols and language more effectively, though they may still find logical reasoning challenging. Concepts like conservation of volume or number can be difficult for them to grasp.

Emotionally, children start to identify and express their feelings, developing empathy and forming friendships based on shared interests. They learn essential social skills through interactions with peers in settings such as schools or daycare, allowing them to develop confidence in sharing, taking turns, and resolving conflicts peacefully.

Middle Childhood (Ages 7-11)

The period of middle childhood serves as a pivotal bridge between early childhood and adolescence. During these years, children aged seven to eleven undergo remarkable cognitive developments and broaden their social networks.

As brain maturation occurs and children engage more fully in formal education, their cognitive skills become increasingly refined. According to Piaget, this stage is characterised by concrete operational thinking, meaning children can grasp logical principles consistently, although abstract concepts may still pose challenges until they mature further.

Academic success takes on greater significance during this time as children develop reading fluency and mathematical problem-solving skills while delving into subjects like science and history.

Social dynamics also grow more intricate as children begin to form friendships rooted in shared interests, values, and activities. Peer influence emerges as a powerful factor during this stage, shaping behaviors and attitudes across various life domains. Meanwhile, self-esteem fluctuates as children measure their abilities in academics, sports, and social settings against those of their peers. Supportive feedback from parents and teachers is vital for cultivating healthy self-esteem.

The Cognitive Benefits of Competition

Children are naturally energetic and possess an incredible ability to learn new skills. As a parent, channelling your child's enthusiasm into a constructive outlet, such as a sports program, can be immensely beneficial. This approach blends learning, physical activity, and, most importantly, enjoyment!

While engaging in sports encourages regular exercise, healthy eating habits, and coordination, competitive sports introduce a range of valuable life skills that can serve your child well throughout their lives. These skills include:

- Self-confidence
- Teamwork
- Camaraderie
- Discipline
- Goal achievement

For many children, sports provide their first encounter with failure, instilling the importance of perseverance and practice. These skills are essential as they transition into adulthood, and nurturing them early on offers vital insights into their world.

Some Additional Considerations

Participating in sports as a child offers significant advantages for future success.

Consequently, there's a growing belief that every child should experience at least one sport in their lifetime. In fact, recent educational policies in China reflect this belief, as they are now requiring all children to learn at least two sports due to the immense cognitive and health benefits associated with them.

That said, enrolling your child in a sports program entails both family and financial commitments. It's essential to carefully weigh all aspects, including potential drawbacks, when selecting a sport for your child. Here are some key factors to consider:

- **Financial Cost:**

The sport your child chooses, alongside the number of children you have, can result in considerable expenses, including equipment, travel, and training fees.

- **Time Commitment:**

Transporting your child to and from practice, volunteering, and attending games can significantly impact your daily schedule, as well as your child's routines. Competing often requires extensive travel, needing careful coordination with other responsibilities, including work, holidays, and your child's homework and social time.

- **Stress Levels:**

Competitive sports can be demanding and, at times, stressful. It's vital for children to have opportunities for unstructured play and adequate rest. This reinforces the importance of allowing your child to choose a sport they genuinely enjoy. While competition has its merits, prioritizing your child's overall well-being and happiness is equally crucial.



Chapter 6: Summary and Final Thoughts

Recap of Key Insights

Throughout this book, we have explored the intricate relationship between physical activity, cognitive development, executive functions, and motor skills in children. From the foundational understanding of motor skill acquisition to the profound cognitive benefits of strategic and dynamic sports, each chapter has highlighted the critical role that physical movement plays in shaping a child's intelligence, adaptability, and social competence.

We examined the distinctions between fine and gross motor skills, recognising how both contribute to a child's ability to interact effectively with their environment. We also delved into the types of sports that best enhance cognitive growth, particularly those that



require strategic thinking, rapid decision-making, and adaptability. By understanding these relationships, parents, educators, and coaches can make more informed decisions about how to guide children towards activities that will not only benefit their physical health but also strengthen their mental acuity.

The Bigger Picture

The implications of this research extend beyond childhood. The motor-cognitive connection plays a vital role in lifelong learning, problem-solving, and resilience. In a world that increasingly demands creative thinking, flexibility, and collaboration, engaging children in the right forms of physical activity can be a catalyst for developing these essential life skills.

Moreover, fostering a physically active lifestyle from an early age can have long-term benefits, reducing the risk of cognitive decline in later years. The habits and neural pathways established in childhood set the foundation for a lifetime of intellectual and physical engagement.

Moving Forward: Practical Takeaways

To maximise the cognitive and developmental benefits of sports and motor activities, consider the following takeaways:

Encourage Diverse Movement Experiences: Expose children to a variety of activities that challenge both fine and gross motor skills. From creative play to structured sports, diversity in movement fosters a well-rounded cognitive toolkit.

Prioritise Sports That Demand Strategy: Open-skilled sports that require quick thinking, adaptability, and teamwork offer significant cognitive advantages over repetitive, closed-skill activities.

Balance Physical and Cognitive Training: Motor skill development should go hand in hand with activities that stimulate executive functions, such as problem-solving games, decision-making drills, and dynamic group activities.

Recognise the Social and Emotional Benefits: Beyond cognitive and physical growth, sports play a crucial role in developing emotional intelligence, teamwork, leadership, and resilience.

Final Thoughts

As we conclude, it is clear that physical activity is far more than just a means to maintain fitness—it is a powerful tool for cognitive enhancement, emotional growth, and lifelong learning. By making informed choices about the types of activities children engage in, we can help them develop into remarkable individuals equipped with the skills needed to navigate an ever-changing world.

The journey towards cognitive and physical excellence is a dynamic process, and there is no one-size-fits-all approach. However, by applying the insights from this book, parents, educators, and coaches can play a pivotal role in shaping a child's future, ensuring they reach their full potential both on and off the field.

Chapter 7: Real-Life Examples

The world is full of examples of how sport has changed the lives of many people. In fact there are so many examples that it necessitates putting them into certain categories.

The information provided is mainly in the form of internet links to valuable information resources provided by reputable Sporting organizations.

Category 1

Sport delivers individuals and families from Poverty.

5 Athletes Who Rose From Poverty

(<https://borgenproject.org/5-athletes-who-rose-from-poverty/>)



Cristiano Ronaldo: Hailed as one of the greatest soccer players of all time, Ronaldo did not have an easy upbringing. [Ronaldo was born in a poor neighborhood](#) in Fungal, Portugal, in 1985. His father was an equipment manager at a local soccer club, while his mother was a cook and a housekeeper. Ronaldo did not grow up with much but grew fond of soccer because of his father's profession. After being recruited by a local boys' soccer club, Ronaldo left his family to go to Lisbon at the age of 12. Despite being frequently ostracised due to his thick accent, [Ronaldo kept surging forward](#). At age 16, Manchester United signed Ronaldo to a more than \$14 million contract. This was the largest ever given to a player his age. Ronaldo went on to win a plethora

of awards and accolades for his feats in soccer.



Jose Aldo, [a renowned UFC fighter](#), Aldo is another athlete that vanquished the detrimental effects of poverty. Aldo was born into a poor household in the city of Manaus in Brazil. Aldo's father was a bricklayer while his mother was a housewife. Love tied the family of six together, but that took a turn when his mother and father split

when Aldo was young. Aldo stayed with his father. Frequent street fights prompted

Aldo to learn capoeira. Despite being talented, capoeira classes were draining his finances, so he moved on to pursue jiu-jitsu with his mentor, Marcio Pontes. [At age 17, Aldo went to Rio de Janeiro](#) without a dime to his name. There were days when he had little to no food, but this did not disrupt his resolve. Aldo currently holds the most wins in UFC and WEC featherweight history. He is a two-time UFC Featherweight Champion and one-time WEC Featherweight Champion.

Kassim Ouma: [A former professional boxer](#), Kassim Ouma has, perhaps, the most appalling story out of these five athletes who rose from poverty. Born into extreme poverty in Uganda in 1978, Ouma's life was already very difficult. At the age of five, he was



kidnapped from his family and forced to join the National Resistance Army. Ouma was trained to do horrific things that no child should have to bear. Ouma did not see his family for three years. In 1998, Ouma was considered to have deserted the Ugandan army because of his venture to the U.S. to compete in a boxing tournament. Ouma pursued boxing to make money and ensure that his family never has to share his experiences. Ouma went on to [win the IBF world junior middleweight title](#) in 2004. He serves as an activist for global issues surrounding poverty despite being unable to physically return to Uganda. Furthermore, in 2006, Ouma started a charity called Natabonic Incorporated to help the needy in Uganda.



Yasiel Puig: Surrounded by poverty and suboptimal living conditions, Yasiel Puig had longed to go to the United States and play baseball from an early age. Puig was born in Cienfuegos, Cuba. Puig played baseball for Cuba, but he only earned \$17 per month due to the impoverished conditions as a product of the Castro dictatorship. As a result, Puig became desperate to go to the U.S. and play baseball there. In June 2012, he was successfully [smuggled to Mexico](#) by an illicit group with ties to the drug cartel, Los Zetas. Through negotiations with the president of two Miami companies, Raul Pacheco, Puig was released and went on to play for the Dodgers.

Bibiano Fernandes: The last of these five athletes who rose from poverty is Bibiano Fernandes. His resilience can be attributed to his early life struggles. Like Jose Aldo,



Fernandes was born in Manaus, Brazil. His mother died when Fernandes was seven years old and his father left his five kids because he could not provide for them. After scavenging and begging on the streets, Fernandes went hunting for food in [the Amazon forest](#). He and his siblings stayed there for several years. Fernandes returned to the city after contracting an illness that nearly killed him. He discovered jiu-jitsu while washing car windows at a streetlight near a dojo. After some assistance from a friend, Fernandes was able to partake in lessons at the

dojo and soon became a top student.

Category 2

When sport helps to develop cognitive skills that drove success in Big Business

Money Inc lists 50 of the most successful sportsmen Entrepreneurs of All-Time
(<https://moneyinc.com/most-successful-athlete-entrepreneurs-of-all-time/>)

10 Renowned Athletes and Their Famous Business Ventures:

30 Legendary Athletes Who Became Business All-Stars

50 Famous Athletes Who Became Business Tycoons - Stacker

Category 3

When sportsmen and women used their sport to overcome disabilities

[8 Athletes who used sport to overcome disabilities and became famous.](#)

[42 Famous Athletes with Disabilities - Sports Aspire](#)

18 Famous Athletes Who Are Disabled

5 Inspiring Athletes Who Overcame ...

Appendix 1: Practical Guidance for Parents

The information provided in this section was provided by the Australian Sports Commission through the Australian Institute of Sport (AIS) website.
https://www.sportaus.gov.au/athlete_development/

It provides 10 evidence-based recommendations on how to best facilitate a child's sporting development.

Author's Note: We highly recommend parents view and make use of this world-class resource of evidence-based advice and expertise.

When considering these recommendations, it is important to match your expectations with a child's developmental status and their motivation for participating in sport. Children often play sports for fun and social reasons, competitive and performance-orientated reasons or a combination of all these factors.

Nurturing a love of playing sports at any level has many benefits. Remember, this is just the start of their lifelong journey enjoying sports.

For a positive, fun and nurturing experience of sport, individuals must remain positive, regardless of the result, and stay realistic in their shared expectations to avoid putting pressure on the child. You can greatly assist a child's development by providing a strong and positive role model and upholding integrity and respect.

Nurture a full range of movement skills, including kicking or hitting a ball, running, jumping, climbing, balancing and basic aquatic skills.

Deliberate play promotes movement problem-solving, creativity, diversification, variability and adaptability of skills, self-challenge and mastery

Family and friends are instrumental to sporting skill development and, later, sporting expertise.

Children should participate in modified versions of a sport that are appropriate to their age, size and skill level.

Encourage children to try a few sports. This will help the development of a full range of sporting skills, coordination and control.

The quality and type of practice is more important than simply how much you do it and make sure it's challenging and fun.

Children learn many behavior responses, such as reaction to failure or how to respond to a coach or referee from their parents, siblings, peers and sporting idols

After the game, ask the child: 'What felt good today?' or 'What do you think you could improve on for next time?'

Get a healthy, sport-life balance. Get an understanding of the role that good nutrition, hydration, rest and recovery, plays in the child's sporting life.

Find a sporting club that provides products and services including quality coaching, that focus on fun and participation regardless of skill level and ability.



Appendix 2 : Recommended articles and Further Reading

[Australian Institute of Sport \(AIS\) website.](#)

[Physical activity, brain, and cognition – ScienceDirect](#)

[Motor skills and cognitive benefits in children and adolescents: Relationship, mechanism and perspectives](#)

[Exercise and the Brain: The Neuroscience of Fitness Explored](#)

[Effects of Physical Exercise on Brain and Cognitive Functioning](#)

[Physical Activity, Fitness, Cognitive Function, and Academic Achievement in Children: A Systematic Review](#)

[Why Are Sports Important for Children's Development? - Physio Inq](#)

[Effects of the FITKids randomized controlled trial on executive control and brain function](#)

[The cognitive benefits of exercise in youth](#)

[Exercise, sports, and performance arts benefit cognition via a common process.](#)

[Benefits of After-School Sports: A Global Analysis of Pediatric Physical Health and Cognitive Function](#)

[Deliberate play and preparation jointly benefit motor and cognitive development: mediated and moderated effects](#)

[Cognitively challenging physical activity benefits executive function in overweight children](#)

[Enhancing children's cognition with physical activity games](#)

[Effects of physical activity on motor skills and cognitive development in early childhood: a systematic review](#)

[Motor skills and their foundational role for perceptual, social, and cognitive development](#)

[Fundamental movement skills in children and adolescents: review of associated health benefits](#)