



COMPETITIVE RIDER JOURNEY

TRACK RACING

The **AusCycling Competitive Rider Journey*** is a holistic approach to the rider development pathway from entry to elite levels, through to life-long participation. This document provides specific information for the **Track Racing** disciplines with a more detailed explanation of the various stages of development and key principles. It should be used to help develop and align coaching programs and skill development to the appropriate level for riders.

Track Racing is both a sprint and endurance discipline which takes place on short, banked tracks with riders either racing individually or in tight bunches depending on the event. International indoor tracks are usually 250m in length and made of wood. Corners are banked at up to 45 degrees. Outdoor tracks can be made of a hard surface such as tarmac or concrete or occasionally a soft surface like grass. The length and angle of the banking can vary considerably but outdoor tracks are usually longer and have less steep banking. Track races are broadly split into short events (Sprint) and longer events (Endurance).

The main **Track Sprint** events include:

- The **Sprint** or match sprint is a track cycling event involving between two and four riders, though it is usually run as a one-on-one match race between opponents that start next to each other. Depending on the size of the velodrome, this event can be from 250 m to 1000 m.
- The **Team Sprint** is a three-rider team time trial held over three laps of a velodrome. Two teams race against each other, starting on opposite sides of the track. At the end of the first lap, the leading rider in each team pulls up the banking leaving the second rider to lead for the next lap; at the end of the second lap, the second rider does the same, leaving the third rider to complete the last lap on his own. The team with the faster time is the winner.
- The **Keirin** is a form of motor-paced cycle racing in which track cyclists sprint for victory following a speed-controlled start behind a motorized or non-motorized pacer. It was developed in Japan around 1948 for gambling purposes and became an official event at the 2000 Olympics in Sydney, Australia. Competition keirin races are conducted over several rounds with one final. Some eliminated cyclists can try again in the repechages.
- In the track **Time Trial**, a track cycling event, cyclists compete individually against the clock to record the fastest time over the specified distance from a standing start. Distance is usually 500 to 1000 metres.

The main **Track Endurance** events include:

- The **Individual Pursuit** is a track cycling event where two cyclists begin the race from a stationary position on opposite sides of the track. It is held at over a distance of between 2-4 kilometers (depending on the category). The riders start at the same time and set off to complete the race distance in the fastest time. They ride on the pursuit line at the bottom of the track to find the fastest line, with each rider trying to catch the other who started on the other side. If the catch is achieved, the successful pursuer is the winner. However, they can continue the rest of the race distance to set the fastest time in a qualifying race or a record in a final.
- The **Team Pursuit** is a track cycling event similar to the individual pursuit, except that two teams, each of up to four riders, compete, starting on opposite sides of the velodrome.
- The **Points Race** is a mass start track cycling event involving large numbers of riders simultaneously on track. The races are run over 40 km for men and 25 km for women in UCI championships. A sprint is held every ten laps, with 5, 3, 2, and 1 point(s) being awarded to the top four finishers in each sprint. The winner of the race is the one to have the most points at the end of the race. In addition to the sprints, any riders managing to lap the main field are awarded an extra 20 points.
- The **Madison** is a points race for teams of 2 riders, where 1 rider shall be racing and the partner on relief. The riders in a team take turns in being the racing or relief rider, and do this by performing a relay where they must make contact with each other, normally with a hand sling. Placings are determined by the points accrued during the intermediate sprints and by gaining or losing a lap.
- The **Scratch Race** is a track cycling race in which all riders start together and the objective is simply to be first over the finish line after a certain number of laps.
- The **Omnium** is a single competition usually consisting of four events run with a maximum number of riders set by the track limit. For Championship events the races are Scratch, Tempo, Elimination and Points.

*The term 'Journey' has been used instead of the traditional term 'Pathway' in order highlight that individual development is usually non linear and not always the same between riders.

AUSCYCLING COMPETITIVE TRACK RIDER DEVELOPMENT PATHWAY

Progressions	Foundation		Extension and Refinement		Sport Specific Commitment			Elite and Mastery		
Age	5-12 years old	8-14 years old	12-16 years old	14-17 years old	15-19 years old	17-21 years old	17-23 years old	22 plus years old		
Years in Cycling	0 - 2 years from entry to the sport		2 - 4 years from entry to the sport		4 plus years from entry to the sport			4 - 6 years from entry to the sport		
Primary Focus	Learning and acquiring the basic foundations of cycling through off the bike movement skills, cycling skills instruction, and free play on bikes.	Introduction to the various cycling disciplines through developmentally appropriate club and school programs. Sampling competition in modified forms with a high emphasis on recreation.	Regular skills instruction, practice and competition through developmentally appropriate club, school and AusCycling endorsed programs. Continued recreational participation.	Continued sport specific commitment. Performance potential identified through competent skills demonstration.	Continued potential identification through skills demonstration, race results and participation at development and performance camps and academies	Performance potential verified through athlete profiling, physiological testing and race results.	Commitment to pre elite preparation and holistic athlete development through a structured training plan.	Transition to Elite international competition through individual programs, ACT.	Podium success at international benchmark events (Olympics, Commonwealth Games, World Championships, Nations Cups).	Sustained international success over multiple high performance cycles (Olympics, Commonwealth Games, World Championships).
Primary Environment or Domestic Training Environment	<ul style="list-style-type: none"> Clubs Schools Community Groups Participation Events 		<ul style="list-style-type: none"> Clubs Schools Participation Events Private Coaching and Skills Instruction Regional & State / Territory Academies 		<ul style="list-style-type: none"> Clubs Schools Private Coaching and Skills Instruction Regional & State / Territory Academies State and Territory Institutes Regional & National Development and Performance Camps Event Support 			<ul style="list-style-type: none"> Clubs (including mentoring and coaching) Regional & State / Territory Teams / Institute Academies Regional & National Performance Camps National Teams Event Support 		
Coach / Instructor Level	Community or Foundation Instructor		Foundation or Development Coach		Development or Advanced Coach			Advanced or Elite Coach		
Training Structure	None		<ul style="list-style-type: none"> Learning to train. 1 – 2 programmed sessions per week. Limited session structure / phase 		<ul style="list-style-type: none"> Transition to phased planning. Introduction to Strength & Conditioning. 	<ul style="list-style-type: none"> Full phase planning and session structure year round. 		<ul style="list-style-type: none"> Full phase planning and session structure. World class coaching, testing and sports science support. 		
Competition / Racing	<ul style="list-style-type: none"> Club training environment Club & state events. 	<ul style="list-style-type: none"> Club, State and National events (U15). 	<ul style="list-style-type: none"> Continued club level racing. Build competency at state level events. Participation at National events. 	<ul style="list-style-type: none"> Continued club level racing. State and National Events. 	<ul style="list-style-type: none"> Club, State and National Events. U19 introduction to International camps and events. 	<ul style="list-style-type: none"> Club, State and National events. International camps and events. 	<ul style="list-style-type: none"> Continued participation at international events. 	<ul style="list-style-type: none"> National and international racing blocks. Nations Cups World Championships Commonwealth Games Olympic Games 		
Cross Discipline Focus	Encourage and facilitate participation on any bike.	Encourage and facilitate participation on any bike. Actively encourage and facilitate riders experiencing other disciplines.	Continue to facilitate multiple disciplines.		Discipline crossover may narrow to 60-70% Primary discipline focus may shift to endurance or sprint specific.			Sprint - focussed on primary discipline. Endurance - focus 80%-20%.		
Multi-Sport Focus	Cycling is included in a broad range of physical activities and free play. Formalised cycling is not necessarily facilitated year-round.		Cycling continues to be combined with other sports.		Cycling becomes primary focus.			Cycling Only.		
Education and Knowledge			<ul style="list-style-type: none"> Training fundamentals. Basic hygiene, hydration, and nutrition. 	<ul style="list-style-type: none"> Introduction to domestic travel. Process goal setting. 	<ul style="list-style-type: none"> Introduction to International travel. Basic sleep management and recovery techniques. Advanced hydration and nutrition. 		<ul style="list-style-type: none"> Highly refined international travel, hygiene, jet lag, heat and altitude adaption processes and techniques. Advanced recovery techniques and performance nutrition. 			
Categorisation Level						Emerging	Developing	Podium Potential	Podium Ready	Sustained Success

Age:

Refers to the approximate age of children entering the sport. This will vary with a range of factors particularly physical maturation.

Competition:

Age and developmentally appropriate competition is critical at each stage of the pathway. Recommended competition levels are aligned to each stage of development and progress from grassroots club and school events through to world championship, Commonwealth and Olympic Games. More information on running age and development appropriate racing for all disciplines can be found in the [AusCycling Junior Policy](#).

Multi-Discipline Focus:

An emphasis on experiencing all cycling disciplines is strongly encouraged at the early stages of development and a multi-discipline approach continues through to elite level. There is strong evidence that competing in multiple disciplines increases the chance of success at benchmark events. There is a strong physiological correlation in the disciplines grouped together in the Endurance and Acceleration sub pathways, and there is particularly high skill and physiological correlation in combining the following, however any combination is encouraged especially at entry level:

- BMX Racing / Track Sprint
- MTB Endurance / CX / Road / Track Endurance
- MTB Gravity / BMX Freestyle

Environment:

Refers to the athletes' primary place of support and training delivery.

Multi-Sport Focus:

Cycling is a late specialising sport and combining cycling with other sports is strongly encouraged until later in the development journey. Transfer from other sports to cycling is possible and encouraged at any stage in the rider's journey. Complimentary sports could include Triathlon, Rowing, and Speed Skating (as examples).

Years in Cycling:

Is of particular relevance to riders entering the sport late or transitioning from other sports. Years in cycling gives an approximation of the time required to progress to each stage in the development pathway. Although the diagram is linear, your actual route will evolve depending on your discipline, location, priorities, education, opportunity, and injury.



TRACK CYCLING SKILLS INVENTORY AND PROGRESSION

Progressions	Foundation	Extension and Refinement	Sport Specific Commitment	Elite and Mastery		
Years in Cycling	1	2	3	4	5	6+
Starting, Stopping, Riding Lines, Managing Gaps	<ul style="list-style-type: none"> Pushing off from lower and perimeter fence. Able to stop on lower and perimeter fence. Perform a hand-held standing start. Ride a straight line – looking forward. Follow another rider's wheel (snaking and paceline). Look, Flick, Move. 	<ul style="list-style-type: none"> Perform hand held start with correct body and pedal position. Perform a flying 200. Able to control the bike on black line at speed. Able to execute a fast start from perimeter fence. Can maintain a gap during drills and racing. 	<ul style="list-style-type: none"> Perform a proficient gate start. Hold bike on black line for timed events. Demonstrate correct changeover line in team sprint. Demonstrate effective transition onto bars in pursuit. Lays off and can rush a wheel at speed. 	<ul style="list-style-type: none"> Consistently riding optimal lines in timed events. Consistently executes optimal start lap technique through transition points. Consistently displays timing in laying off and rushing a wheel. 	<ul style="list-style-type: none"> Technically proficient in gate starts. Technically proficient in holding all event racing lines. Inherent technical and timing proficiency at managing and rushing gaps. 	
Group Skills	<ul style="list-style-type: none"> Able to swap turns with other riders at bottom of the track. Confident in riding a group scratch race from perimeter fence. Can pass slower riders judging speed correctly. Able to attack from a paced group. 	<ul style="list-style-type: none"> Able to participate in skill games such as "get out of the box". Demonstrate ability to ride tight packs such as eliminations. Able to "get together" with a group. Able to drop into a gap judging speed and distance. Attacks and counter attacks solo and in pairs. 	<ul style="list-style-type: none"> Increased proficiency at skill games such as "velodrome tag" in readiness for Madison. Increased proficiency at riding elimination, from front, one out and one back, and from the rear. Dropping in and creating gaps. Increased proficiency of positioning relative to race. 	<ul style="list-style-type: none"> Consistently displays good positioning in bunch races relative to race speed and timing. Displays competency at Madison changes within a race dynamic. 	<ul style="list-style-type: none"> Has inherent responsiveness within the bunch. Possesses advanced technique in event specific skills such as the Madison. 	
Slow Riding Skill Drills	<ul style="list-style-type: none"> Weaving around cones on track straights. Infield Thunderdome – last one left in circle wins. Slow race. Gaining confidence in off track skill drills using props. 	<ul style="list-style-type: none"> Track stands in infield, pit, apron or straight. Shoulder – elbow rubbing in pairs (infield). Basic Madison exchange at walking pace in infield. Increased technical difficulty in weaving drills. 	<ul style="list-style-type: none"> Capable of holding track stand at start line for longest lap race. Capable of rolling group track stand on whistle. Able to ride slow at perimeter fence. 	<ul style="list-style-type: none"> Able to track stand at difficult angles on the track. Able to pin and be pinned at the perimeter fence at slow speed. 	<ul style="list-style-type: none"> Can track stand at any part of the track. Confidently rides at the top of the perimeter fence at 25kmph. 	
Observation	<ul style="list-style-type: none"> Looking over shoulder to identify how many fingers (pairs in infield). Looking left and right in drops on track. 	<ul style="list-style-type: none"> Increased duration for looking over -under both sides on track solo and in small groups. 	<ul style="list-style-type: none"> Able to consistently look over – under and maintain a straight line. 	<ul style="list-style-type: none"> Can ride multiple laps while looking over – under and maintaining straight line. Demonstrates ability to observe tactical bunch race movement. 	<ul style="list-style-type: none"> Advanced observation skills relative to race positioning. 	
Pacing and Transitions	<ul style="list-style-type: none"> Practising timed events 1,2 and 4 laps and understanding how much energy is used in each. 	<ul style="list-style-type: none"> Developing understanding of pacing strategy in timed events and controlled group breakaways. 	<ul style="list-style-type: none"> Developing understanding of speed reserve. Pursuit splits become more consistent. Inherent feel for pacing strategy during takebacks. Developing Team Pursuit skills including length of turns and transition swings. 	<ul style="list-style-type: none"> Effective pacing strategy and gear selection for maximal power distribution. Demonstrates competency at optimising recovery in Team Pursuit swings. 	<ul style="list-style-type: none"> Technically proficient at transition swings and strategy. Consistently executes optimal line and event velocity. 	
Acceleration	<ul style="list-style-type: none"> Learns to accelerate out of and in the saddle. 	<ul style="list-style-type: none"> Can perform slow rolling accelerations. Develops longer out of saddle acceleration ½ lap. 	<ul style="list-style-type: none"> Maintains form while accelerating from high on the track and from higher speeds. 	<ul style="list-style-type: none"> Accelerating out of the saddle for an optimal defined path. 	<ul style="list-style-type: none"> Can accelerate out of the saddle at speed while diving down the bank. 	

LET'S RIDE TOGETHER

