

WHITEHORSE CYCLISTS Inc

List of Cycling Hazards and mitigations to reduce risks

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From our experience we have identified **five common risks** of recreational cycling, discounting minor and harmless things such as delays and getting wet:

- Falling off the bike
- You collide with something
- Something collides with you
- The onset of a personal medical condition, such as dehydration or sunburn
- Injurious to the body politic: damage to the public's feeling about cyclists.

No attempt has been made to assess or compare the severity of these risks, since all of them are reasonably possible, and in practice, severe injuries have arisen from the most mundane mishaps, and conversely some dangerous-sounding high-risk mishaps have had no consequence at all.

The **Mitigations** suggested here are actions that will minimise the chance of a risk occurring when a hazard is encountered, and reduce injuries and other bad consequences.

1. Route Planning and Ride Preparation

Hazard	Mitigation
Intersections	The cycling route should be planned to avoid major intersections, and to make use of pedestrian crossings where possible.
Footpaths	The route should avoid the use of footpaths where possible
Weather	In hot, cold or rainy weather, the ride should have provision for modification, shortening, or abandonment, to avoid rider fatigue and ensure rider safety
General	The route should not require manoeuvres that are not normal road-user practices. Risk information (this document) is presented to new members Leader considers rider safety and dangerous road junctions when planning rides Leader provides a hazard briefing specific to the ride route at start Riders must wear correctly-fitted helmet (a legal and Club requirement) Riders should wear gloves, good closed-toe shoes, eye protection, and high visibility clothing The bikes should have front/rear lights, and a bell Safety information is placed periodically on the website and in the Newsletter

2. General behaviour when riding

Hazard	Mitigation
General addressing of hazards	Riders maintain awareness of surroundings at all times. Leader stations riders to indicate hazards en-route. Riders communicate hazards to each other en-route. Think of other people!
Riding style	Maintain spacing between riders! This allows more time and space to react if the bike in front encounters a problem. Riders must comply with ALL road and path rules, including red lights and stop signs, not riding on footpaths, and dismounting to cross pedestrian crossings. When riding amidst traffic, avoid making sudden, unpredictable, or illegal manoeuvres that would confuse motorists.
Attitude	Be polite and cheerful to other road and path users. Respect, and give way to, pedestrians. Anyone riding in a risky manner will be counselled or later reprimanded.

3. Riding on cycle paths

Hazard	Mitigation
Narrow and/or winding bike tracks	Keep left and ride in single file. Do not cross a single full line. Approach blind corners carefully. Ring the bell when approaching blind corners. Maintain spacing between riders.
Pedestrians	Call out "walker up". Ring bell and/or call "passing" to attract pedestrians' attention. Be polite, cheerful and kind. Say "good morning"
Dogs and children	Dogs and children can move suddenly and unpredictably. Slow down, and watch them carefully. Call out "dog loose" if dog is not on a lead.
Other cyclists	Keep left, be alert for oncoming riders, call out "bike up" (for oncoming riders), "bike back" or "passing" (for riders overtaking from behind).
Riding two abreast	This is permissible if there is space across the path. The rider behind such a pair must leave enough space for the outer rider of the pair to suddenly merge back in.
The ride is halted	Always pull off the track if your ride stops for any reason, or when waiting at toilet blocks, at drink stops, when regrouping etc

4. Riding in a group of cyclists

Hazard	Mitigation
Stopping or turning suddenly	Call "slowing", "stopping", "turning" etc. Minimise the need for a sudden stop or turn. Move off the track when stopping. Maintain adequate spacing between riders.
Riding too close behind another rider	Keep a safe distance from other riders, to allow reaction time and space Look well ahead for obstacles, that will cause the rider ahead of you to slow down
Wheels overlapping	Don't do this! Overlapping the rear wheel of another bicycle, especially if near a hazard, will bring down both bicycles if either one of them swerves or falls.
Conversations between riders	Refrain from making conversations in hazardous riding locations. If conversing, remain primarily aware of riding conditions
Riding two abreast	Ride two abreast only when it is clearly safe to do so, for example on a wide path or a roadway with little traffic. Ride two-abreast only when you can see that the path coming towards you is clear. Two-abreast riders must be closer than 1.5m apart. The rider behind a pair should leave a gap, to ensure that the outer rider of the pair has an escape route without suddenly slowing down the riders behind. Heed any "ride single file" directive from the Ride Leader or Whip. Return to single-file if there is a car or overtaking rider behind or if "car back" or "bike back" is called.
Lack of rearward awareness	Fit, and get into the habit of using, a rear vision mirror. Keep left; signal if moving to the right. Avoid sudden stops or turns. Call "car back" or "bike back" to alert riders of potential rearward dangers.
Overtaking another rider	Warn the rider about to be passed by calling out "passing" (even if it is not you that is going to do the overtaking). Overtake only when safe to do so. Pass on the right if possible. Specifically warn, if about to pass on the left.

5. Riding on roads

Hazard	Mitigation
Crossing a road with traffic on it (not at an intersection)	<p>Dismount, and use a pedestrian crossing if there is one. If the crossing has lights that turn against you, do not try to rush across and join those already across. The last rider already across should become a back marker for navigation.</p> <p>If there is no pedestrian crossing, line up along the road and try to cross in parallel when there is a safe gap in the traffic.</p> <p>On arriving at the other side, move forward or sideways so as to leave a space for those crossing right behind you.</p> <p>If you doubt that there will be enough space for you on the other side, do not cross.</p>
Riding in a marked bike lane	Stay within the bike lane.
Narrow, dotted, or interrupted bike lanes	<p>Ride single file and well to the left.</p> <p>Watch out for cars turning left, across your path.</p>
Riding on a road that has no bike lane marked	<p>The leader should plan the ride to avoid such roads.</p> <p>Ensure you are visible to motorists behind, keep left, ride in single file.</p> <p>At or approaching junctions, the group should spread out to occupy one entire lane.</p> <p>Give clear hand signals. Look often in rear-view mirror.</p> <p>Do not gather into a group of more than about 5-6 bikes, and leave a 50-metre gap between such groups, so that an overtaking car can fit in.</p>
Oncoming vehicle in narrow street	<p>Call “car up”. Ride in single file. Ride as far as possible to the left.</p> <p>Slow down or stop, to avoid any risk of swerving or falling off just as the vehicle passes</p>
Passing parked cars	<p>To be clear of a suddenly opened car door, pass with at least one metre spacing, if possible.</p> <p>Be especially aware of any parked car with the driver still in it. In that case, warn other riders by calling out “car door”</p>
Cars reversing from driveways	<p>Be aware of vehicles in driveways with reversing lights on, or showing any sign of an imminent departure.</p> <p>When riding on a path and/or close to the property line, ride at a speed that allows stopping in time if a vehicle or persons suddenly come out onto the path.</p> <p>Maintain spacing between riders, to allow sudden stops to be made safely.</p>
Vehicle turning left	<p>Know the law in this regard, and be aware that not all motorists know it. If a vehicle is signalling left and is moving, then it has the right of way over you. If it is not signalling, or is signalling and is not moving, then you have the right of way.</p> <p>If you have the right of way, then don't try to be kind and yield anyway, because this will lead to confusion and hamper driver education. Act in the way the left-turn law indicates.</p> <p>At a red light, move into the marked “bicycle box” at the front of the queue, if there is one.</p> <p>When stationary, check that nearby drivers have seen you.</p>
Overtaking to left of stopped/queued traffic	<p>Watch for cars coming towards you and turning right, across your path.</p> <p>Watch for cars turning left when traffic begins to move again.</p>

Right turns amid traffic	As you approach, decide whether you are going to make the turn as a vehicle (on the road), or will you do a hook turn, or will you dismount and walk with the bike as a pedestrian. Consider if an equivalent turn can be made at another location.
Vehicles crossing riders path	Wait until safe to proceed. Call "car left" or "car right" to warn other riders.
Intersections	Use pedestrian (or bicycle) crossing lights if these are provided. Take great care to assess the traffic in <u>all</u> directions before entering intersection. Warn others of vehicles they may not be aware of. Be patient. Wait for traffic to go away if possible. Do not try to follow the other bikes if there is insufficient time to cross Do not cross if there will not be enough room to land your bike on the other side. Queue at intersection in such a way as to avoid delaying rearward traffic, such as a left-turning vehicle behind right-turning cyclists. The leader should plan the ride route to avoid black spots and intersections.
Aggression by motorist	Do not retaliate. Behave nicely and reasonably at all times.
Unconventional manoeuvres	Do not confuse motorists. Avoid manoeuvres that are not normal road-user practices. Avoid making any sudden manoeuvres. Give clear hand signals. Cross legally at traffic and pedestrian lights, as would be expected by motorists.
The ride is halted	Do not halt the ride just after a junction or intersection - the stationary bikes will tail back for 20-50 metres behind you. Move off the road. Do not stop on a major road. Turn into a side road if possible, before halting.

6. Riding up and down steep hills

Hazard	Mitigation
Steep downhill slope	Look out for hazards in the riding surface ahead. Maintain spacing between bikes, noting the higher speed, to be able to see any road or surface hazards in good time, or to be able to make a sudden halt or manoeuvre without having time to look behind. Control downhill speed to allow safe manoeuvring around hazards, and to ensure you can see far enough ahead. Get off and walk, if you feel safer doing that. Be aware of difficult turns, narrow gates etc. at the bottom of the slope
Steep uphill slope	Keep to the left and allow much greater spacing between riders. Change to a lower gear WELL BEFORE the slope. Call "low gear", "stopping", etc If you stop, immediately clear the path for riders behind. Be aware of difficult turns, narrow gates etc. at the top of the slope If overtaking a slower rider, call "passing", and move back to the left after overtaking but allowing a gap. Riders may briefly ride 3-abreast during overtaking.

7. Obstructions and Surface Conditions

Hazard	Mitigation
Ridges caused by tree roots	Look ahead, and far ahead, at the path surface. Hold handlebars with both hands.
Potholes	As soon as a pothole is seen, call "pothole" and ride carefully around it, pointing to it. After seeing one pothole, be on the alert for more. Leave space between riders.
Cracks in the surface	Call "crack" and do not ride into the crack. Be on the alert for more cracks.
Tram Lines	Call "tram line" and ride across it at a right angle Maintain spacing between riders if approaching tram lines Try not to ride between tram lines if a turn is about to be made.
Slippery things	Be aware, especially on well-used roads, for shiny metallic surfaces such as drain covers and gratings (and tram lines). If possible, do not ride over the shiny surface. Tar patches and white paint can also be slippery. Take extreme care if the surface is wet. Leave space between riders to allow swerving Call and point to hazard to alert other riders.
Fixed objects at rider level (posts, railings, signs)	Leave enough spacing behind the bike ahead so that you have a clear view ahead. Warn following riders by calling out "Post" etc and/or pointing to the hazard. For a severe hazard, station yourself or someone at the location of the object. The riders behind you will thank you.
Overhead objects	Call "low branch" or "duck" and point to the overhead object. Slow down, or dismount and walk. Facial and eye injuries can be serious! Wear spectacles or eye protection Maintain space between riders for good vision of objects ahead
Debris on the path	Look ahead, and look for indications that the surface may become wet or slippery. Be aware of possibility of flood debris and mud on the riding surface, especially in underpasses, even long after rain has stopped. Slow down and leave spacing between riders, to allow sudden stopping. A loose stick can jump up and jam a front wheel (or derailleur gears) quite dangerously - therefore do not ride over it, and warn other riders by calling "stick" etc
Broken glass	Call "Glass" and ride well clear of it, pointing to it
Sand or gravel	Call "sand"/"gravel", dismount, and walk the bike. You cannot steer on loose sand.

8. Weather conditions

Hazard	Mitigation
Cold weather	The leader might shorten the ride. Wear wind breakers/jackets, leggings etc. Keep shoulders warm. Riders should monitor each other for signs of hypothermia.
Hot weather	Leader makes more drink stops, or cancels or shortens the ride. Take sufficient water bottles, fill them up at bubblers when they get low, and drink often. "If you feel thirsty, it is already too late to avoid some dehydration" Monitor each other for dehydration and exhaustion. Use sunscreen; watch out for sunburn.
Rainfall	Shorten, change or abandon the ride. Wear high visibility clothing. Use flashing lights on bikes. Allow extra spacing between riders. Allow for having less grip on the riding surface; don't do sharp turns, etc.
Wet surface, even several days after rain	Take great care on corners, white lines, wooden boards on bridges. Avoid patches of mud, gravel and leaves. Watch out for green, slimy patches.
Riding into the sun	This is very hazardous, especially towards sunset. Slow down to keep within the range of what you can actually see. Be aware that drivers' visibility is also impaired when driving toward the sun.

9. Bicycle-related problems

Hazard	Mitigation
Theft of bicycle	Lock the bike if it will be unattended. (At many of our coffee stops, there can always be someone keeping an eye on the bikes) Don't use a cheap lock on an expensive bike! If no lock is available, fasten helmet across the front wheel as if to hide a lock, and leave the bike in the highest gear.
Chain falls off the sprockets	Stop, move off the path, and ask the Whip or another rider to help put it back on (by using a stick, you can avoid your hands getting filthy)
Puncture, low pressure tyre, broken cable or other mechanical fault	Stop, and immediately move the bike off the path. Either repair the condition quickly, or arrange to leave the ride.
Stick caught in wheel/derailleur	Stop, and immediately move the bike off the path. If you feel shaken, wait a few minutes until your composure is regained.
Spare clothing or other item dangling near a rear wheel	Warn the rider urgently to stop and tuck it in.

10. Personal and medical issues

Hazard	Mitigation
Fatigue	<p>Monitor yourself, and watch for signs of fatigue in other riders, especially in hot, cold, or rainy weather. Fatigued riders make bad decisions, using poor judgement.</p> <p>Hunger can also impair focus and judgement – eat during the ride, and eat if feeling tired or distracted.</p> <p>Select rides appropriate to your riding ability.</p> <p>Leave the ride, or ask for a stop, if you feel fatigued.</p>
Existing medical conditions (poor sight, hearing, balance)	<p>Understand your limits and make allowances</p> <p>Take increased care on corners etc.</p> <p>Ride with a “buddy” throughout the ride</p>
Low strength or fitness level	<p>Select rides appropriate to your ability.</p> <p>Leave the ride, or ask for a stop, if you feel fatigued</p>
Lack of concentration	<p>Stay focussed at all times; avoid getting distracted.</p> <p>Don't distract other riders.</p> <p>Don't ride if fatigued.</p>
Impatience	<p>Wait until it is safe to pass, safe to cross, safe to turn etc.</p> <p>If traffic or pedestrian lights are no longer green, resist the urge to stream after the riders ahead. Wait for the next cycle of the lights. The ride <i>should</i> wait for you.</p> <p>Do not ride close behind the leader, or in any other way press upon the leader to ride faster; choose a harder ride next time instead.</p>
Mobile phone ringing	<p>Feel free to let the call go - it is your day off, after all.</p> <p>Otherwise call “stopping” and stop the bike before trying to reach the phone.</p> <p>The ride WILL NOT be slowed or stopped for you to answer the phone. You will have to catch up, or leave the ride.</p> <p>Do not speak on the phone, or handle it, while riding (this is illegal)</p>
New members and riders with little experience	<p>Provide new members with risk document (this document).</p> <p>Leader to allocate a buddy to ride with the new member</p>