

PACELINES

Note: these guidelines are intended for “sports” and recreational riders; not for competitive cyclists though most principles still apply.

THE IDEA

- Paceline riding (drafting) can cut air resistance by 20-30%; up to 50% under certain conditions.
- Air resistance depends on the frontal area of the rider and machine, air density, speed of the rider and the speed of any headwind.
- Velocity is squared in the equation: thus a 15 mph head wind is nine times harder than a 5 mph one!
- Also, the drafting advantage increases significantly with rider speed.
- Learning paceline techniques helps new riders feel more comfortable riding in close proximity to others and promotes better bike handling skills.
- Effective pacelines can be a safe way to share the road with motorists.

GENERAL PRINCIPLES

- Chose your paceline carefully and never draft any cyclist or join a paceline without making your presence known.
- Experienced riders' front wheel can be ~12 inches from the rear wheel of the machine in front.
- Inexperienced riders should start with gaps of around two feet or more even tho' some benefit will be felt even if riders are a bike-length apart.
- Never let your front wheel touch or overlap the rear wheel in front; you will usually lose control, probably go down and bring others down with you.
- However, don't fixate on the wheel ahead of you. Alternate your attention toward the front of the paceline, the rider in front of you and to the sides.
- The lead rider/s must warn other riders of obstacles and dangers.
- All riders must maintain a steady, even cadence.
- Never brake without advance warning unless not doing so would cause a serious accident and try not to veer suddenly to avoid obstacles.
- If going too fast, do not coast without pedaling; "soft pedal" until speed is again that of the paceline. Also try shifting up one or more gears to even out your pressure stroke.
- If going too fast down hill, it's sometimes safest to pull out of the line and sit up. If safe, signal before doing so.
- Going uphill, take care in standing out of the saddle, the bike will tend to slow down momentarily. Call-out "standing" a revolution or two before getting out of the saddle.
- When cornering, the paceline should reduce speed until all riders have completed a turn, and then pick up the pace again.
- The stronger the wind or the higher the number of riders, the shorter the pulls should be.
- 70-100 revolutions or about a minute is often quite adequate with large group.
- Never ride aero-bars when within the paceline; only when you are on the front or bridging back from the rear.
- Do not deal with bodily fluids in the paceline! Move aside or go to the back.

SINGLE PACELINES

- Two to eight riders will benefit from a single paceline.
- The lead rider should position themselves in the road so as to provide maximum benefit to those following, not too close to the edge of the road, especially with a left cross wind.
- Ride a straight line, maintain a steady speed and a smooth cadence
- The lead rider should pull off into the wind with a couple of strong pedal strokes to clear him/herself from Rider #2.
- Signal your intent to give up the front "pull" by wiggling either your hand or your elbow on the side you want the rider behind to come through on. Agree on these signals beforehand.
- The alternative of indicating direction of pull-off requires hands off the bars; not good.
- The next lead rider must not accelerate but continue at the same speed allowing the rider who has just finished at the front to catch on.

- Rider #2 should not make a unilateral decision to pull around #1; other riders will not follow and Rider #1 then becomes #2 instead of moving to the back. Better suggest that Rider #1 pulls off correctly.
- Rider/s wanting to “sit in” should move out behind the rider who had been on the front and is now dropping to the back. Do not create an unnecessary gap.

ECHELON

- If the wind is not directly from the front, the paceline can be in an echelon formation, providing road/traffic conditions permit.
- Each rider is offset on the leeward side of the rider in front, such that the paceline is strung out in the direction of the wind.
- If the wind is coming from the left front, the lead rider pulls off to the left (towards the middle of the road) and the following riders pull through on the right (the inside).
- If the wind is coming from the right front, the lead rider moves to the right and drops back on the inside of the paceline, next to the road’s edge.
- It’s sometimes acceptable to overlap front with rear wheels in an echelon formation; ensure the rider in front is aware of this.
- Be acutely aware of motor traffic from both directions, especially when pulling off to the left into traffic lanes.

DOUBLE PACELINES

- With eight or more riders, double pacelines are more effective.
- The simplest method involves the two lead riders doing the pacing, or “pulling,” at any given time.
- They pull off in opposite directions and the paceline then pulls through between them.
- A more efficient format is for the right hand line of riders to move slightly faster than the left hand group.
- As the RH leader passes the LH group, he/she moves over to the left and assumes the position as leader of the LH group. The lead rider does only a very short pull.
- As the last RH rider passes the last LH rider, the LH rider moves to the right to become the last RH rider.
- As described there is a counterclockwise circulation of riders; a clockwise rotation can be achieved by reversing the above description.

TANDEMS

- If riding with a tandem, allow them plenty of maneuvering room; they must have “right of way”.
- They need more reaction time and a greater turning circle on corners.
- Tandems don’t make the same “rhythm” as singles on hills; they generally go slower up and faster down.

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