

## Strategies for Elimination Races

Although not a championship event, the elimination race is a crowd favorite. The elimination race is also called the “Miss – and – Out” or the “Devil Take the Hindmost”. It is a game of musical chairs on bikes, where the last rider to cross the finish line is removed each lap.

The Elimination race is different from other pack-style racing in that the race is scored by the back edge of the rear wheel. This race is also different in that the field usually remains together the entire race. While other pack-style races have jumps, attacks and counter-attacks, the elimination race traditionally does not. In fact, the pack pretty much stays together the entire race with very little jockeying at the front of the field. Because of this, the position you choose within the field during the first ½ lap pretty much determines how you will finish in the event. The back of the field may be a different story, depending on your ability to jump or “move up”

At the beginning of the race the field takes on the shape of a wedge. The positions within the field have different advantages, depending on your riding style.

Riders # 1,2,3,and 12 are typically pursuited and their strategy is to ride a steady pace just fast enough to keep from being overtaken.

Riders # 4,5,8, and 11 are typically sprinters or points race riders. Their strategy is to attack over the top during each sprint.

Somewhere between the entrance and exit to turn 4 the riders that are “up-track” start moving forward within the field. Riders that are low on the track may only move a foot or so. The riders that are high on the banking have more distance to make up, and need to have a larger jump to move up.

These accelerations continue as the field heads toward the finish line. The riders low and at the front accelerating slightly, while the riders higher and at the back need more acceleration, creating a “crack the whip” effect.

For riders at the back, their only option is to find a hole by going “over the top”, or by

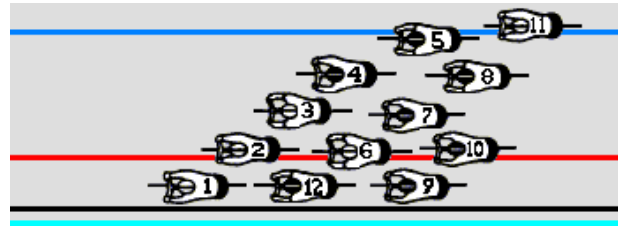


Fig. X1:

Riders # 6,7,9, and 10 usually have no strategy, or do not have the strength or confidence to move to a better position.

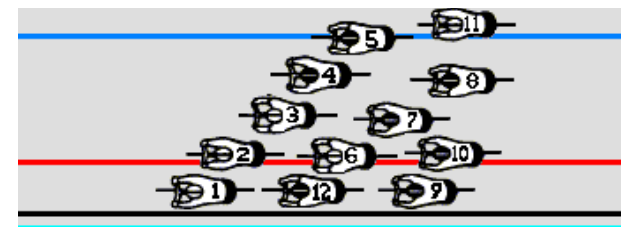


Fig. X2:

trying a “desperation move” and half-wheeling the rider in front of them.

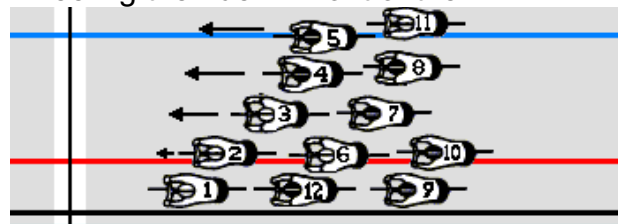


Fig. X3:

As the field crosses the finish line, the field is now 6-8 riders wide, filling the entire track from the pole line to the balustrade. There is no way to move up at this time. The last rear wheel to leave the vertical plane of the finish line determines which rider is removed from the race.

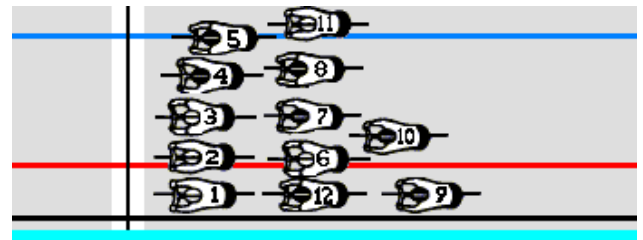


Fig. X4:

After the finish, as the field enters turn 1, the riders that are up-track slow down. The field returns to its wedge shape, and the process repeats itself.

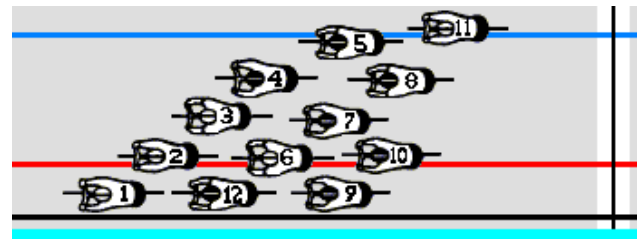


Fig. X5:

Traditionally, the only option to move up happens after the finish line, as the field enters turn 1. The riders at the top have more speed than the riders at the bottom. The riders need to push a little harder, go over the top, and then move down in front of the field. The field will move up and around you, absorbing you, but you will now be in the “front row”

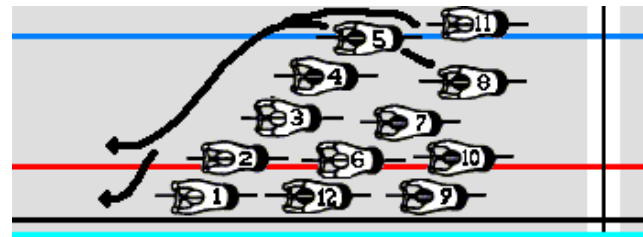


Fig. X6:

## Strategies

**The pursuiter:** Riders with a pursuit style tend to ride at the front of the field. Examples of this are positions 1, 2, 3, and 12 within the field. These riders tend to keep the pace a steady, hard tempo, just fast enough that the sprinters will sit-on, and not try to overtake the front. By using this strategy, a pursuiter can usually hold on until the top 6 or so riders. This strategy falls apart around the time that riders can come across the line in a single row, 6-7 riders wide.

**The sprinters:** Riders with a sprinters style tend to ride on the outside of the field. Examples of this are positions 3, 4, 5, and 11. These riders are always within “striking distance” to the front, and attack over the top to keep from being eliminated.

**The “devil”:** Although the back of the field is considered a bad place to be in an elimination race, sometimes a rider may choose to be there. Knowing that all one needs to do is to beat one other rider, a rider may choose to be in position 8 or 11. From this position, they only need to pass one rider, usually preying on newer, less experienced, riders that has been caught at the bottom or the back of the field. The job of “devil” is difficult, as it requires multiple sprints. Typically, you see the devil at the beginning of the race when it is easy to pick off unsuspecting riders. As the race continues, it slowly becomes more difficult. Usually the devil disappears after the first 10 laps or so.

## Training Drills for the Elimination Race

A group of 3 to 5 riders starts out by riding single file. More advanced groups can be 5-8 riders, enough to generate a wedge-shaped field.

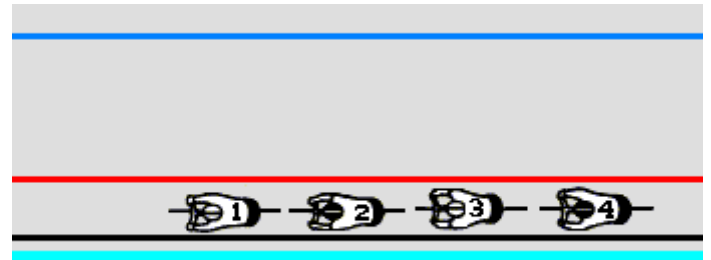


Fig. X7:

As the riders get mid-way through turn 4, the riders start to fan over the top, with riders at the back moving up, and accelerating at the same time.

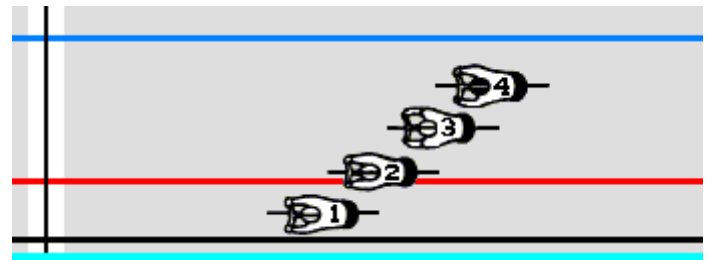


Fig. X8:

As the riders approach the finish line, they continue to accelerate -side.

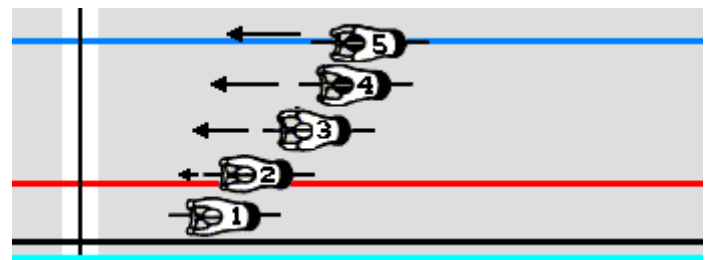


Fig. X10:

At the moment the field hits the line, the riders should have timed the finish such that all are side-by-side.

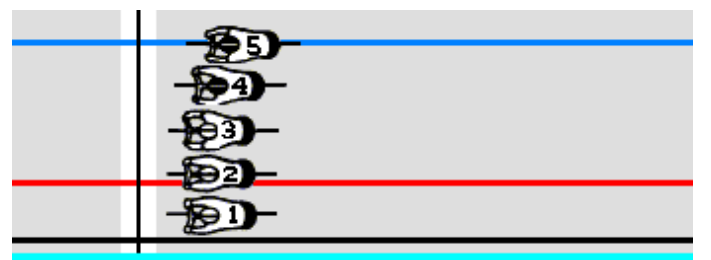
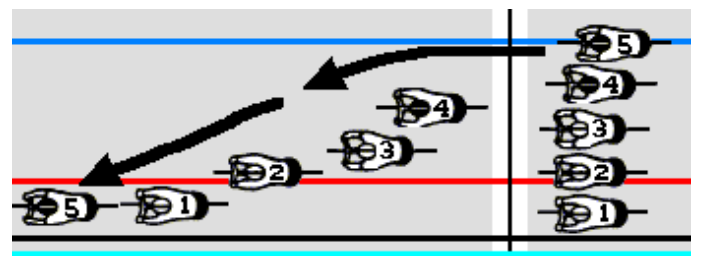


Fig. X11:

To rotate in this paceline, every other sprint lap, the rider that is high and outside, kicks a little harder, attacking over the top when the group crosses the finish line. Using this extra speed, the rider moves forward and down the banking to become the new leader of the paceline.



## Strategies for Sprint Racing

### Flying 200m Time Trial

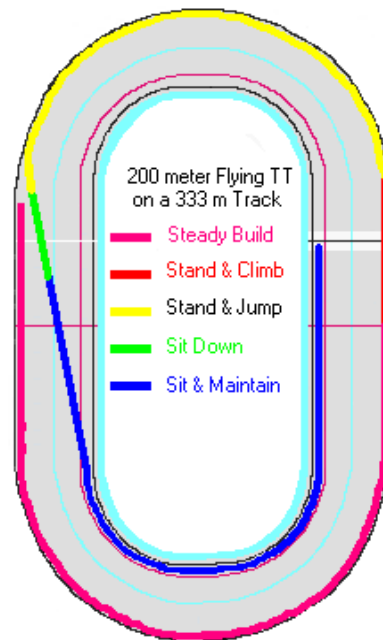
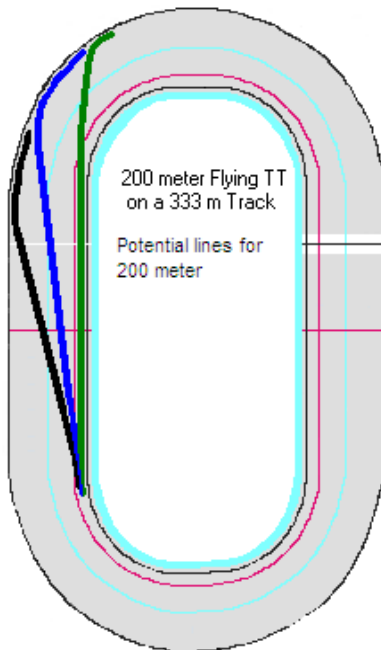
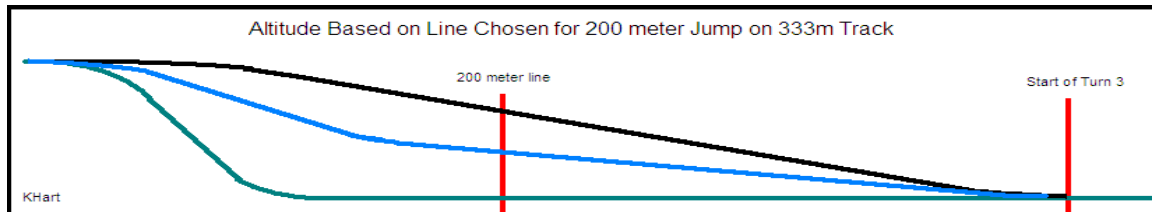
#### The Basics

To be a good match sprinter, one also needs to have a good 200-meter time trial. The flying 200-meter time trial is how most match sprint races are initially seeded. The rider that can do the fastest 200-meter time will be top seed in the sprint competition. The second fastest time will be second seed, and so on.

It is always in the rider's best interest to have the fastest time possible, as the faster you ride, the slower your competitor will be in the sprint rounds.

Items that affect your ride include:

- Size and shape of the track and banking,
- The number of laps to build up speed, and
- The location of the 200-meter line with respect to the shape and banking of the track.



#### Picking the Right Line

Every track has a unique feel to it, and the line you choose will be different on each track. The goal is to have the fastest time possible, and the line that you choose on the banking will have an effect on your time. Practice this, using the different possible lines, as well as determining where you need to be at top speed to optimize your time.

If you are a big gear sprinter, it takes more time to get up to top speed. These riders tend to get out of the saddle earlier to start their final acceleration. These riders also tend to take the higher line, diving down the banking later, using the banking as long as possible to help them accelerate the bigger gear.

Small gear sprinters usually have an easier time bringing the bike to top speed. These riders can start their sprint a bit later, and might take a slightly lower line as they have less need of the banking to help them accelerate the gear. Trial and error will eventually help you determine when you should accelerate, and which line you should take.

The ride itself will be about the same length as a sprint ride, varying in length from 2-3 laps, depending on the track.

Riders should steadily increase speed, while also climbing higher on the banking. This steady increase in speed is not a constant build, but instead, is a stair-stepped increase in speed, taking advantage of the banking to give short rests as you exit turns 2 and 4 and roll downhill through the transitions on the straights of the track.

As you speed up on the exit of the turns, use this momentum to carry you up the climb into the transition into the next turn. Each of these stair-steps should add 3-5 mph to your speed.

You should be at 'race pace' at about 100 meters before the 200-meter line. From this spot, you should be about ½ lap from the 200-meter mark and starting to enter a turn (either turns 3 and 4 on a 200m or 250m track, or turns 1 and 2 on a 333m track).

Accelerate out of the saddle, as you want to be at 100% just as, or slightly after, you cross the 200-meter mark. If you are uncomfortable out of the saddle, then you need to work on "out of the saddle" drills, as the flying 200-meter event should produce the fastest time / speed that you are capable of. Your acceleration should occur at the same time that you are diving down the banking, as this will help with your acceleration. Accelerating at the bottom of the track is a poor choice as you have no benefit of gravity to help with the acceleration.

Stand as long as you are capable, or until top speed is obtained. Ideally, you should be at top speed just at, or slightly after, crossing the 200-meter mark. From there it is a matter of trying to hold that speed, and fade as little as possible during the next 10 - 12 seconds. Your time will be faster if you start at your peak speed, then fade. Hitting top speed at 100 or 150 meters into the event will produce a slower time, since you spend less time at top speed.

If you are still accelerating after crossing the 200-meter line, then you should have either

- 1) Started your final jump earlier, or
- 2) Started your final jump from a higher speed

If your sprint fades before the finish, add time/distance to your max effort training routine, which will take some time to improve.

These basic concepts apply for flying lap events, with the final jump and acceleration coming out of turn 4 and accelerating as you dive down the banking in the home straight, reaching top speed after the finish line, and before you enter turn 1.

## 333m .vs. 250m Tracks

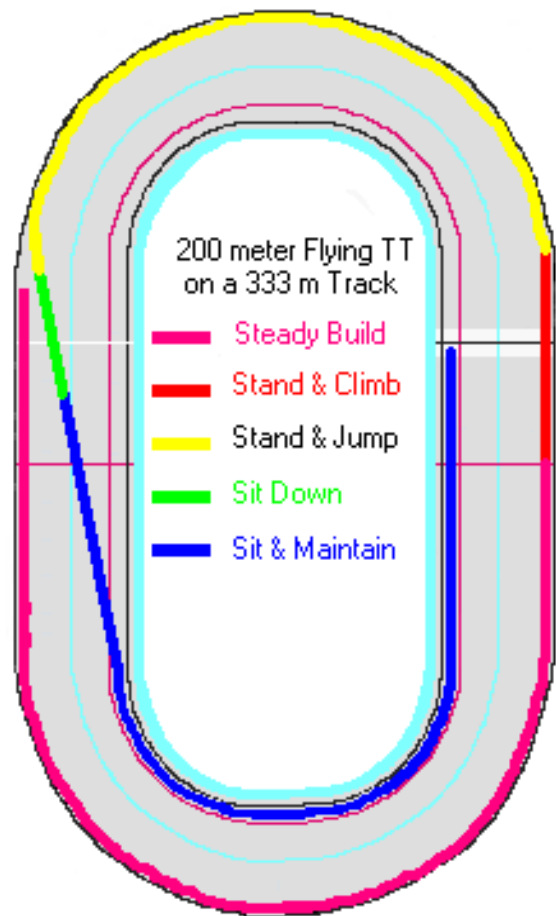
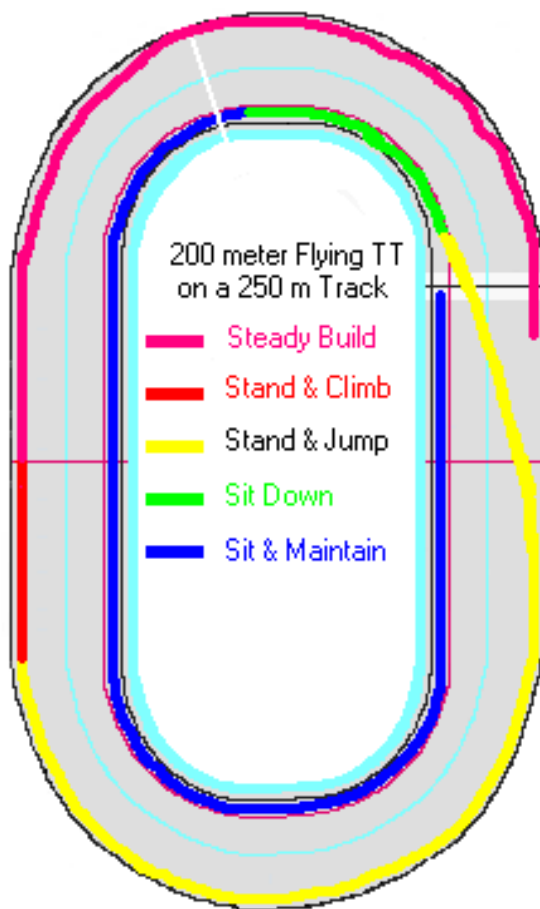
The references above give locations to accelerate based on distances before the 200 meter mark. Most riders prefer landmarks based on the track that they ride most often. These landmarks vary based on whether the track is a 333m or 250 m track.

### 333m Tracks

Your final acceleration out of the saddle should start somewhere in turn 1. Faster riders and big-gear riders will start closer to the beginning of turn 1, while slower riders and small-gear riders will start their jump closer to the end of turn 1. This acceleration is high on the banking, and occurs while riding through turns 1 and 2. Many riders have difficulty accelerating, out of the saddle while not riding a straight line. These riders may require extra distance to reach top speed.

### 250m Tracks.

The final acceleration should start as you exit turn 4. Since the 200 meter mark is near the beginning of turn 2, you can use the entire home straight to accelerate as well as dive down the banking. Sit down as you enter turn 1.



# Strategies for Sprint Racing

## Moves within Sprinting

These moves / tactics apply to other pack-style events, such as the scratch race, points race, the keirin, etc... but are described here, since the one-on-one competition of sprinting allows the tactic to be used in its simplest form, without the confusion of multiple competitors.

### ALTITUDE

Being as far up-track as possible is like getting an extra 2 miles per hour for free out of your jump. Always try to have as much altitude as possible, except in the few instances where you do NOT want the altitude. One possible scenario for not wanting altitude would be if you are leading at a brisk pace, trying to counter the jump of a competitor. If you can lead out low, with the other rider low, you can force that rider to pass "over the top", covering a longer distance.

### PLUGGING THE GAP

Since most riders ride high, if you are the lead rider, you may want to position yourself so that you are "Plugging up" the best line that your competitor might take in their jump down the banking.

### CHANGING THE NUMBER OF POTENTIAL ROUTES FOR ATTACK

The opposite of "plugging the gap" mentioned above. If you are the following rider, you will want to give yourself the maximum number of potential routes to attack. This normally means hanging back a bit from the rider in front, giving you a path to dive under the front rider, and a path to attack over the top of the front rider.

### GAP

To create a distance between the 2 riders. This can be done by the front rider, as well as the back rider. The front rider may do this to give them more time to counter an attack, or hope to jump when the rear rider is napping. The rear rider may open up a gap to create more routes of attack, or to help them build up speed before jumping.

### CHOP

When 2 riders are close to each other, typically the lead rider is below the following rider on the banking. The lead rider may make a quick movement up-track, trying to force the trailing rider to either move up-track, or back down, so that they are no longer overlapped. This quick move up-track is followed by a quick move down-track, returning to the original altitude on the banking. Sometimes this move is merely a fake, but sometimes, physical contact may happen, especially if the sprint is not yet at full speed. Another phrase for this is to "Ride-off" someone, as you are trying to ride them "off of your wheel".

### HOOK

Just as if you are leading, you can ride someone up the track with a chop, if you are ahead and above someone, you can ride your competitor down-track with a hook. This is usually done just before the race is "At speed", since once the race is at speed, different rules apply as to how much you can change your line. A hook is a quick movement down-track, followed by a movement up-track, back to your original altitude on the banking.

## RIDING OFF

Similar to a chop or hook, except that after the rider moves up (or down), they do not move back to their original position. This is commonly used as part of a “bump and go”.

## BUMP AND GO

## HIP CHECK

When done in extremely close quarters, such that the lead riders hips are near the handlebars of the following rider, this move is often called a “hip-check”. Once again, a hip check is often done before the race is “At speed” , since once the race is at speed, different rules apply as to how much you can change your line.

## RUNNING AT FRONT RIDER

The is a medium to large gap between the two riders. The rider in the rear uses the front rider as a “carrot” to build speed before the front rider builds. The build needs to be quiet and/or non-explosive so that the front rider is not tipped-off about the build in speed. This build is straight towards the lead rider (hence the phrase “running at”) , changing direction at the last possible moment so that the lead rider is unsure of the direction of the pass.

## RAZOR

To lead out from the front, using a build in speed that happens early, negating the jump of your competitors.

The trick to a razor is to have the race already at speed, at the time the jump should be happening. This forces the rear riders into having only 1 option, to exert extra energy to come around the outside. The lead rider needs to be strong, to bring the race up to speed early, as well as breaking the wind for the following riders. The lead rider also has to have some sprint in reserve to counter the attack over the top when it is attempted by the following riders.

## Tactics within Sprinting

## Unfinished Notes

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Q) Also, do you have any tips for reaction when the other person reacts, I always seem to be a slow reactor even though I can catch them usually.

A) A couple of things here.

Read the sprinting section of the book, near the back (although it is not yet done)

To describe the layout of the track, we have the following descriptions:

Home straight  
turn 1  
turn 2  
back straight  
turn 3  
turn 4



stronger riders, and endurance riders, tend to sprint long, often starting their sprint from high in the banking in turn 1, right after getting the bell.

weaker riders, and sprinters, tend to sprint short, usually waiting until turn 2 to start their sprint.

Sprints rarely start before the bell (although riders may be riding quickly and building lots of speed before the bell)

The goal of ALL the sprints is to be the first person to the finish line,

A) for most riders, there is not enough time to come around someone when exiting the final corner, into the finishing straight

B) In turns 3 and 4, the rider on the inside has a shorter line, by about 10 feet.

SO, for 90% of all races, the person that is in the lead, when you leave the back straight, and go into turn 3 will win the race.

You need to do whatever is necessary, to be the first person into turn 3.

As a novice to sprinting, the distance to do this will take longer than you think.

for the women sprinters, their 200 meter times will vary between, 12.5 and 15.5 seconds, and you and Dean will have that information available to you, to know whether the person you are sprinting against is faster or slower than you.

For the other 10% from above, they will know from the 200 meter times, that they are more than ½ second faster than their opponent, and do have the strength to come around someone in turns 3 / 4 and the final straight.

Finally,

Everything on the track happens quickly.

it is better to react immediately, and then afterwards, decide not to chase, counterattack, etc.. it is far worse to pause, think about what is going on, and then make the decision to chase. By this time, the rider has a big gap that is hard to close.

another trick, is to pay attention, and listen.

most riders nowadays use disk wheels, and many of these are loud. Listen this afternoon at the track,

you can actually hear the difference between a rider going slow, and one going fast.

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## Strategies for Sprint Racing

Now you need to know how to win from the front and how to win from the back.

Winning from the back involves drafting. Here how you use it. When the sprint is engaged, do not hesitate to let between 3 and 5 bike lengths between yourself and your opponent. Being too close to your opponent's wheel will suck you to him, but you will not enable you to accelerate and go FASTER than him. Once you have established 3 to 5 bike lengths, sprint