B SIG 2011

Riders' Guide

Notes:

This guide is the result of the efforts of all the B-SIG leaders the past several years. A special word of thanks goes to Carol Waaser, Liane Montesa, Eva Wirth, Mark Gelles and Wayne Wright —the B-SIG coordinators for 2001 through 2011.

We make this guide available to you as reference tool to help you get the most out of the B-SIG. Please note the NYCC is a volunteer organization; consequently, the information in this guide is not intended for any other use.

What is the B-SIG?

The B-SIG (Special Interest Group) is a combination of a *Progressive Training Series* and a *Cycling Skills Program.* In the B-SIG you will cycle with the same group of folks each week of the series. The B-SIG will be broken down into three "pace" categories and into subgroups within each pace category.

- **The B16 groups will progress from a 14-mph pace and a 30-mile distance in early March to a 16-mph pace and 70 miles by early May.**
- **The B17 groups will start at a 15-mph pace and 30 miles and work up to a 17-mph pace and 76 miles (with an option to do 95 or 105 miles) by early May.**
- **The B18 group will advance from a 16-mph pace and a 30-mile ride up to an 18-mph pace and 95 miles (with an option to do 105 miles) by early May.**

Please note each group is always referred to as B16, B17, and B18, even though they will go slower in the early weeks. Also note that the NYCC's pace system average speed (for a day's ride) is typically 3-mph less than the indicated pace (i.e., B17s will go 17 M.P.H. on the flats, but more than likely will average 14 M.P.H. for an entire ride).

The New York Cycle Club and the B-SIG are committed to making our group rides as safe as possible. The B-SIG will emphasize safe cycling habits. We urge you to review this informative website: http://BicycleSafe.com.

Our sport does have risks. Each B-SIG participant must "sign in" before each ride. The sign-in sheets have a waiver, which is a legal agreement between each cyclist and the NYCC. Please read and understand that by signing this waiver you have agreed to the waiver's terms.

Progressive Training Series:

- The B-SIG coordinator will initially place you in a group of your cycling peers based primarily on your time in the self-classification ride (1st week's ride on March 5th). It is imperative that members of each group have similar levels of fitness; consequently, make sure you start in a group whose level you can sustain and build on. If you find yourself in the wrong group, talk to your group's captain and leaders, who will try to make an adjustment.
- One of the B-SIG's goals will be to build speed, endurance and strength by riding harder and longer each week, generally in 10% increments.
- Mid-week workouts are highly recommended, but not required. Our recommendation is two workouts during the week (on non-consecutive days), each one hour in length. In our experience, a workout includes:
  - a 10 minute "warm up" at an easy pace (approx. 65% of your max. heart rate);
  - followed by 35 minutes at a brisk pace (breathing hard, but not panting - approx. 75% of your max. heart rate);
  - followed by 10 minutes at a little slower than brisk pace (approx.70% of your max. heart rate);
  - ending with a 5 minute "cool down" at an easy pace.
- This type of workout will be very beneficial to you. Schedule recovery days (no cardio. exercise) at least every other day, including Friday; which, given that we ride on Saturdays, is the most important day to **rest, hydrate**, **and eat** *(what a deal!).*

Cycling Skills Program:

The first seven group rides will start with a short class presentation in which your leaders will discuss the skills to focus upon practicing during the ride that day. Topics include bike handling in a group, spinning, gearing, riding in traffic, pacelining, climbing/descending, and ride leading. All the information in the cycling skills classes is documented in this guide on pages 14-26.

What the B-SIG Expects of You:

- Signing up for the B-SIG means you have made a commitment to spend 10 consecutive Saturdays cycling with us this spring. The rides are all-day affairs; you might get back early, but don't count on it. In other words, your Saturday's "are spoken for" when you join the B-SIG.
- All B-SIG participants must do the timed, 4-lap qualification ride or, in special cases, make arrangements to provide the SIG Coordinator with a time before the program starts.
- You must ride in a safe manner. Your actions or inactions affect all the cyclists in the group. Anyone who places the group in danger will not be allowed to continue. You are responsible for your own safety on the road, but don't think that riding in a group absolves you from "watching out for the other guy."
- You must show up each week **10 minutes prior** to the announced time, ready to go immediately upon arrival. Your bike (see page 10 and article on pages 29 & 30) must be in excellent working condition. Have the week's cue sheet with you. We will not hold up the entire group because you are not prepared.
- Each B-SIG participant is expected to "give something back" to the club. Our club is a volunteer organization, which is run on the efforts of our volunteers. The B-SIG is the perfect place to learn what it takes to lead a club ride. After the B-SIG is over, you will be asked to co-lead a club ride or volunteer to help out at a club event.
- Every B-SIG participant must be a dues-paying NYCC member in good standing.
- Bikes with "fixed" time trial aero bars are prohibited for safety reasons; if you have a triathlon-type bike and want to do the SIG you will need to convert your bike to standard handle bars.
- Your bike must have gears and brakes; in other words, no track bikes.
- While cycling, cell phones are not to be answered; wait until the group stops. Electronic ear-pieces and/or headphones are banned, as our ears need to be totally tuned in to road traffic and communication within the group.
- Print your first name on both the front and rear of your helmet (magic marker on masking tape will do) and wear your helmet on every ride. Helmets are mandatory (no helmet, no ride).

Attendance Policy:

- Each participant is expected to attend all the rides and all the class presentations held prior to the rides.
- Given that we understand that "stuff" comes up in one's life, if you have to miss a week, make sure your leaders are aware of this **prior** to the start of the ride that day.
- Try to "make up the ride" on your own, as your fitness will suffer if you don't. Before your make-up ride, review the class material you missed, outlined in this Riders' Guide, and practice those skills on your ride. Your ride leaders are available to answer any questions and/or concerns.
- If your fitness level and or skills level are not keeping up to the group, you may be moved to another group or another SIG (if they have space) or you may not be allowed to continue in the B-SIG.

- The bottom line is that participants will not be allowed to continue in the B-SIG if they accumulate more than two absences of the nine group rides or miss more than two classes.

What does it take to be considered a B-SIG Graduate?

- Each year the B-SIG leaders get together after the SIG and bestow the title of B-SIG graduate on those who complete the entire SIG, learning and practicing all the skills.
- In other words, if a participant abides by the attendance policy, becomes a better cyclist, and cycles with the skills taught, he or she will be recognized by their NYCC cycling peers as a B-SIG Graduate.

Safety First:

- The biggest concern on any SIG ride is the safety of its participants. We, therefore, have to insist that you abide by a few rules.
  - No earpieces or music headphones while on the ride.
  - No photo taking while on a moving bike.
  - No cell phone calls, texting, or use of any electronic mobile device while the ride is in progress. Please save your calls and other connectivity for bathroom and food breaks.

Other Information:

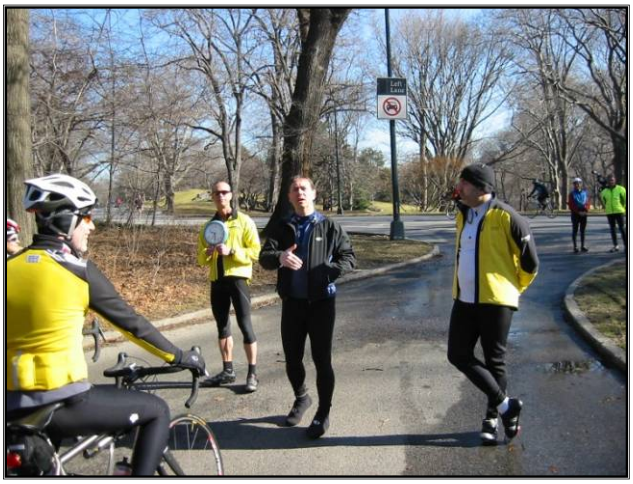
As time allows, the B-SIG leaders will try to give you tips on bike maintenance, bike fit, and other cycling skills. If you are unsure of a cycling skill or what to do in a certain cycling situation, ask your leaders to guide you, as this is what the B-SIG is all about.

How Do I Sign Up?

Look over this Guide and decide if the B-SIG is for you. If you are considering joining, please note that **when you pre-register, you are making a commitment for 10 Saturdays this spring.** The B-SIG series, unlike regular club rides, requires that you do the entire program. If you are unsure that you can budget the time for the B-SIG, do not pre-register, as you will be taking away an opportunity from someone else.

If you decide to participate, please pre-register early, on-line (nycc.org, and follow the links to the RIDES/SIGs/B-SIG page). Space **is** limited; in the past several years well over 100 folks pre-registered, forcing us to limit participation. It is our policy to give preference to folks who have not signed up for the B-SIG before. We will get back to you via email before it all starts on March 5th.

Required Group Riding Skills (how we cycle on a group ride)



1) Be Predictable by:

- Riding in a straight line
- Always pedaling (do not coast)
- Maintaining the speed of the group
- Signaling any changes
- Adjusting your speed and direction gradually
- Communicating with your fellow riders

2) Safe Group Riding:

You should "always protect your front wheel." Less-experienced cyclists frequently get nervous on a group ride. Bikes could be anywhere—in front, to the side and close behind. It's hard to know how to avoid danger. However, you're unlikely to crash unless your front wheel is hit. So visualize a halo surrounding your front wheel and protect that sacred space from intrusion.

3) Mechanicals:

When a rider has a flat or other mechanical problem, or if there's an accident, ***don't stop abruptly***. Instead, keep moving forward (calling out "mechanical" or "rider down") while stopping gradually, pulling off the road away from traffic. Assess the situation and (after checking for traffic) turn around, if necessary, to help the person with the problem.

4) Hand Signals:

- Right turn: right arm held straight out to the right.
- Left turn: left arm held straight out to the left.
- Slowing or stopping: arm held diagonally down towards the side, palm open to the rear.
- Road hazards: point down to left or right.
- *Note:* Use hand signals only if it is safe to take a hand off the bars without threatening the stability of the bike. It is best to move the opposite hand to the area on the handlebars near the stem before removing the hand that will indicate the signal.

5) Voice Signals:

- "Car up" = car approaching from opposite direction
- "Car back" = car approaching from rear
- "Car right/left" = car approaching from right/left side
- "Slowing" or "stopping" (particularly important for unexpected stops when your hands are busy on the brakes)
- "Hole right/left"…"bump" "gravel" "glass" "grate" "rough road" "door"
- "Off the back" = when one or more riders fall behind the main group (typical reason is red lights). This is critical to keep a group together. Make sure this signal is relayed up to the leader; who will acknowledge the message by either slowing or stopping.
- "All On" is very important and used to inform the leader that the "off the back" condition no longer applies. The leader acknowledges the message by speeding up.
- Note: do not call out "all clear" when going through an intersection where there appears to be no cross- traffic. You may miss something or things may change in the time it takes the next bike to get to the intersection. **It is essential that each cyclist checks for traffic independently before entering an intersection.** As you go through the intersection, call out "going through," which indicates to the other cyclists behind you that you are not stopping.

6) Road Rules:

- Stay in line. On most roads we will ride single file. Leader will indicate if group can go double file by holding up two fingers.
- If riding double file and leader signals single file (by holding up one finger), the rider on left falls back behind the rider on right. The next rider back, on the right, slows to open space in line for the rider moving in from the left.
- At red lights pedestrians in the cross walk have the right of way; so if the Leader or Siggies see pedestrians; she/he'they will stop. After such a stop, the leader or rider in front will decide when to start again.
- Don't bunch up at lights. **STAY IN LINE!**
- Pass on the left. **NEVER pass on the right**. Call out to the person being passed: "passing" or "on your left."
- If passing on a hill, make sure you have the stamina to pass as many cyclists as necessary to get back into line—*never box someone else in on a hill!*
- When passing on a hill, do not remain on the left or in the middle of the road – instead, move back to the right as soon as it is safe to do so.
- Before standing (especially on a hill), call out "standing" before you shift gears and stand. This warns the person behind you that you will momentarily slow down.
- Finally, do not blow snot rockets unless you're last in line!

7) Turning Left:

- From Single Lane. Before the intersection, move toward the center of the lane and signal left turn. If a car ahead of you is signaling left turn, stay in line behind that car. If stopped at a light where you will turn left, stay toward the center of the lane so that cars cannot pull up beside you. If you are too far left, a left-turning car might pull up next to you on your right, which makes it difficult to get to the right after the turn.
- From Left Turn Lane. Before an intersection, move to right side of left turn lane. Turn wide so that you stay on the right side of the lane so cars turning left will stay to your left. If you approach the intersection with a car ahead of you in the left turn lane, stay in line behind that car and take the lane so that other cars turning left will stay behind you. As you turn, stay on the right side of the lane.

8) Turning Right:

- From Single Lane: Don't go wide on right turns; tuck in the radius as much as possible.
- From Right Turn Lane. If you're going straight at an intersection where there is a right turn lane, move to the left side of that right-hand lane so that cars turning right can pass you on the right as you go straight.

What to Eat

1) Before Rides:

- Lots of carbohydrates during the two days before each ride.
- Don't forget protein, too…and a little bit of fat is okay.
- *Breakfast, breakfast, breakfast*; **very important!**
- Also drink water the day before and the morning of the ride

2) During Rides:

- Take along "fuel" food: like energy bars, energy drink, fig newtons, nuts and dried fruit, bananas—just make certain it is food that you digest easily.
- Drink the water and sports drink that you have along with you on the ride. It is a good idea to alternate between the two.
- Be careful at lunch stop…don't eat too much/too little…avoid heavy, greasy meals.

3) After Rides:

- It is important to re-fuel soon after a ride (within an hour if possible; as the "glycogen window," is the short period after a ride when muscle cells are most open to restoring fuel), with carbs and protein. The general rule is to eat a high-carbohydrate snack after training, preferably within 30 minutes. Recent studies show that some protein with the carbohydrate improves glycogen uptake into the muscles.
- Don't stop drinking when the ride is over, as you need to replace the fluids you lost.
- Eat healthy that night and all during the week…vegetables and fruits, carbohydrates like whole grain pasta, low-fat protein like chicken or beans.

What To Wear

- Clothing that wicks away sweat (synthetics and wool good choices; cotton poor choice).
- A few light layers work better than one or two thick layers.
- Keep extremities warm: head, hands, feet (can never be too warm in winter/early spring!).
- On cold or cool days, shoe covers, full-finger gloves and a head cover are in order.
- Bright colors help you be seen; being seen is safer (forget fashionable black, except for shorts).
- Cycling shoes are stiff in the forefoot, and more comfortable for longer rides (sneakers are a poor choice, because they are too flexible in forefoot).
- Wear eye protection (such as sunglasses): protect your eyes from glare, dust, pebbles that shoot up, and insects that fly into you.
- Trial and error (find what works best for you, especially with varying weather).

Bike Preparation

- Wheels must be equipped with quick release skewers.
- Tires must be in excellent condition, with no cuts that go all the way through the tire tread and no nicked sidewalls.
- Inflate your tires the night before the ride (to check for problems early).
- Brakes in perfect working order.
- Drive train (chain, derailleurs, shifters) lubricated and working smoothly.
- Pedals: equipped with toe clips or clipless pedals with cycling specific shoes.
- Get bike tuned up before the B-SIG starts.
- See bike maintenance article on pages 29-30.

Tools and Equipment for Rides

1) Mandatory:

- Two spare tubes that fit your wheels (make sure your tubes are protected with valve caps in your seat-pack so they will not get ruined as they bounce around), patch kit (with fresh glue, plus patches), tire irons, and hand pump or CO2 inflator that fits your tires valves.
- Two water bottles or a hydration pack (e.g.. CamelBak), plus snack food.
- Helmet (that fits you properly and is not old). **No helmet – no ride!** Print your first name legibly on the front & back of your helmet (magic marker on masking tape will do).
- Sunglasses.
- Money for lunch or emergency transportation.
- Clip to hold turn-sheets (a.k.a., cue sheets) on your bike.
- Train pass for Westchester/Putnam & Long Island rides (Metro North/LIRR; same pass works for both, and this lifetime pass costs only $5; available on-line or at Grand Central or Penn Stations).
- Identification and health insurance card(s).

2) Nice to Have:

- Allen wrenches (hex keys), box wrenches or small adjustable wrench, spoke wrench, flat-head screwdriver, chain tool (only if you know how to use one). (All can be had in one multi-tool.)
- Lock (small "crime of opportunity" lock is good, but not a heavy one)
- Sunscreen
- Handi-wipes
- Small first aid kit (bandages, antiseptic, aspirin or ibuprofen)
- Tissues or handkerchief
- Separate bike wallet
- Musette bag
- Cyclocomputer
- Cell phone with I.C.E. *(in case of emergency phone #)* entry in memory.

3) Frills:

- Tire boot
- Emergency string spoke
- Electrical tape or duct tape
- Zip ties or twist ties
- Spare screws
- Folding knife
- Bottle opener

Cycling Accidents on SIG Rides

The B SIG has an outstanding record for safety and has had very, very few accidents over the years. Unfortunately, accidents do happen occasionally, so it's good to know what to do if a crash occurs on your ride.

1) While a crash is happening:

- If you realize you are going to crash, try to resist extending an arm out to break your fall. Landing hand or arm first is a good way to fracture a wrist or collarbone. Instead try to relax your body and fall on your side or butt, rolling with the crash to the extent possible.
- If you are behind a rider who begins to crash, try your best to ride around her/him on the left to avoid being brought down too. DO NOT PULL OUT INTO THE PATH OF AN ONCOMING CAR TO DO THIS. Do not slam on your brakes; attempt to keep the line of remaining riders intact, maneuvering around anyone who has fallen as best as possible. Try to protect your front wheel.
- If you are in front of the crash proceed as if someone has a mechanical problem. Do not slam on your brakes, but follow your leader, who will gradually slow down and pull the group off to the side of the road.

2) Immediately after a crash:

- Unless you are a medical professional, do NOT run to the aid of the fallen cyclist, and DO NOT ATTEMPT TO MOVE SOMEONE WHO HAS CRASHED.
- The SIG leader closest to the fallen cyclist will attend to her/his needs. If you are a medical professional, we ask that you please step forward to do what you can to help.
- The two riders closest to the crash victim may assist the attending leader as needed.
- If you are at the very front or back of the line, your job is to watch for traffic approaching from the front and back – cars and other SIG groups – and signal to them to slow down or stop. Move out into the road far enough to be seen, holding your bike in front of you so as to appear as large as possible. If someone next to you is wearing a bright color and you are not, have them assume this duty. Direct traffic around the crash victim, or, if this is not possible, make the traffic wait.
- If you are not assisting the victim or directing traffic as described above, stay calm and remain in your place at the side of the road. It may be frustrating to stand to the side when one of your fellow riders is hurt, but, if all the other needs are attended to, that is the best way to maintain order in the group.

3) The follow-up period:

- Your leader will ask the victim questions, such as "where are you?" or "what month is it?", in order to get a quick assessment of the victim's condition.
- The leader will quickly decide whether to call 911, always erring on the side of caution when making this decision.
- If emergency help is summoned, the victim is not to be moved and should be encouraged to stay still until help arrives.
- If the victim is being taken to a hospital, the leader will phone that rider's emergency contact to let her/him know what happened, and to which hospital the victim is being taken.
- Someone – most likely one of the leaders -- will accompany the victim to the hospital, being sure to bring the victim's emergency contact information.
- Anyone near the victim can pick up the victim's bicycle and pull it off to the side of the road.

- If a bicycle needs to be left behind, the police may often offer to keep the bike until it can be picked up. Oftentimes, your leader may make other arrangements, like leaving it at a nearby bike shop or at the home of someone who lives near the crash site.
- If the victim is not badly hurt, the leader will assess whether that person can continue the ride or arrange to get her/him home via train, cab, etc. The victim's emergency contact will be notified.

Ride Cancellation Policy

Predicted actual temperature below 25-degrees; rain or snow; wet or slick roads; or steady winds above 30 M.P.H. at start time will cancel a ride.

The B-SIG coordinator will make every effort to make a cancellation decision in time to "get the word out" to all. If in doubt about the status of a particular ride, check the NYCC online Message Board. If a ride is cancelled on Saturday, the ride will be re-scheduled to Sunday—usually at the same time and place.

Contact Information 2011

General Information		http://www.nycc.org/rides_sig_b.shtml
NYCC message board		http://www.nycc.org/mb/threads.aspx?B=1
B-SIG Coordinator	Wayne Wright	wwright8@nyc.rr.com
B 18 Captain	Joe Hunt	jhunt@we-nyc.com
B 17 Captain	Fred Leffel	fleffel@aol.com
B 16 Captain	Kim Jenkins	kimjenkins@aol.com

Basic Cycling Skills

1) Share The Road:

- Pedestrians have the right of way.
- Use common sense and courtesy when dealing with automobile traffic.
- Avoid “road rage” situations.

2) Good Bicycling Position:

- Center yourself, with your weight low, bending from the hips. This allows you to shift your weight forward and back as well as side to side.
- Relax! Keep elbows slightly bent with shoulders down and relaxed. Relax the hands; don’t grip the bars tightly.

3) Brake:

- Move your body low and rearward. Slide your butt to the rear of the saddle.
- Brakes adjust your speed – above 15 M.P.H. they don’t stop you in an instant.
- Slow the wheel rather than locking the brakes; there’s more surface area between brake pads and rim than between tire and road. Feather the brakes by alternating between front & rear brakes.
- Do not use the front brake without also using the rear brake.
- Anticipate braking situations.
- Brake **before** entering a corner.
- Brake and ride with intention.
- When in line, keep pedaling even when braking (**do not coast**).
- The front brake is more effective than the rear brake!

4) Turning your bike (cornering):

- To negotiate a corner you need balance, traction and trajectory.
- Always keep pedaling even w/o putting power into drive-train (soft-pedaling).
- Always stay in line behind the person in front of you.
- Remember to anticipate and brake **before** going into the turn.

5) Three ways to turn your bike:

Steer – At speeds of less than 10 MPH or when roads are slick:

- Steer the bike (move the front wheel).
- Bike stays upright, body leans slightly in direction of turn.
- An upright bike will be hard to turn at higher speeds

Lean – The standard turn at speeds over 10 MPH:

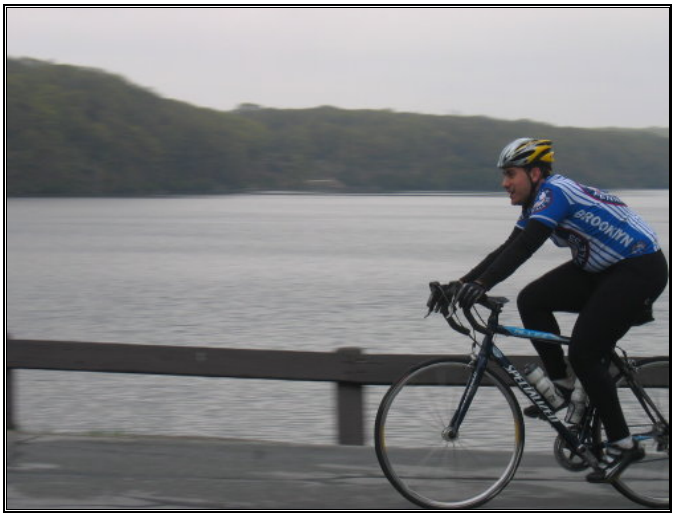
- This is done without steering the bike (not turning front wheel)
- Follow natural line (visualize water moving down curvy mountain stream)
- Lean your body into direction of turn – moving your nose in line with your inside brake lever. Your bike leans with you.
- Exiting the turn, re-center your body over your bike.

Counter Steering – Nirvana – making you and your bike one

- Do everything from lean (above), but:
- Straighten your inside arm and continually push down on the handlebars.
- Push more for a tighter turn, less for a wider turn.

6) You Go Where You Look:

- Avoid target fixation by looking past where you are going.
- Pick your line and always look ahead.
- Keep seeing your way through and past the turn.



Pedal Stroke and the Art of Spinning

1) Bio-Mechanics of a Pedal Revolution:

- Place body in good bicycling position. We are not sitting down to dinner.
- We use our gluteus initially at 12 o'clock, quads on the rest of the down-stroke and our hamstrings on the up-stroke.
- You want to turn the cranks in full circles, feeling the same amount of pedal pressure all the way around.
- Down-stroke motion is easy and intuitive; the up-stroke needs to be learned.
- To gain power from an up-stroke, when at the bottom of your pedal stroke visualize scraping mud off the soles of your shoes. Another visualization trick that accomplishes the same thing is, when at the bottom of the stroke, think of pushing your knees toward the handlebars.
- Practice this by taking a lap in the park in an easy gear with a slow cadence, say 50 RPMs (revolutions per minute). Once you get the hang of this, pedal faster until you can maintain that equal pressure all around the pedal stroke at 90 RPMs.

2) What Is Spinning? It's RPMs or Cadence:

- It's not about miles per hour; it's about revolutions per minute (RPMs).
- Spinning is simply crank revolutions per minute (RPMs), regardless of what gear you're in. You generally want to turn the crank at a consistent rate between 90 and 105 RPMs. Watch a good cyclist—his/her legs are going like a runaway sewing machine, but the upper body is quiet. You want to isolate your upper body from your lower body; in other words, your torso should be motionless.

3) Why Do We Spin?

- Spinning gives you more bike control, especially on dirt or gravel.
- If you spin, you will ride further with less effort, because you will use less of your finite supply of glycogen for fuel.
- The more you spin the more you reduce the risk of a physiological cycling injury.
- Spinning helps you maintain a consistent heart rate.

4) Spinning Technique:

- Spin at all times (don't coast); "keep your motor running." If you don't want to gain speed, you can pedal without putting power into the rear wheel (sometimes referred to as "soft-pedaling").
- Don't pay attention to your MPH; rather pay attention to your RPMs.
- If your cyclometer has a cadence function, use it, trying to stay above 90 RPMs during regular riding.
- Count your cadence; 15 to 18 strokes in 10 seconds are what you're seeking. Learn what 90 RPMs feels like and stick to it unless the terrain prevents you from attaining this goal.
- After a while, you will know, without counting or looking at your cadence function, that you are at 90 or more RPMs.
- If spinning feels unnatural to you and you find yourself with a lot of upper body motion, try moving slightly forward on the saddle. As body motion decreases, move back to the center of the saddle.
- Spin down hills, soft-pedaling, with hands in the drops with a quiet upper body. Whenever you go downhill, slide your rear end back in the saddle.
- Try one-legged pedaling on a solo ride; this will teach you how to spin.
- Ride an exercise bike at 90 RPMs while balancing a book on your head.

Gearing

You have lots of gears, so that you can always be in the right one. Use them!

In cycling, the word "gears" has many meanings, among them referring to the chainrings and cogs on your bike as well as the ratio between them that defines the speed when you pedal. There are many tutorials online about bicycle gearing, www.sheldonbrown.com one of the most respected. A small book, Bicycle Gearing: A Practical Guide, by Dick Marr, remains a great resource.

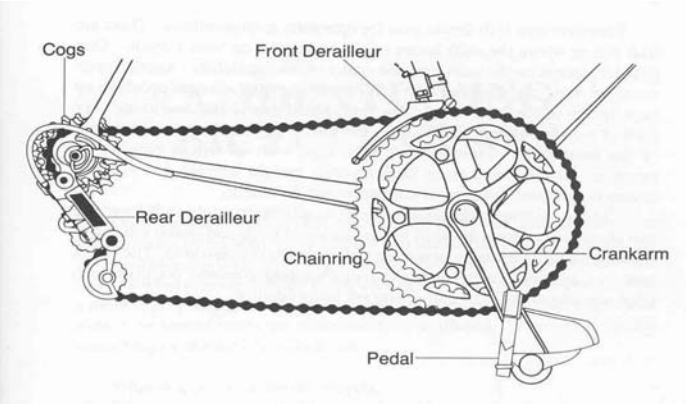
Gear Inches:
In cycling, the gain that you achieve from the effort that you expend is measured in "gear inches" (soon to be metric). "Gear inches" are the distance that you travel due to one rotation of your pedals.

A basic gear inches formula -- front (chainring) divided by rear (cog), times wheel size -- will give your gear inches for each combination of chainring and cog. There are many auto-calculators online that will chart your gear inches for each combination of chainring and cog on your bike, or you can easily do it yourself. Once again, Sheldon Brown for online or Dick Marr's book for DIY charts.

- The higher the gear inches, the faster the speed and harder the pedaling.
- The lower the gear inches, the slower the speed and easier the pedaling.
- For climbing, generally you want low gear inches

Chainrings:

Chainrings are the gears in the front, those on your crank that you shift between with your left hand. You may have two of them (double) or three (triple).



Ring size is measured by the number of teeth in the ring (e.g., 52). Road Doubles are typically 39T/53T; Compact Doubles typically 34T/50T; Triples typically 30T/42T/52T.

- Smaller ring = easier pedaling; bigger ring = harder pedaling.

Cogs (aka Sprockets):

Cogs are the gears in the back, those on the hub of your rear wheel that you shift between with your right hand.
A cog with eleven or twelve teeth (11t or 12t) would be typically the smallest cog. A large cog can range from 21t (for racing, not for us) to 34t.

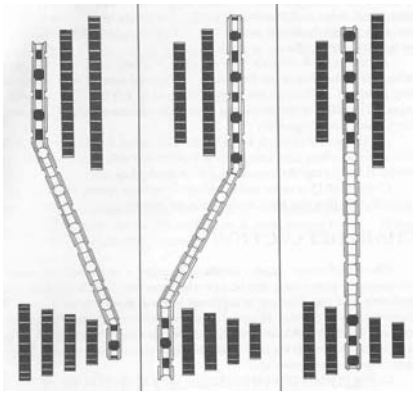
- Smaller cog = harder pedaling; bigger cog = easier pedaling.

Derailleurs:

The front derailleur pushes the chain back and forth across the chainrings.

The rear derailleur uses pulleys and springs to lift the chain from one cog to another. If the rear derailleur becomes bent, it will not operate properly and may contribute to mechanical damage or an accident.

- Be very careful not to bump or lean your bicycle against the rear derailleur!



Avoid the combination of the large chainring and large cog, and the combination of the small chainring and small cog. These combinations put the chain at a bad angle and are known as "cross-chaining" or "extreme chain deflection" (see illustration). Extreme chain deflection puts added stress and wear on the drivetrain, is less efficient when pedaling, and contributes to mechanical failures. Try to use gear combinations that keep your chain as straight as possible.

Technical proficiency:

- Using references such as Marr above, you may prepare a shifting chart for yourself so as to have a strategy to shift progressively between gears according to the terrain and your needs. Some technical understanding of the shifting process will aid in your development as a proficient cyclist, rendering your rides safer and more enjoyable.

Shift early and often:

- Anticipate what gear you'll need ***before you actually need it!***
- When riding on the flats, get into a gear combination that gives you a comfortable spin for the speed of the group.
- As you approach a hill, get into the gear combination that will work for you on that climb.

Be Careful:

- Carefully consider when to look down at your chain, not in heavy traffic or when on uneven road surfaces, and not for too long a time; a glance will suffice when it is safe to do so.
- Don't back pedal.
- Don't try to shift gears when your chain is under load.
- Don't purposely shift the chain over too many cogs at once.
- Don't move both shift levers at the same time.

Cycling in Traffic

1) Where Should I Be at Intersections?

- Turning Right: Stay to the right of the right-most lane.
- Turning Left: Stay to the right of the left-most lane, as this allows you to stay on the right of left-turning cars.
- Going Straight: In one lane of traffic, stay to the right. In two lanes of traffic, stay to the left of the right-most lane, as this allows cars to turn right from the same lane. If the right-most lane is a right-turn-only lane, stay to the left of the right turn lane.

2) In General, Where Should I Be?

- Two-Way Traffic: Stay to the right, especially outside urban areas and on busy roads with fast-moving traffic.
- One-Way Traffic: Stay to the left, as drivers can maneuver around you more easily, and you're less likely to get "doored" by people getting out of parked cars.
- Heavy Traffic: Especially w/slow-moving heavy traffic, establish position in the middle of a lane. Don't skirt the edges, as car drivers are too likely to take chances on getting around you and you might get side-swiped.

3) On NYC Streets:

- Use the left-most lane on Avenues, as you're less likely to get "doored," and you won't have to deal with buses. Stay to the right of the left-most lane, so that you can go around left-turning, double-parked vehicles and pedestrians who pop out from between parked cars.
- Don't skirt the edges of a street or avenue. Keep at least an open car door's width between you and the line of parked cars. Proceed straight ahead, keeping the position you've established.
- NEVER squeeze between a double-parked vehicle and a line of parked cars. Go around the outside of the double-parked vehicle.
- Go slowly in stand-still traffic. It's full of surprises.
- BE ABSOLUTELY SURE TO YIELD TO PEDESTRIANS WHO HAVE THE RIGHT OF WAY.

4) Top Threats to Cyclists on City Streets:

- Pedestrians (they tend to listen for traffic, not look for it) – be ready to yell 'heads up,' bark like a dog, etc.
- Private motorists – they aren't used to having bikes as part of the mix.
- Cabbies – they drive aggressively, but they ARE used to dealing with bikes. If you see a cab's roof light go on, beware – they're about to let out a fare, so expect a door to open.
- Potholes
- Metal "tire-eating" construction plates and grates are hazardous, especially dangerous when wet.

5) In Groups:

- Ride single file, except in situations where the group can take over a lane, then ride double file. Exception: police in Bergen County (NJ) will stop and occasionally ticket groups of cyclists who don't ride single file, even in situations where riding double file makes sense.
- Always stay in line, regardless of whether it's single or double file riding.
- Always try to stay with the group. If a light is changing, but the group has started going through, continue going through unless you're riding right into traffic.

6) Tips:

- Try to make eye contact with drivers when interacting with their vehicle. When in doubt, stick with the group going through an intersection.
- Don't count entirely on a vehicle's turn (or lack of turn) signals – watch the car's front tires, which always point where the car is going.
- The best way to indicate to a motorist that you're planning to stop is to put your foot down.

Climbing Hills

Successful hill climbing depends on proper gearing and a proper riding style.

1) Gearing on Climbs:

- You should spin through the climb, and remember, you cannot spin with a lactic acid build-up.
- There is no way to climb a long hill without going anaerobic, which results in a lactic acid build-up. To extend the aerobic period, reduce the gear as much as you can to keep spinning.
- When climbing hills, you should change gears before you need to.
- There are three parts to any hill climb: the approach, the climb and the place where the hill tapers off to a crest. Because the same cadence should be maintained from flat terrain to the hill, the gears and pressure of the foot on the pedal must be adjusted to accommodate the various stages of the hill.
- As you approach the hill in a particular gear, you should shift to a lower gear as soon as the climb begins and your RPMs drop. Change to the gear that will bring the RPMs above normal. Continue shifting down to maintain your cadence until you find the gear in which you can spin up the climb. Shift ***before*** you need to, because you do not want to have a painful lactic acid build-up, which you might get if you are pushing too big of a gear.
- As you approach the crest, the hill tapers off and your RPMs will increase. Immediately shift to a higher gear to maintain your cadence. Continue with this shifting process until you crest the hill. At the top of the hill, increase the gearing to maintain the constant cadence and pedal down the hill.

2) Four Basic Climbing Styles:

- Sit down and spin.
- Sit down and mash (lower cadence), sitting way back and dropping your heels.
- Stand as high as you can, while keeping the bike straight.
- Stand up as high as you can, fall back on your heels, and “honk” the bike (Pull up with your arms against downward pressure with your leg).
- Each cyclist has a different climbing technique. Eddy Merckx sat down and had a running technique; Greg LeMond stood up and ran; Lance Armstrong spun at a very high cadence. All three of these guys have won more Tours de France than any of us likely will.

3) Hints for Hill Climbing:

- Try to keep the pressure off the calf muscle by using the bigger muscles instead of the small muscles. Using the big muscles allows you to pull back with hamstrings and your butt, pulling the bike with the hands, and putting extra pressure on the pedal….“honking.”
- Don’t look (stare) at the hilltop, it’s self-defeating and psychologically drains you. Hills are never as steep as they look. On the other hand, don’t look at your feet. It is best to look a bit ahead of you, but, again, don’t fixate on the slope of the hill.
- Ride “through” the hill. Mentally, you must maintain 100% effort not just to the top of the hill, but until the point at which you have accelerated on the down slope, establishing your gear for the descent, and starting to recover without loss of momentum.
- As you are climbing, do not frown (dreading the climb), instead smile (thinking about your improving fitness – this hill will help you get stronger). This really works!

Descending Hills

- Concentrate on the road ahead.
- Keep pedaling; which helps dissipate any lactic acid build up from the climb.
- Control your speed; if you reach a speed that feels uncomfortable **gradually** slow down. **Do NOT jam on the brakes!**
- Practice descents, increasing your speed as your bike handling skills improve.
- Keep your weight back by sliding your butt toward the back of the saddle.

1) Controlling your speed while descending:

- Slow down by raising your upper body, creating more wind resistance.
- Brake by briefly applying the brakes (especially rear brake), then re-applying briefly as necessary. This is called feathering the brakes.
- Do not constantly apply brakes.
- Brake ***before*** turns, trying not to brake while in a turn.
- Keep your weight back to help stabilize your bike by sliding your butt toward the back of the saddle or even off the back edge of the saddle.
- On steeper descents, move your hands to the drops of your handlebars. Your body will be more compact and therefore more stable. This position will also make you go faster, but you can control your speed by feathering both brakes, as mentioned.

2) Learn how to increase your down hill speed:

- Proper bike handling skills (pages 14 & 15) will allow you to obtain more speed on descents. Practice mastering the counter-steering technique.
- As your skills improve, try going a little faster on descents.
- You want to strive for the feeling that your body and the bike are one.

3) Passing on a descent:

- Be sure to yell “on your left” as loudly as possible. Don’t pass unless you see that there is enough room for you to get by the cyclist ahead of you clearly, without jeopardizing you or the other riders.

Paceline Cycling

1) What Is Drafting?

- Drafting is when you ride closely behind the cyclist in front of you so that (s)he blocks the wind, allowing you to travel at the same speed as her/him, with less effort.
- When you are drafting behind another cyclist, you are said to be 'on her/his wheel.'
- Because the entire paceline drafts behind the lead cyclist, each individual saves between 15% and 30% of his or her energy compared to riding alone. Even the cyclist in the lead gets a slight advantage over solo riding.
- The group can maintain a steady pace more easily and conserve energy.

2) How Does Riding in a Paceline Work?

- The lead person sets the pace.
- Each following rider stays between 18 and 36 inches behind the next forward rider.
- Stay in line, calling out hazards down the line (do your part).
- Always keep pedaling unless you're stopping (and have signaled that to the riders behind you); **DON'T COAST**. Alternating pedaling and coasting makes you impossible to follow; your speed will be inconsistent and you won't be predictable to the next rider.

3) Tips:

- Focus on what is going on around you! A paceline is ***not*** the place to allow your mind to wander!
- Don't stare at the wheel in front of you. Look beyond the rider's left shoulder (in front of you) so you can see if someone ahead swerves or hits a bump.
- Don't overlap the wheel in front. Control your speed by sitting up and/or feathering brakes and/or slowing your cadence.
- If you start to overlap, gently steer to the side while you slow down. Don't brake suddenly.
- Be consistent, so the next rider can anticipate.
- If you are in the lead when the group approaches a red light, slow the group down gradually, well ahead of the intersection. Think of a train arriving at a station.
- If you are in the lead when the group stops, accelerate slowly when starting off, as it takes a while for everyone to get going. Think of a train leaving a station.

4) Rotation in a Single Paceline:

- Lead rider both calls out and hand-signals "Pulling off," and then, after checking for traffic, safely moves over to the left and slows her/his pace. When falling back to the end of the paceline, stay as close as comfortable to the riders on the right. Don't move too far left, into traffic.
- Next rider becomes lead, maintaining the same pace (***don't speed up!***).
- "Ex-leader" rides slower than the group's pace while the line passes on right.

- Next-to-last person in the line calls out “Next-to-last” to alert the ex-leader.
- Last person in the line calls out “I’m last” so the ex-leader can fall in behind by accelerating to keep the line’s pace.
- Depending on conditions, each pull should be no more than 1-3 minutes.
- Always maintain a steady pace, up and down the line.
- On hills, try to maintain the pace of the leader, even if you are a little slower. If you’re leading and know you’ll slow down on a hill, pull off the lead **before** the hill and let a stronger rider take lead.
- At the top of a hill, the leader ***gradually comes back to pace allowing the line to regroup—never switch leads on the uphill or downhill on a curve*** (too confusing and potentially dangerous).
- Don’t drink or eat when you’re first in line, since you won’t maintain the consistent pace that the rest of the group is counting on. The lead cyclist should never reach for a water bottle or unwrap an energy bar.
- Clear upper respiratory tract only while last in line.

5) Rotation in a Double Paceline:

- Requires a larger area of road (shoulder) than Single Paceline. Only do this when you have the room, because when rotating you will be riding four abreast!
- The group rides double file with two leaders.
- When it’s time to rotate, the two leaders communicate with each other, making sure they both are ready.
- After checking for traffic and calling out, the two leaders pull off; the left leader to the left and the right leader to the right. The two ex-leaders move on the **outside** of the double file line, moving to the back in unison (same pace).
- It is very important for the leaders to anticipate the possibility of the road narrowing and returning to single file when necessary.
- Not recommended for newbie single paceliners.

6) Summary:

- ✓ A paceline is a beautiful thing! You all move as one and help each other.

The Art of Leading a Club Ride

You have the skills; why not give something back to the club and lead a ride?

1) List and prepare for your ride:

- Pick a route you are familiar with and one that you love. Be sure to line up pit and lunch stops along your route beforehand. It also pays to know some bail-out points in case of need.
- Recruit a least one co-leader. If you are a rookie leader, ask your SIG leader for help or recruit a veteran leader to co-lead. The NYCC B ride coordinator can help you find a co-leader. Coordinate with your co-leader who will lead first and where you will switch between leading & sweeping.
- Choose a pace that is a little slower than your normal pace. If you normally do B17 rides, for example, you might want to lead a slower-paced ride, such as a B16, as it takes a "little more out of you" when leading.
- Bring a NYCC sign in sheet, and lots of cue sheets to hand out. If you listed your ride online, print out the pre-populated cue sheet with names and numbers already typed in.
- Use the NYCC ride submission program to list and automatically publicize your ride. You can post updates, if relevant, on the NYCC Message Board.

2) At ride's Start:

- Make sure everyone has signed in at the start of the ride and has listed an emergency phone number (not 911), contact person, cell phone number, etc.
- Take a look at the bikes that the participants bring. If you notice a poorly maintained machine, explain to that person that everyone is responsible for her/his own bike's condition. Explain that, if someone's bike breaks down, it is her/his responsibility, and that person runs the risk of getting left on the road with a problem.
- Take a look at the participants. If you have ridden with some of these folks, make a mental note of who you might want to ask for assistance leading, as needed. If a lot of folks show up, don't be shy about asking for assistance from qualified participants.
- **Pre-ride talk** is very important; tell the folks before the ride starts what to expect. This talk will set the tone of the ride and helps eliminate any misunderstandings during the ride.
- Explain the **pace** you will be going; including a warning that if a participant goes off the front "they are on their own." Conversely, if this ride is too fast for any participants, tell them to notify one of the leaders that they are leaving the ride and getting home on their own. Leaders should adhere to the pace that was advertised for the ride.
- Briefly talk about group riding and how it is the participant's responsibility to communicate while on the road (i.e. "off the back", hazards, etc.) to the leaders and the other participants.

3) During the Ride:

- Make sure you constantly watch your speed (the pace) and maintain the advertised pace.
- Be deliberate & predictable when you are in the lead of the pack. Speed up & slow down gradually.
- If your group is not communicating, pull them off the road and tell them nicely that they must pass the word up and down the "line."
- If you have someone constantly "off the back," talk to that person in private, telling her that she needs to stay in contact with the group or perhaps get home on her own.
- If you have a mechanical or accident, get everyone off the road to a safe spot away from traffic.

4) After the Ride:

- ***Make plans for your next ride lead!***

Preliminary Schedule

Please note that dates, destinations, starting points, and mileage are all subject to change. If a ride is "rained-out" we will try to go on the following day.

#:	Date:	Class:	Destination:	Starting Point:	Miles:
1	03/05/11	Intro	Central Park (4 Laps) SIG Orientation	Central Park Boathouse PS 334 (Columbus Av/84th)	24
2	03/12/11	Skills	Westwood/Northvale NJ	Ramble Shed, C.P.	48/51
3	03/19/11	Spin	Scarsdale/Hartsdale NY	Ramble Shed	47/57
4	03/26/11	Gears	Ridgewood NJ	Ramble Shed	53/58
5	04/02/11	Traffic	Mamaroneck NY	Ramble Shed	56/60
6	04/09/11	Climbing	Nyack NY	Ramble Shed	57/66
7	04/16/11	Paceline	Bayville/Oyster Bay NY	Queens: Statue of Civic Virtue	67
8	04/23/11	Leading	Armonk/Port Chester NY	Ramble Shed	63/74
9	04/30/11	---	Deep Westchester NY	Jerome/Woodlawn terminal (end of the #4 train)	68/84/104
10	05/07/11	---	Cold Spring NY	Eleanor Roosevelt statue 72nd & Riverside Drive	70

Central Park's Boathouse
Located on the East Side of Central Park in Manhattan, just slightly north of the 72nd St. Park Drive transverse. We meet slightly northeast of the Boathouse itself in the car parking lot for the first ride.

Central Park's Ramble Shed
Is also located on the East side of Central Park in Manhattan, a few tenths of a mile north of the Boathouse at the crest of Cats' Paw Hill; look for the building and parking lot on your left slightly west of the road.

Statue of Civic Virtue, Queens
By subway, take the E or F train to Union Turnpike stop. Exit towards the front of the train. Once through the gates at the token booth, go left (towards the front of the train) and left again to exit at the "court house." The statue is right at the top of those stairs. This particular statue was removed from Manhattan by Mayor LaGuardia in 1941 as he was sick of being mooned by it every time he left City Hall (important stuff)!

Grand Central Station and Riverside/W. 72nd St.
Located where they've always been (you knew that!). But you also need to know that we meet at the info booth at G.C.S. and at Riverside Park on the (NW corner) of Riverside & W. 72nd St.

Routine Bike Maintenance Check List:

Some of us maintain our own bikes, others among us depend on a mechanic in a local bike shop; but all of us need to maintain our machines!

Checking the following three items, you'll cover about nine-tenths of the causes for trouble encountered on bike rides:

1. **Chain** - **make sure that it is clean and lubricated.**
   - How does your chain look? Dry, maybe even rusty? Or excessively oily, dirty, gritty? Does the chain run smoothly through the rear derailleur when you backpedal? A dirty, worn chain tears up the rear cogs and front chainrings, is prone to chain-suck, shifts lousy and is less efficient. If you haven't lubricated the chain recently clean and lubricate it now!
   - Is your chain worn? If you've been experiencing difficulty shifting, noisy operation or a rough pedal feel, you may need a new chain. Check this by pressing lightly on the right pedal to tension the chain. Hold a 12-inch ruler against the chain. On a fresh chain, 12 full links (from pin to pin) measure exactly 12 inches long. If 12 links measure 12 and 1/8 inches or longer, the chain needs replacing.

2. **Brakes - make sure that they'll stop you.**
   - When you squeeze the levers, they should go no further than two-thirds of the way to the handlebars before the brakes are fully applied.
   - Check the brake pads. Are they centered? The pads should contact the wheel rim at the same time. Are they positioned on the rim correctly? They should touch the rim all at once, not upper or lower edge first, no overhang, not touching the tire. Pads should be slightly angled front to back to eliminate brake squeal.

3. **Wheels/Tires - make sure that you're rolling safely.**
   - Inspect your tires (sidewalls, too) for punctures, cuts, weak spots, and leaky valves. Inflate to correct pressure before the ride. If not sure ask your leader for PSI recommendation.
   - Seat the wheels properly. Set the bike on the floor, open the wheel's quick release lever and press down lightly on the frame so that the wheel is fully in the dropout. Hold the wheel in place (both sides of the quick release skewer) when tightening the quick release. Be sure that the wheel is tight to the frame. You have to develop an instinct about how hard you have to turn the quick release lever to lock it, but if it leaves an imprint in the palm of your hand when you close it, it's probably tight enough.
   - Spin the wheel to see if it's bent/wobbling. Inspect for rim or spoke damage (cracked or dented rims/bent or loose spokes).
   - Every few weeks inspect the tire surface and carefully “pick out” any glass. If you really want to go a good job, deflate and remove tire from rim. Squeeze the deflated tire where it meets the road and pick out the glass (you will be amazed at how much stuff is embedded). If you find a cut that goes all they way through the tire (outside to inside) it time to replace that tire.

Other things to check:

4. Steering:

- Check the headset for looseness or tightness. Turn the handlebars to the far left and right; make sure that they turn smoothly and have a full range of motion. Standing with the bike straight, lock your front brake and rock the bike back and forth while checking for any gapping between the fork and lower headset cup; listen for any clunking noises.
- The headset is the component that connects the fork to the frame and allows the fork to turn for steering. It's also forced to withstand the massive pressures encountered when the fork transmits shock into the frame (all those rough roads). If you've a loose feeling in the handlebars, rattles or clunks when riding over bumps, or you feel the handlebars "catching," as if there were notches stopping the turning at various points during the fork's rotation inside the head tube, then you need headset maintenance.
- Hold front fork between your knees and try to twist the bar and stem with one hand; if it moves easily, tighten the stem binder bolt a moderate amount.

5. **More Lubrication and Adjustment:**

- If your gear shifting has been slipping, sluggish, or noisy, inspect the cogs and derailleur for dirt or damage. The front and rear derailleur may need adjustment, as well.
- Check your brake and derailleur cables for kinks and fraying.
- Lightly bounce your bike to listen for rattles indicating parts that need tightening. Check tightness of nuts.
- Check that your saddle is level and doesn't pivot or drop.
- Lubricate brake and derailleur pivot points, and springs on clipless pedals.

Whew! That's not all inclusive, but a good start.

There are a handful of excellent, comprehensive bicycle maintenance and repair manuals. One such is Anybody's Bike Book, by Tom Cuthbertson. Also, Bicycling Magazine and Park Tool Company each publish manuals of their own.

Here are a few great online resources:

Sheldon Brown's Bicycle Technical Info
Jim Langley Bicycle Aficionado
Bicycle Repair, Maintenance and Much More