


# ***Bike Handling, Safety, Comfort, and Group Riding***


## ***Bike and Build Workshop, June 4, 2004***

### **I. Bicycle Handling for Safety**

 Wear a Helmet

 Understand the physics of bicycle riding

- o How your bike stays upright, and how it steers and corners
  - You learn unconsciously to make minute adjustments, and without realising what you are doing, you steer to the right if you begin to fall right, thus bringing the bike back underneath your center of gravity
  - The steering of the front wheel is the key to control of the bicycle
    - It is very hard to push a cyclist off his bicycle by pushing his body or the bicycle itself
    - It is easy to push a cyclist off his bicycle by pushing his handlebars or arms
- o Starting & Stopping
  - A properly raised saddle won't allow you to straddle it stopped – always get off the seat to start/stop
  - Quick tip: Shift down a gear when you are about to stop to allow starting up again

 Falling off your Bicycle

- o This will probably happen some day, and it probably won't really hurt
- o Cause
  - Crashes almost always caused by front wheel being turned unexpectedly (most other ways are creative enough that only racers manage them)
- o Prevention
  - Ride in a straight line (don't crash others)
    - If you must swerve, do it in a controlled, minimal fashion
  - Protect your front wheel
    - NEVER overlap (“cross”) wheels
    - ALWAYS keep hands tightly on drops or hoods over potholes, sand or downhill

- Sand, Debris and Water
  - Water can hide dangers, so go slow or avoid
  - Sand or Debris can grab your front wheel
    - Slow down a little
    - Ride in a straight line
    - Use a small (easy) gear: pedal softly, but don't stop pedalling
    - DO NOT try to turn, get out of the saddle, or mash a big, hard gear by throwing your body weight around
- Dealing with dogs
  - Yell firmly "NO"
  - Menace with pump, or squirt water bottle
  - Better to stop than to crash (dogs usually lose interest if you get off the bike)
    - Put bike between you and the dog to deter it
- Stopping Suddenly
  - Front brake has more power, but potential to flip you
  - Rear brake weaker, potential to fishtail
  - Use a combination of both for controlled braking

### Try This At Home

- o Ride in a straight line
  - While looking over your shoulder (IMPORTANT SKILL)
  - While taking and replacing water bottle
  - With only one hand (no hands if you can!)
  - While using hand signals (see group riding below)
- o Swerve around small imaginary obstacles without losing control

## II. Basics of Riding in a Group

### Group Formations

- o Single line
  - The most usual formation. Leave enough space to be safe (do not overlap wheels.)
- o Double line
  - Only suitable in low traffic conditions
  - Ride next to another and chat

## Your Responsibilities in Group Riding

- o Ride Safely
  - DO NOT OVERLAP (“CROSS”) WHEELS
  - Ride in a STRAIGHT LINE
    - Only grab a waterbottle or balance bar while riding if you are confident you can do so without swerving
  - NEVER brake or swerve suddenly
    - Any deviations from a straight steady line must be announced to others – yell or hand signal
    - Braking/slowing must be announced and gradual
- o Point out dangers
  - Hand signals
    - If you are afraid to take your hands off the bars, yell instead
    - Point to holes and dangers on the road
    - Hand to lower right, wave: to indicate swerving to pass a parked car or other obstacle
    - Hand behind back, palm out: stopping/slowing/watch out
    - Others: parked cars with people, glass, roadkill, horse poop, turning signals
  - Yelling
    - “Car up”: oncoming traffic
    - “Car back”: overtaking traffic
    - “Car left/right”: entering traffic
    - “Runner/Walker/Cyclist up”: if group is overtaking and may need to swerve to make room
- o Communicating Your Desires with Others
  - If you’re tired, say so
  - If you need to stop, say so
  - If you want to go slower, say so
- o Constructive Criticism of Others
  - Others need you to tell them if they are doing dangerous things: swerving in the group, braking suddenly, etc.
  - Try to use constructive and polite criticism – communication is essential for safety.

## The “Draft”

- o Riding in the wind protection of another rider
- o Huge efficiency savings (25% or more)
- o When you become comfortable, you can take advantage of this

### III. Basics of Riding in Traffic

#### You are a vehicle

- o You have a right to a lane
- o However, you should stay to the right whenever possible

#### Understanding drivers

- o Drivers think bicyclists are stationary.
  - Know that they will often cut you off because they don't think you can move that fast.
  - They feel a need to pass you even if you are speeding.
- o Drivers don't see you. Seriously.
  - REQUIRE eye contact before expecting a driver to yield right of way to you
  - Drivers NEVER look right before turning right
  - Drivers do not see cyclists behind or next to them
  - At night, a rear blinking red light is the most helpful item
    - Also, bright & reflective clothing, front headlight
- o Drivers do unexpected things.
  - Drivers often forget to signal – never assume they are not turning
  - Ride like you might drive in winter
    - Never assume someone is stopping just because they should
    - Make sure you understand what each car is doing as you approach it

#### Be Assertive

- o Make it clear **where you are, what you are doing** and **where you plan to be.**
- o When turning left, take up entire leftmost lane (or left turn lane) and signal clearly
- o Ride to the left of right turn lanes if not turning

- o Do not ride up between lanes of traffic/parked cars unless in a very small group.
- o Use hand signals
  - Right turn: right arm out or left arm bent up
  - Left turn: left arm out
  - Stopping: left arm down, palm backward.
  - Signal if crossing/entering lanes
- o IMPORTANT: Crossing/entering lanes of traffic requires that you can safely see behind you
  - Best: Learn to look over your shoulder while riding
    - If you can't look over your shoulder while riding, stop to look
    - NEVER cross a lane of traffic without looking behind for cars
  - If you like, also get a rear-view mirror but be warned that as in cars, mirrors only give partial views, so you need to look for yourself before navigating traffic anyway.

 The Rules of the Road apply to Bicycles. Period.

- o Along with the rights of a vehicle come the responsibilities. **Don't even think** of running red lights. You're representing Habitat for Humanity as well as cyclists everywhere.

#### IV. My Bum Hurts (and Other Discomforts)

 This WILL happen to you.

 General soreness will dissipate on its own after the first few days

- o If it doesn't, consider changing your saddle
- o Saddle should support your sit bones, not the part in between
  - Try sitting further back on your saddle to use the right part of you for support

 Rash and/or Saddle Sores

- o Clean your shorts every time you use them. *Seriously.*
- o Do not wear underwear inside your bike shorts. *Seriously.* (It chafes.)
- o VASELINE is the answer

- Also targeted products like “Shammy BUTT-er” or anything designed for diaper rash in the local pharmacy (yes, that’s what it is)
- And when I say Vaseline, I mean LOTS of it. All over everything making a huge gooey mess is best.
- There’s something called “shammy time” which refers to the time you wear those gross sweaty bike shorts
  - Get out of them as soon as you can!
  - Clean yourself off after. Some like baby wipes.
  - Some like to put on some Gold-Bond/Baby powder afterward (not while wearing the shorts).

### Bicycle Position

- Saddle low enough so hips do not sway
  - More efficient; Allows you to ride straight and “spin” (see below)
- Saddle high enough so knees can extend fully with heel dropped
  - Prevents knee pain
- Handlebar position is to suit comfort, minimise back/shoulder/arm discomfort

### Efficient/Healthy Pedalling

- Pedal “circles”
  - Pull/Push all the way around smoothly and quickly – spin!
  - You should hear no “pulsing” from the tires (you should create smooth even force on the bicycle)
  - You should not sway side to side with each pedal stroke
- High cadence (90+ revolutions per minute of the pedals (rpm) best, 80+ minimum)
- These two combined (called “spinning”) prevent knee damage and save energy

### Troubleshooting

- Knee pain: raise saddle, high cadence, pedal circles
- Back pain: adjust handlebar position, don’t let back “sag” from shoulders – use back muscles to support yourself
- Shoulder pain: don’t lock elbows

## V. Further Information & Final Advice

🚲 *Contact: Kate Stange, 401-270-5324 / [streamergirl@brown.edu](mailto:streamergirl@brown.edu)*

🚲 *Web reference:*

<http://www.sheldonbrown.com/beginners/index.html>

🚲 *Good luck and remember to pack vaseline, chapstick, bug-spray and sunscreen -- the balms of the cycle-tourist.*