

## **PUT THE PEDAL TO THE METAL**

### **Tips on best bike fits from the Canadian Physiotherapy Association**

Toronto - It's summertime, and time to get out on your bike. Bicycle riding is one of the easiest ways to stay fit, promote cardiovascular health and improve muscular endurance. It's a relatively inexpensive exercise that can be enjoyed by the whole family. However, a correct bike fit is absolutely essential. Why? In a one-hour bike ride, the average cyclist completes over 3000 strokes. If the bike doesn't fit the rider, the joy of bike riding can easily turn to pain. A bike that fits properly – frame size, alignment of the pedal and foot, position of the handlebars and saddle height – promotes good posture, with all muscle groups working together in harmony.

Each riding season, Canadians suffer from all kinds of aches and pains, such as knee problems, neck and low back pain, and premature fatigue because the distance between seat and handlebars is too great or the saddle isn't at the correct height. "I can't stress enough to my clients how important it is to ensure a correct bicycle fit, in particular the height of the saddle," remarks François Landry, a private practitioner at the Clinique de physiothérapie du Plateau Mont-Royal in Montreal. "If your bicycle seat is too low, it will create a lot of stress on your knees; and if it's too high, it will increase the stress on your lower spine. Riders also want to ensure they have the correct distance between the seat and handlebars. If it is inadequate, your neck muscles may become strained."

Cycling should be about enjoyment, not pain. Proper bicycle fit will minimize discomfort and maximize economy, and ensure safe bicycle operation. A few simple modifications can dramatically boost performance, increase comfort and reduce the risk of cycling-induced injuries.

The Canadian Physiotherapy Association recommends the following bike fit tips to ensure a longer, more enjoyable riding season:

**FRAME SIZE** - The first step to proper bike positioning is to make sure you have the right bike frame size. Stand over your bicycle's top tube (between the saddle and the handlebar). The general rule-of-thumb for road biking is to have roughly one inch of clearance between your buttocks and the frame. For mountain biking on trails, you should have two to six inches depending on the terrain and the slope on which you are riding so that you are nice and compact and can easily put your feet down quickly.

**SADDLE POSITION AND HEIGHT** –The saddle should be level for endurance and recreational riding. If you are sliding forward from a forward-tilting saddle, your arms and back will be taking too much weight. If the seat is tilted backwards, you may place undue strain on your low back and may experience discomfort or pain in the saddle area. Saddle height should be set so your legs are not quite fully extended at the bottom of each pedal stroke. The straight leg should have a slight bend in the knee, roughly 30-degrees. If you have to shift your seat with each stroke, your saddle is too high and needs to be lowered

**HANDLEBAR POSITION** –The handlebar's position can make a difference to the comfort of your back and upper body while riding. Handlebars that are too low or too far forward force you to stretch and bend down too far, placing undue stress on your back and neck. Higher

handlebars will have you put more weight through the saddle. Generally, taller riders should have lower handlebars in relation to the height of the saddle.

**SHOE/CLEAT ALIGNMENT** – If you ride your bike with clip less pedals, the position of the cleats on your cycling shoes determines the comfort of your feet, ankles, knees, hips and back. Misaligned cleats can put stress through all joints from your foot to your low back with every pedal stroke. Your feet should point straight ahead when clipped into the pedals. The rule-of-thumb is to adjust the cleats so there is no twisting stress in your leg as you pedal.

**BICYCLE SAFETY** – Cyclists must track multiple objects simultaneously while riding including surrounding vehicular traffic, parked vehicles and pedestrian traffic. Road safety skills are critical to help prevent serious accidents and injury on the road. Most importantly, your bicycle must be road worthy and in good condition and you should be wearing the right equipment. Helmets are **critical** for safety and should be worn properly to prevent serious head injuries.

**PARENTS CYCLING WITH CHILDREN** – Set an example by wearing helmets properly, using mirrors and obeying the rules of the road. If you're riding safely, your children will too!

### **Be seen**

- Cyclists who stand out are safer. Wear something fluorescent by day and reflective by night;
- If you are going out after dark, make sure that you have lights that work
- Highway Code requires reflectors - white for the front and red for the back.

### **Make space not contact**

- Cyclists need space. Make sure you know what's around you on the road;
- Help drivers to help you - look and hand signal before you start, turn or stop;
- Take care when crossing roads – even quiet roads can be hazardous because of occasional fast traffic;
- Always be on the lookout for car doors being opened by motorists;
- Avoid open cracks in the road and loose gravel.

If you are injured while cycling, consult a health care professional. Physiotherapists are regulated health care professionals who have the knowledge and skills to help relieve pain, increase mobility, build strength, and improve balance and cardiovascular function. A physiotherapist will assess your injury and provide appropriate treatment to help get you back up to speed as well as give advice on how to prevent recurrence of injury.

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