

What's so different about the OrthoBike?

You have to know this first: We designed the OrthoBike from the ground up for therapy. The bikes you find in every outpatient clinic are fitness bikes, not therapy equipment. They were designed by major fitness manufacturers for gyms and sold to therapy clinics.

1. The OrthoBike's first important feature is the adjustable variable-length pedal cranks.

You already know this: Every bike has a pair of pedals, and each pedal is connected to one end of a crank arm. The other end of the crank arm is fixed to the bike's axle.

What you might have experienced: You can't get the pedal all the way around on the exercise bike at home, in the gym, or at the therapy clinic. It hurts, and maybe you feel you aren't in control.

That's because the pedal crank is too long.

What you might not have thought about: A shorter pedal crank needs less knee bend or flexion than the long crank. You could ride a bike with a really short pedal crank (like 2") the day after your knee was replaced or your ACL repaired, when your knee flexion is around 60°. Without pain, and under your control! Ask your PTs for a bike with a shorter crank, one that actually meets your needs.

What you didn't know until now: The outpatient clinic doesn't actually have a bike with short enough cranks. That's why we're here. The OrthoBike's secret is adjustable, variable-length pedal cranks. You can easily make them shorter or longer by sliding them up and down.

See the numbers on the crank in the photo to the right? The number 5 is on the bottom so this is the longest pedal crank. You could push the pedal down so the number 4 is on the bottom to shorten the crank by one inch. And so forth to number 1 (which you can't see) for the shortest crank



The adjustable pedal cranks make the OrthoBike equal to five bikes, each bike with a different pedal crank length.

This is important because: You can start pedaling with the shortest pedal crank right after surgery when you have around 60° of flexion. Or, whatever your range of motion is, you can adjust the pedal crank length to make sure you can pedal without pain.

You can grow your range of motion and strength from there, under your control, a little at a time.

It's the same bike from the beginning of your rehab to the end.

Now that you know this terrific fact: Watch again in this short clip what Sandra did to shorten the pedal cranks. She wanted to pedal with less knee flexion.

https://youtu.be/6t_66Z0aZtM

Pedaling all the way around feels great. It is something you already know and trust, and it is the best exercise for your knee.

There is no other recumbent bike specifically designed from the ground up for therapy, and that has pedal crank arms that you can easily adjust to meet your needs.

2. The OrthoBike's second important feature is the long lever arms with the funky green grips on the handles.

These long arms are connected to the pedal cranks. You can move the pedals with only your hands, or with only your feet, or with both.

You get both upper and lower body exercise and conditioning.



If your knee hurts too much and you can't press down on the pedal, like the day after surgery, something else has to make the pedal rotate to get your knee moving. The long lever arms allow you to move the pedals with your hands; and your other leg can help.

You must always keep both pedal cranks the same length to reinforce correct gait patterns. Re-establishing correct gait neural pathways is a vital goal of rehabilitation. You can't do this in the early days without the lever arms.

Pedaling the OrthoBike early is "preventative insurance": It is really important to get your knee bending rhythmically and frequently immediately after surgery. Pedaling pumps the fluid out of the wounded tissues and helps the scar tissue lay down correctly around the knee.

If your body creates excess scar tissue (in about 6 -10% of knee patients) and you did not start pedaling early, you could end up with a stiff and bent knee after rehab.

Excess scar tissue can make your knee hard to bend and difficult to straighten. And painful. (Search the Internet for "knee flexion contracture," "adhesions knee replacement," and "arthrofibrosis knee.")

It is not possible to predict whether a person's body will create excess scar tissue, and the PTs may misdiagnose the cause of slow recovery during rehab. They can't treat it with their standard tools, anyway. Once you've got it, that's it.

If you end up with this problem, your doctor may recommend additional procedures like manipulation under anesthesia (MUA) or invasive revision surgery. Unfortunately, the more surgical interventions you undergo, the more likely you will suffer pain and limited mobility for the rest of your life. (Talk to us about home-use of an OrthoBike to loosen the stiff knee and straighten the bent knee if you already have these problems.)

Prevention by early, repetitive cycling motion of your knee, "just in case," is the best approach. You need the OrthoBike's dual-action lever arms to help you get your knee moving right away after surgery. **Moving early is preventative insurance against a bad situation.**

3. The OrthoBike's third important feature is the adjustable recumbent seat.

You don't have to climb onto the high seat of a fitness bike. The seat was designed for you and therapy.

There is plenty of room to swing your legs through.

You can move the seat back and forth *after* you sit down to put it where you want it.

The seat and the pedal crank arms work together to let you increase your flexion a little at a time—always pushing you to improve but always in your pain-free zone. We'll teach you the routine.



Insist on the best therapeutic exercise for your knees—OrthoBike.