Shirley Ryan Abilitylab®

Handcycle Training Tips

1. Be an Educated Exercise Enthusiast

Did you know that studies on spinal-cord-injured individuals have shown strength training and arm ergometry/handcyling for two times a week over a period of nine months increased power output and strength by 81% over their sedentary counterparts? Those same individuals reported less pain, stress, depression and overall higher quality of life scores as well!

You gain the most benefit and lessen the risks when you exercise in your target heart rate zone. Usually this is when your exercise heart rate (pulse) is 80% to 85% of your maximum heart rate. Your maximum heart rate is the highest your pulse rate can get. To calculate your predicted maximum heart rate, use this formula: 220 – Your Age = PREDICTED MAXIMUM HEART RATE

For example, a 50 year old would have a predicted maximum heart rate of 170 beats per minute (220 – 50 = 170). So, this individual's ideal target heart rate zone would be between 136-145 beats per minute (170 x 0.80 = 136; 170 x 0.85 = 144.5).

*Note that those individuals with spinal cord injuries above T6 may be less able to increase their pulse in response to exercise. A maximum heart rate for someone with tetraplegia might be as low as 120 or 130. Please consult with your physician on how to monitor exertion prior to starting your exercise program.

2. It's as Simple as Stretching

Before cycling, you should perform some active stretching to "warm up" your muscles. Active stretches are a great way to improve flexibility, mobility and your sports performance. These stretches should focus on the biceps, triceps, wrist flexors and extenders, pectorals, deltoids, latissimus and rotator cuff muscles. Doing arm circles (first small circles then increasing in size), marching your arms in place, non-weighted up rows and light rolling will all increase blood flow to those muscles and prepare you for the cycle event! Keep in mind that the "warm up" should not be vigorous as to cause any fast breathing or muscle fatigue.

3. Pace Yourself

Increasing an exercise program to build strength and endurance is the ultimate goal, but be patient! Research indicates that increasing your activity by 10% every week is an appropriate guideline for progressing training

programs. Each session should take about 20 or 30 minutes, three times a week. That just happens to be the same amount of moderate exercise recommended by numerous studies for optimum fitness. Be sure to space out these three days throughout the week to give yourself a chance to rest and recover between efforts.

4. Practice Makes Perfect

Incorporate training sessions on an actual hand cycle. If you have a hand cycle, find areas in your neighborhood or in parks that have slight graded incline (5% or less) for training in the beginning and work your way up to steeper hills of greater than 5%. Sign up for indoor training sessions at the Shirley Ryan AbilityLab Fitness Center in the month of October to test out challenging courses that will be similar to the course design on the big day or call 312.238.5001 for more information.

If you don't have a hand cycle and can't get down to the Fitness Center, the next best option to train with would be to upper body ergometers or rowing machines, commonly found at gyms, fitness and health clubs. For upper body ergometers use, start with lower wattage numbers (less resistance) and small bouts of 10-15 minutes. Gradually increase wattage and time the weeks leading up to the event.

5. Focus on Fuel

Food is the fuel for our body! Maintaining a well-balanced diet will give you optimal energy to train for the stair climb. Avoid large meals the day of the climb. You may want a 200-300 calorie snack prior to the climb.

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6. The Wonders of Water

Did you know that we lose a pint or more of water every day simply by breathing? And, dehydration of just 1 percent of your body's water can make you physically or mentally weaker. Staying hydrated, especially while hand cycling is so important! A key to successful workouts is keeping well hydrated before, during and after exercise. Start hydrating early by drinking 1-2 cups of water in the morning. Keep a water bottle with you all day long. Drink 1-2 cups before you exercise. Tip: Drink ½ - 1 cup of fluid for every 15 minutes of exercise!

7. Building Strength

Like most cardiovascular exercising, hand cycling requires a basic foundation of strength. Building a combination of aerobic and anaerobic strength is even more paramount in hand cycling. Your upper body muscles including the biceps, triceps, and deltoids are much smaller muscle groups than those located in the lower extremity. These muscles will fatigue faster than the lower extremity and also produce less aerobic power or output. Bicep curls, dips, seated rows, lateral raises; lateral pull downs and wrist curls are all examples of exercises to target the muscles used in hand cycling. As a general rule, each muscle that you train should be rested one to two days before being exercised further in order for the fatigued muscles to rebuild. Think about training one muscle group on day and it's opposite the next. For example, plan to exercise your biceps and chest muscles on a Monday and your triceps and back on Tuesdays.

"No pain, no gain." This statement is not only false, but can be dangerous. Your body will adapt to strength training, and will reduce in body soreness each time you work out.

8. The Wrist Bone is Connected to the Elbow Bone

With good movement mechanics, proper stretching and training, hand cycling will not cause excessive wear on your bones and joints. It is actually considered a non-weight bearing exercise that reduces the amount of pounding or shock that joints will naturally incur during weight bearing exercise. However, proper biomechanics and form are essential. When hand cycling there should always be a bend in the elbow through all phases, if your elbow is locking out, you are positioned too far back from the crank arms. Conversely you don't want to sit too close to the crank arms that your elbows have to flare out significantly to go through the range of motion. Gloves can be used to help reduce friction and prevent blisters on hands. Wrist straps or taping can also offer additional support and reduce overuse injuries in the wrists.

9. Pain During Training

Overuse injuries are very common, and joints like shoulders, elbows and wrists are very susceptible to these injuries if proper warm-up, cool down and stretching are not followed. The small group of muscles in the shoulder called the rotator cuff, whose main purpose are to help decelerate the shoulder during rotation are prone to overuse injuries, especially in hand cycling.

If you start to experience pain or discomfort that persists following exercise, then decrease the time or intensity at which you are exercising. You may also try applying ice to the painful area, elevation and gentle range of motion or movements. If the pain continues or gets worse after 48 hours, contact your personal physician to review prescribed medication or other treatment options.

10. Enjoy Cycling for a Cause!

Recruit friends and family to join you as you increase your fitness level! Having a training "buddy" can be fun and motivating. Hand cycling is a truly inclusive recreational activity that can be a fast and effective way to better health.

DISCLAIMER

It is strongly recommended that you have your physician's approval to participate in exercises like SkyRise Chicago. Please be sure to know and understand the potential side effects of all medications and supplements you will be taking on the day of the event.