

## Weight Training For Figure Skaters

<http://www.faqs.org/faqs/sports/skating/ice/rec-skate/off-ice/>

Weight training is also good, especially for improving jumps. But weight training is not recommended for kids because of the potential for long term damage to a growing skeleto-muscular system

In skill sports, such as skating, there is controversy over weight training. One school of thought is that the weight activity should reflect the activity of the skill to be performed, so there is some neuromuscular training effect as well as the muscular hypertrophy (strength-gain) of the groups involved.

The other view is that the activity should be UNLIKE the related skill. This supposedly will prevent psychological and neuromuscular confusion over whether you're performing the desired skill, or the weight activity that's like it.

The first school would appear to be appropriate for relatively static skills like a sit-spin. This is because an activity that is similar to this activity is going to have the broadest effect upon all the muscle groups involved in the activity, rather than just isolating certain muscles.

With highly specific skills such as jumps, it may be better to train all muscles in the legs with exercises that target the major muscle groups but are not similar to any jumps in particular.

The second school would be more likely to favor machines, which are designed to isolate specific muscles without the need for any form. These machines allow you to build strength without developing the neuromuscular skills (e.g. proprioceptive perception) necessary to control your actions.

This isn't considered a good idea - a major part of weight training, particularly for a beginner, is to develop the neuromuscular system to fully utilize the strength that you already have, mainly through efficient muscle fiber recruitment and control over the action.

Basic exercises should cover large muscle groups. A few exercises can train most of the body. The bits that are missed can be trained by more specific exercises, but this is not necessary at the beginner-to-intermediate level.

Find a competent fitness instructor to create a program. If you are looking for good information regarding weight training for young athletes, hook up with the National Strength and Conditioning Association (NSCA).

The address is:

National Strength & Conditioning Association  
P.O. Box 81410  
Lincoln, NE 68501  
(402) 472-3000  
<http://www.nasca-lift.org/>

The NSCA has several publications dealing with training young athletes. They have recently published several position papers on the subject.

AVOID power exercises like plyometrics (explosive jumps) until you have built the athletes' strength using basic strength exercises. **NEVER** do more intense plyometric exercises like bench jumps with pre-pubescent athletes.

### Improving turn-out

Turnout, the ability to point your feet in opposite directions, has to come from the hips joints, \*not\* the knees. You can tell if you're doing it right by turning your feet out as much as you can and then doing a knee-bend (ballet "plié").

Your knees should bend along the same direction your feet are pointed. If they're further in, you need to stretch more. Forcing turnout by twisting your knees is dangerous because they can be permanently injured!

The following exercise is excellent for improving your Mohawks and spread eagles by improving the range of hip rotation. After warming up, lay on your stomach (on the floor) with your knees spread out, and try to touch the soles of your feet together, while pressing your pelvis towards the floor.

Tough to describe this, hope an ASCII picture. Helps.

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                Right Knee
                \ /\
Head-> O-|-| >= <- Feet
                / \/
                Left Knee
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You sort of look like a frog - not a very dignified position, for sure. The stretch is achieved by trying to push your pelvis and feet toward the floor. Initially both feet and pelvis will likely be quite some distance from the floor.

Here's another exercise for the severely hip-rotation challenged.

1. Sit against a wall and bring your feet together and as close to your behind as you can comfortably.
2. Place your hands on your knees. Swing your knees apart to the point where your hips start to protest.
3. Push inward with your knees but keep your knees from moving by pushing back with your hands.
4. Relax your leg muscles. Push your hips a smidgen farther open. Hold for ten seconds, then bring your knees together a bit with your hands.
5. Repeat steps 2 through 4 ten times.

When you strain to bring your knees together (step 3) and then relax the muscles (step 4) the muscles relax completely, which allows you to stretch the hips without your muscles trying to stop you. You should do this exercise at least once a day.

Again, when you do these or similar exercises to improve turn out, be very careful not to force your knees!

### **Knee strengthening exercises**

The quadriceps (quads for short) are four muscle sheets running along the outer and inner thigh. Although one would think that skating is an excellent exercise for the quads, with all that knee bending, this is only true for the outer quads.

The inner quads are not used to the same extent. This could result in a strength unbalance between the muscles which can slowly pull the knee cap out of track and cause or aggravate chronic knee pain. Here are a couple of exercises which are useful to prevent and treat this condition:

- Slide your back down a wall until you reach a sitting position, without letting your knees pass beyond your ankles (the knee joint will be at about 90 degrees). Sit unsupported for as long as you can while squeezing a cushion or pillow between your thighs.
- Sit near the edge of a chair or low table with your feet resting on the floor. Raise one leg so that it is extended forwards (it does not have to be totally straight) and as turned out at the hip as you can manage (ie, the inside of your leg will be facing the ceiling). Don't slouch.

If necessary, use a wall to prop up your back. Stay like that for 30 seconds, then do the other leg, rest and repeat again.

### **Plyometrics**

The idea is that you get stronger and better at jumping by doing it. Repeatedly. In a row. In particular, plyometrics is supposed to improve the explosive spring that is characteristic of all good jumping.

So, e.g., you stand there, feet shoulder width apart, take a deep bend, and jump as high vertically as you can, keeping back straight and bringing knees up as high as you can.

Do this 20 times in a row, rest one minute and do it again. The next time, bring your legs up front together (a 'pike' position) and touch your feet with your hands. 20 times and repeat. Then as in a Russian split. 20 times and repeat. To a certain extent, you do this in ballet or martial arts, but not to the same degree of repetition.

You can see that you'd be building some big jumping muscles, and coordination. But your knees and back take an incredible pounding, and that's why many ex. physiologists and trainers don't like plyometrics. If you do enough reps to get the benefits, you may be very sorry. Much of that depends, obviously, on your body, the surface you jump on, and exactly how much you do.

### **Pilates**

Pilates is becoming increasingly popular as off-ice training for skaters. Although many variations of the original method exist, the common aim of all the exercises is to work the deep core muscles, with an emphasis in correct body alignment and stretchingskating. They increase both strength and flexibility, without adding bulk.

While many exercises require a special machine with pulleys and springs (somewhat resembling a torture instrument!), some can be done on the floor or on a mat. The disadvantage of Pilates compared to other types of cross-training is the relatively higher cost, particularly when using private instruction. Callanetics and even ballet can also achieve similar results.

### **Off ice warm-up**

Warming up properly before any sport activity is crucial to avoid injury, improve performance and reduce soreness after exercising. Unfortunately it is all too common to see skaters whose idea of warming-up is to do a single lap around the rink and then put their leg up on the rink barrier!

There is also the misconception that a good warm-up for skating involves only stretching. Stretching is beneficial and should be included in a full warm-up.

The really critical and most important part of warming up is to prevent injury and prepare you for skating. Start by performing some gentle physical activity for long enough to increase the temperature of your body ("warm-up") and increase the blood flow to your muscles.

Although in principle it is possible to warm up on the ice, by doing a few laps or certain Moves In The Field (MITF), **you will be wasting valuable (and often expensive) ice time on something which can be done for free off ice.**

Even if you think that working on stroking is never a waste of time, it is much easier to concentrate in proper technique and posture when you are not all cold and stiff.

It is impossible to stretch your leg muscles properly with your boots on. If you test or compete it is especially important to have an off-ice warm-up routine in order to be able to use the short on-ice warm up more effectively. Not to mention that the warm up helps relax and keep those pre-performance nerves under control!

#### **Suggestions for a warm up:**

Start by "lubricating" your joints: gently rotate your head, shoulders, elbows, wrists, waist, bend your knees, raise on your toe-tips and rotate your ankles. Do not force any movements!

Do a few of minutes of jogging, jumping rope or similar. This has to be intensive and long enough to break into a sweat, but you should not run out of breath or tire out your muscles. Take breaks to stretch your calf muscles if they feel stiff. You can also do a few single or (if you can) multi-revolution jumps or run through your program off-ice.

#### **Stretch all the major muscles in your body.**

There is some useful on-line material about stretching. Just be aware that some stretching exercises can be harmful if they are not done correctly. Your instructor can probably give you some tips and recommend some exercises

#### **Put on your skates and conquer the ice!**

The full off-ice warm up should last between 5-15 minutes. As a rule of thumb, the higher your skater level and the older you are, the more you benefit from a longer warm-up.

Even a few minutes make a big difference: you get a feeling for the ice much faster and skate with more power and better balance right from the start, being able to make more efficient use of the session.

#### **The cooling-down**

The cool down consists in a gradual decrease of the intensity of a physical exercise at the end of a work-out. The gradual ramping down of activity prevents a sudden stop of the blood flow to the muscles, which can cause cramps or a drop in blood pressure and a feeling of overall tiredness.

A gradual decrease of the intensity uses up the excess adrenaline, which can contribute to heart problems when left unused. Cooling down after a tiring skating session also helps to get rid of lactic acid that may have accumulated in your muscles during intense effort.

A cool down can consist in doing a few laps of gentle MITF before leaving the ice or simply working or something which does not require full power during the last minutes of the skating session.

Alternatively, you can walk around or jog gently for a couple of minutes off the ice. Finish the cool down with stretching. It is claimed that stretching the muscles used during exercise reduces stiffness and soreness -in any case, It feels great! Make sure that the muscles you stretch are totally relaxed.