

# **Metabolic Circuits for Hockey Conditioning**

**By David Lasnier**

The game of hockey requires a high level of sport-specific conditioning. You are probably familiar with the concept of high intensity interval training (HIIT). You probably also know that it's the best way to develop hockey-specific conditioning. The demands of the sport require you to perform short bouts of high intensity efforts interspersed with some periods of rest, whether it is just letting yourself glide on the ice, or sitting on the bench between shifts. Slideboards, shuttle runs, stationary bikes and the like are all well known modalities you can use to improve your conditioning.

An often overlooked modality for conditioning is the use of metabolic circuits. Metabolic circuits challenge the body in a totally different way than traditional conditioning methods. Our more basic modalities (slideboard, shuttle runs, etc) work on delaying muscle and neural fatigue to the targeted muscles by performing multiple sets (assuming you're using HIIT). The targeted muscles are mostly the lower extremity muscles, and this is fine because these are the muscles we primarily use when we skate. But when you think about it, playing hockey involves a lot more than just skating. Whether it is taking shots, battling for the puck with an opponent in the corner, giving body checks or being involved in fights, there is a lot more to hockey conditioning than just preparing for skating. And this is where metabolic circuits can become an interesting addition to your conditioning program.

## **When to use Metabolic Circuits**

The big advantage of metabolic circuits is that it can become a total body conditioning modality. By including different exercises for the upper body, the lower body, and the core, you can turn any metabolic circuit into a challenging total body effort. Metabolic circuits will improve your work capacity very quickly.

But that's not the only use for metabolic circuits. You can also use them when dealing with an injury, when conditioning needs to be adapted accordingly to work around it. Let's say you're dealing with a knee injury and shuttle runs and slideboard are painful to perform, you need to find an alternative method to get a training effect. Using metabolic circuits can still be used to improve your level of conditioning by mixing in different exercises that are going to be pain-free on the knee or that just won't involve any knee flexion at all.

Another interesting use for metabolic circuits is simply variety. Athletes generally like the addition of metabolic circuits when they've been using the slideboard for months. It keeps things interesting and creates a different stimulus, which is rarely a bad thing.

Whatever your reason for using metabolic circuits, it's important to understand that the goal is not to replace the traditional modalities that are an essential part of your program, but rather compliment them.

## **Breaking Down Metabolic Circuits**

There are several different categories of metabolic circuits to choose from.

- **Barbell complexes.** This is basically using anywhere from 4 to 8 different exercises involving a barbell and performing them in one sequence with the same load without putting the barbell down until you've completed every exercise. Complexes require a good mastery of whichever exercises you're going to include. Most of the time they're going to include things like squats, stiff-legged deadlifts, overhead presses, hang cleans and the like. Complexes are usually very demanding on your grip and upper trap muscles because you need to constantly hold the barbell for the whole duration of the circuit.
- **Medicine Ball Circuits.** This type of circuit, like the barbell complexes, involves performing a bunch of exercises in one sequence with the same weight without putting it down between exercises. But instead of using a loaded barbell, you're using a medicine ball. Med ball circuits are usually more upper body oriented and will stress your biceps and chest quite a bit. Med ball circuits typically include a variety of floor slams and throws against a wall.
- **Lifting Circuits.** Lifting circuits involve a combination of different weight lifting exercises. A good time to use lifting circuits is the pre-season, when the time available to lift is very limited; by using lifting circuits you get your lifting done and you get a conditioning component to it at the same time. You can use anywhere from 4 to 8 exercises and perform them all in a row with minimal rest. While there are unlimited exercise combination possibilities, I recommend using exercises that are not too technically demanding so when fatigue sets in, form is not compromised. An example of an overly-complex exercise would be any Olympic lifting movement like a hang clean or a hang snatch. Athletes with older "training ages" may be okay here, but for most athletes, these movements are technically difficult to perform and therefore more likely to suffer as fatigue develops. It's also a good idea to include movement pattern symmetry within these circuits. In other words, there should be at least one upper body pulling exercise for every upper body pushing exercise, at least one lower body pulling exercise for every lower body pushing exercise, and at least one core exercise in every circuit. So if you follow that template, you'd start with a five-exercise circuit:
  - 1 upper body push
  - 1 upper body pull
  - 1 lower body push
  - 1 lower body pull
  - 1 core

- **Bodyweight Circuits.** Similar to the lifting circuits, the bodyweight circuits include a combination of different exercises (4 to 8) all performed in consecutively without rest. You can mix in any kind of plyometric exercise, isometric holds or suspended exercises using a TRX. One big advantage with bodyweight circuits is that since the only resistance you're using is your bodyweight, it will induce less soreness than other type of circuits and you can recover faster from them. Because of this reason, they can very well be used as an active recovery protocol or when you're trying to limit the amount of stress imposed on your athletes' bodies.

The possibilities are pretty much endless with these circuits; your imagination is the only limit. Another option is to perform "medleys", which is just a combination of exercises from the different categories of circuits above. You absolutely don't need to stick with just one type of circuit. It might be appropriate to do so, depending on your goal or facility set-up, but you can definitely mix and match. The next couple of pages provide examples of circuits from each of the aforementioned categories.

## **Barbell Complexes**

### Complex #1:

Perform circuit 5 times, resting 60 seconds between rounds. Try and cut your rest by 10 seconds every week for 4 weeks.

Stiff-Legged Deadlift x 6
Bent-Over Row x 6
High Pulls x 6
Front Squat x 6
Push Press x 6
Good Morning x 6



Stiff-Legged Deadlift



Bent-Over Row



High Pulls



Front Squat



Push Press



Good Morning

## Complex #2:

Perform circuit 5 times, resting 60 seconds between rounds. Try and cut your rest by 10 seconds every week for 4 weeks.

Hang Clean x 5
Push Press x 5
Forward Lunges x 5/side
Overhead Squat x 5



Hang Clean



Push Press



Forward Lunge



Overhead Squat

## **Med Ball Circuits**

### Circuit #1:

Perform circuit 3-4 times and try to complete it in as little time as possible. Rest for 60 seconds and repeat.

Floor Slams x 10
Front Standing Scoops x 10/side
Side Standing Shotput x 10/side
Overhead Throw w/ Forward Step x 10/side
Chest Pass x 20



Floor Slams



Front Standing Scoop



Side Standing Shotput



Overhead Throw with Forward Step



Chest Pass

### Circuit #2:

Perform circuit 3-4 times and try to complete it in as little time as possible. Rest for 60 seconds and repeat.

Side Standing Scoops x 10/side
Side Standing Shotput x 10/side
Rotational Floor Slams x 10/side
Scoops between the Legs x 20



Side Standing Scoops



Side Standing Shotput



Rotational Floor Slams



Scoops Between the Legs

### **Lifting Circuits**

Circuit #1:

Perform circuit 4 times, resting 60 seconds between rounds.

DB Walking Lunges x 8/side
DB Chest Press x 12
Pullthrough x 12
Seated Rowing x 12
Stability Ball Front Plank w/ Minirollouts x 12



DB Walking Lunges



DB Chest Press



Pullthrough



Seated Rowing



Stability Ball Front Plank with Mini-rollouts

Circuit #2:

Perform circuit 3-4 times, resting 60 seconds between rounds.

KB (or DB) Swings x 12
Alternating DB Chest Press x 6/side
Goblet Squat x 12
Seated Rowing x 12
Low-to-High Rotational Cable Press x 8/side
DB Farmer's Walk x 50yards
Ab Wheel Rollout x 8



KB Swings



Alternating DB Chest Press



Goblet Squat



Seated Rowing



Low-to-High Rotational Cable Press



DB Farmer's Walk



Ab Wheel Rollout

## **Bodyweight Circuits**

Circuit #1:

Perform circuit 3-4 times, resting 60 seconds between rounds.

Overhead Walking Lunges x 10/side
T-Push Ups x 5/side
1-Leg Glute Bridge x 10/side
Suspended Rows x 10
Feet Elevated Side Plank x 20sec/side
Split Squat Iso-Hold x 20sec/side
Front Plank x 20sec



Overhead Walking Lunges



T-Push Ups



1-Leg Glute Bridge



Suspended Rows



Feet Elevated Side Plank



Split Squat Iso-Hold



Front Plank

Circuit #2:

Perform circuit 3-4 times, resting 60 seconds between rounds.

Box Jumps x 6
Yoga Push Ups x 10
Split Squat Iso-Holds x 20sec/side
Chin Ups x 5-10
Feet Elevated Side Plank x 20sec/side
Front Plank March x 10/side



Box Jumps



Yoga Push Ups



Split Squat Iso-Holds



Chin Ups



Feet Elevated Side Plank



Front Plank March

### **Medley Circuits**

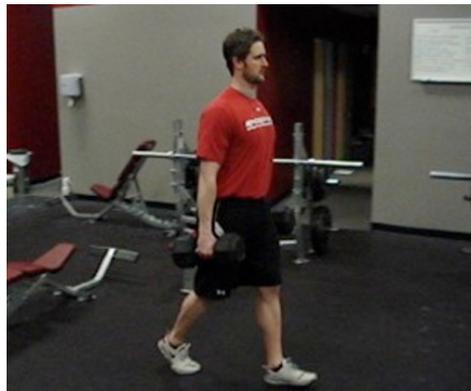
Circuit #1 (Full Body):

Perform circuit 3-4 times, resting 60 seconds between rounds.

Sled Drag x 50yards
DB Farmer's Walk x 50yards
T-Push Ups x 5/side
KB (or DB) Swings x 12
Suspended Rows x 12
Slideboard Bodysaw x 12



Sled Drag



DB Farmer's Walk



T-Push Ups



KB swings



Suspended Rows



Slideboard Bodysaw

Circuit #2 (Upper Body Emphasis):

Perform circuit 3-4 times, resting 60 seconds between rounds.

Med Ball Floor Slams x 12
Chin Ups x 5-10
Low-to-High Rotational Cable Press x 8/side
Yoga Push Ups x 8
Stability Ball Front Plank x 20sec



Med Ball Floor Slams



Chin Ups



Low-to-High Rotational Cable Press



Yoga Push Ups



Stability Ball Front Plank

Circuit #3 (Lower Body Emphasis):

Perform circuit 3-4 times, resting 60 seconds between rounds.

Box Jumps x 6
Front Squat x 6
50-Yard Shuttle Run
Split Squat Iso-Hold x 20sec/side
Feet Elevated Side Plank x 15sec/side



Box Jumps



Front Squat



Split Squat Iso-Holds



Feet Elevated Side Plank

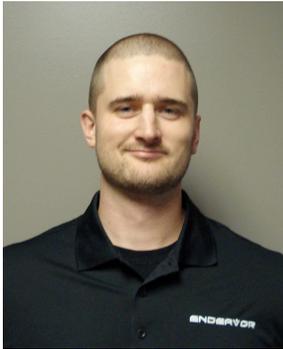
### **Wrapping it up**

On a closing note, it's VERY important to be smart about how you implement metabolic circuits in your own program or the ones of your athletes. Because of the high demands of these types of circuits, one can fall develop overtraining symptoms pretty easily if they add more and more volume in the form of metabolic circuits without consideration to the other competing demands on the body. Bodyweight circuits aside, metabolic circuits use external loading, which is not the case with traditional conditioning modalities. The use of external loading will induce greater fatigue and a longer recovery time than just doing shuttle runs and slideboard HIIT.

On a personal note, this is something I am always aware of with my athletes. I will take into account their specific needs and will use an appropriate periodization of the training volume to make sure we have a good training effect and appropriate recovery to produce the greatest results possible in the end.

If you're not sure on how to address these issues or how you should include metabolic circuits in your programs or the ones of your hockey players, I can help. Just visit <http://davidlasnier.com/services> to learn more about my online program design services and how I can help you.

## About David



David Lasnier is the Assistant Director of Athletic Development at Endeavor Sports Performance in Sewell, New Jersey, where he specializes in comprehensive athletic development and injury prevention. He has experience working with a wide range of athletes from the high school through professional levels. He is dedicated to bringing athletes to the next level by improving their strength, speed and most of all, reducing their sport-specific injury risk.

Over the last 7 years, David has gained experience as a personal trainer in a variety of gyms, a hockey coach for a high school development program, and assistant coach for the Edouard-Montpetit Lynx, a women's college hockey team in Quebec, where he was responsible for developing and implementing the team's off-season training program. In 2007, David interned as a strength and conditioning coach at Robert Morris University in Pennsylvania, where he worked with NCAA Division 1 athletes from different sports including hockey, football, basketball, lacrosse, soccer and softball.

David received his Bachelor of Science degree in Kinesiology from the Université de Sherbrooke in Quebec, Canada. He prides himself on constantly improving his knowledge base by investing a lot of time in continuing education through reading, attending seminars, and keeping in touch with world-renowned coaches, physical therapists and other professionals in related fields.

David played hockey growing up (like every other kid in Canada), he's a Montreal Canadiens fan, and his first language is French, which are all common things for people from Quebec. Hopefully you don't hold the English mistakes he makes in his writing (or being a Canadiens fan for that matter) against him!