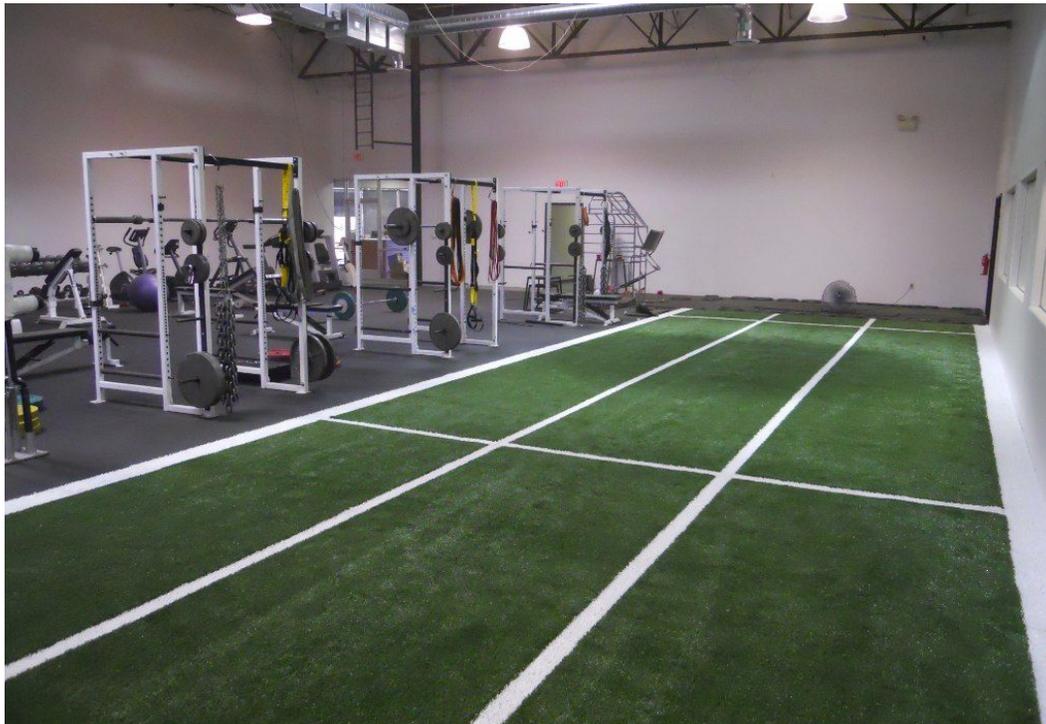


# How to Optimize Your Warmup Routine

Properly Warmup, Cooldown, and Prime your Body for Optimal Performance

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# Disclaimer

I hereby affirm that I am in good physical condition and do not suffer from any known disability or condition which would prevent or limit my participation in vigorous physical activity including but not limited to: resistance training, body weight calisthenics, cardiovascular training, jumping, running, stretching etc.

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These conditions may include, but are not limited to, heart attacks, muscle strains, muscle pulls, muscle tears, broken bones, shin splints, heat prostration, injuries to knees, injuries to back, injuries to foot, or any other illness or soreness that I may incur, including death.

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# Let's Talk About the Warmup...

One of the most important aspects of performance is **warming up** before a lift, conditioning session, practice, or game. It is a staple in every routine for sports programs everywhere, as it should be. It needs to become more of a staple in lifting and conditioning routines as well.

There is a major problem with warming up however...they are often done sub-optimally or without intent to prepare the body for the task at hand. We tend to view warming up as a way to prevent injury or to get the "body loose". Although these are potential side effects of a quality warmup, those are not the true benefits of one. When you warmup properly, you will prepare your body for **optimal performance**.

Let's break down warming up into three categories:

- 1) **General Warmup**
- 2) **Priming**
- 3) **Cooldown**

The **General Warmup** is the most known part of warming the body up. Often associated with "getting loose" everyone usually does some type of "warmup" before activity. There are 4 stages to the general warmup:

- 1) Blood Flow
- 2) Mobilize
- 3) Activate
- 4) Movement Patterns

**Priming** is the next level up after warming up. It is more sophisticated in its approach and is ideal to do right after a general warmup. When you prime your body, you are targeting specific movement patterns and stimulating your central nervous system (CNS) to be prepared to produce force.

The **Cooldown** is not part of the warmup before activity but it does play an important role. After a workout or competition, our body's are in a sympathetic or stimulated state (increased stress levels - this is generally good). When implementing a cool down, you will help the body calm down to facilitate recovery quicker.

Not mentioned in the categories of warming up was **static stretching**. Now, this is not to say static stretching is bad. It is more so to say that it is used improperly and in favor over other methods that are far more effective for warming up than not. Throughout the guide you will see how it is correctly applied in each category.

This guide will help bring the above information into easy-to-understand terms that everyone can easily apply.

With that being said...let's begin to optimize your performance!

# General Warmup

More than getting loose...we are going to prepare your body for optimal performance!  
Let's begin...

## Blood Flow

The start to any kind of activity requires us to increase blood flow throughout the body. We do this by increasing our heart rate. We do not have to increase it dramatically, but by getting our bodies moving even a little bit, we will begin to achieve this.

Blood flow activities can be broken down into two levels:

**Level 1** = Light | Low Impact | Initial Uptick in Heart Rate

- |           |                     |               |                |
|-----------|---------------------|---------------|----------------|
| - Walking | - Jumping Jacks     | - Jump Rope   | - Body Twists  |
| - Cycling | - Light Stretching* | - Arm Circles | - Jog in Place |

**Level 2** = Moderate | Medium Impact | Accelerated Heart Rate

- |             |                     |                 |              |
|-------------|---------------------|-----------------|--------------|
| - Jogging   | - Side Shuffles     | - High Knees    | - Butt Kicks |
| - Karaoke's | - Bounds            | - Back Peddle   | - A-Skips    |
| - B-Skips   | - Mountain Climbers | - Ladder Drills |              |

Start at Level 1, pick the movements you like the most or that are most appropriate for your activity that day. **Select between 1-5** Level 1 activities, no need to do them all, just remember to breathe and keep them light!

After, move on to Level 2 and **select 3-8 movements** that are most appropriate for you activity that day. These are meant to be done with intent and focus. As they are more advanced and begin the transition into the next phase of warming up.

## Mobilize

After getting our heart rate up we then move into mobilization patterns. Simply put, we start to target muscles and joints with movements that will help prepare them for activity.

These movements should be done slowly, with an emphasis on control. Do not rush through them. The slower the better.

The fun part about mobilization movements is that you can get creative and combine multiple movements. There is not a wrong way to combine movements as long as you are focused, doing them with intent and not hurting yourself.

To make things simple, we will categorize these warmups by a foundational movement and list subsequent alternative movements you can combine with it.

**Mobilization Movements:**

Foundational Movement	Alternative Movement 1	Alternative Movement 2
Forward Lunge	Overhead Reach	Side Reach
Reverse Lunge	Upper Body Twist	Kick Through
Lateral Lunge	Overhead Reach	Rotation into Next Lunge
In-Step Lunge	Internal/External Rotation	Leg out into Hamstring Stretch
Knee Hug	Into Calf Raise	Into Lunge
Quad Stretch	Into Single Leg RDL	Overhead Reach
Hammy Sweep	Forward Lunge	Lateral Lunge
Inch Worms	Into In-Step Lunge	Into Cobra Stretch

**Choose 2-6** Mobilization Movements and perform them with focus and intent. Adding the alternative movements are optional but they help you transition nicely into the Activation portion of the **General Warmup**.

**Activation**

When we say “activation”, what we mean is that we are prepping our muscles to perform faster athletic activity. Think of it as a combination of both blood flow and mobilization movements. Everything is a progression so the activation movements are the next level up in our warmup sequence.

Level 1 Activation Movements = Stationary

- Lateral Hops
- Rev Hops
- Pogo’s
- Squat Jumps
- Sprinter Hops
- Switch Kicks
- Power Pushup
- Seal Jacks

Level 2 Activation Movements = Open

- Jog to Sprint
- Sprints
- Broad Jumps
- Bear Crawls
- Crab Walks
- Power Skips
- Lateral Hop for Distance

Level 1 and Level 2 movements can be done in any order and also combined to make them even more effective. **Choose 1-6 movements from each level.** Each movement should be done with 100% energy and focus.

## Movement Patterns

Now that your body is activated and ready to go, this is a perfect opportunity to implement specific movement patterns that match your activity for that day.

When it comes to how to perform these, it all depends on what you are choosing to do. There is no right or wrong way to do anything as long as there is a reason for it and it is done with 100% focus and effort.

The Following are **Common Movement Patterns** to Perform:

- Bodyweight Squats
- MaGill Airplanes
- Cat/Camel
- Downward Dog
- Supermans
- Fire Hydrant
- Squat Holds
- Hip Bridge
- Cobra
- Pigeon
- Scap Pushups
- Knee Drives
- Single Leg Balance
- Single Leg Hip Bridge
- Child's Pose
- Scorpions
- Thread-the-Needle
- Leg Swings

To get even more advanced with specific movement patterns, use a set of resistance bands or loop bands to assist you. With these tools, you can move beyond the scope of strictly bodyweight movements and really enhance your warmup.

## Sample General Warmups

Warmup 1	Warmup 2	Warmup 3
Jumping Jacks	Jump Rope	Walking
Jogging	A-Skips	Arm Circles
High Knees	B-Skips	Mountain Climbers
Butt Kicks	Karaoke's	Ladder Drills
Side Shuffles	Reverse Lunge w/ Upper Body Twist	Forward Lunge w/ Overhead Reach
Forward Lunge w/ Side Reach	In-Step Lunge w/ Hamstring Stretch	In-Step Lunge w/ Int/Ext Rotation
Lateral Lunge w/ Overhead Reach	Quad Stretch into Single Leg RDL	Knee Hug into Calf Raise
Inch Worms	Rev Hops	Seal Jacks
Lateral Hops	Sprinter Hops	Power Pushup
Switch Kicks to Sprint	Jog to Sprint	Bear Crawls
Power Skips	Scap Pushups	Thread-the-Needle
Hip Bridge	Leg Swings	Cat/Camels

# Priming

If you follow the protocol for general warmups, you will have put your body in a position to perform at a high level for your activity that day. Now, if you want to take your warmup to an even higher level toward performance optimization we have to go more into specificity. This is where priming comes in.

Priming is very specific to the individual as well as the task at hand. Although it is possible to figure out what works for you on your own, it may be beneficial to work with a personal trainer or strength coach to help you really figure out your best path to success.

## Priming Principles

- 1) Static Stretching
- 2) Specificity
- 3) Post-Activation Potentiation (PAP)

**Static Stretching** is when you stand, sit or lie still and hold a single position in a stretch for period of time. Usually done in the 10-30 second-hold range. It has been demonized recently when it comes to warmups but it can play a role in priming when correctly applied.

The following are situations where it can be best applied when priming your body:

- Should only be used in a warmup on areas that are tight and overactive.
- Static Stretching should then be followed up by dynamic stretching to improve neuromuscular efficiency (dynamic stretching = general warmup).
- Static Stretching is generally best used post-workout/warmup when muscles are warm and the blood is flowing.

**Specificity** primers are directly correlated to your activity. After your individualized warmup routine, emulate the movement patterns in your sport or workout with dynamic, tension-based movements relative to that task.

Specificity Formula:

- 1) Figure out what muscles & movements are active in your activity.
- 2) Put together a series of dynamic movements that match that.
- 3) Engage the core at ALL times.
- 4) Use isometrics (constant squeezing of the muscle).
- 5) We want to create **TENSION**.

Example 1: **Squat Day.** Wrap a band around a pole then row, squeezing your back muscles and holding it isometrically. Then, while maintaining that row, sit down into your deepest squat, engaging your legs and core. Hold this position for 10 seconds, get up and repeat.  
*This fires the muscles necessary to perform a high quality squat.*

Example 2:           **Deadlift / Legs.** Wrap a band around a pole or a bar above your head. Keeping you arms extended, get into a hip hinge position and hold isometrically. While maintaining that position, bring your arms to your sides and go as far as you can while keeping your arms extended. Go back to start and repeat.  
*This fires the muscles necessary to perform a high quality deadlift.*

## **Post-Activation Potentiation**

Your nervous system holds the key to unlimited power potential. It is just a matter of unlocking it. That is where **Post-Activation Potentiation (PAP)** comes into play. PAP is more simple than it sounds but it is an advanced technique that only experienced athlete's and lifters should use. Beginners can do a regressed version of PAP but it won't elicit the amount of force production the traditional method will.

You unlock PAP by performing a heavy exercise followed by a high-velocity movement.

The heavy set "wakes up" or stimulates the nervous system. This stimulation allows for greater muscle contractile force for the following movement. Thus making the high-velocity movement more effective, leading to great rate-of-force development (RFD) gains. AKA higher force output.

To keep things simple, I will lay out standard forms of exercises that will help elicit PAP and thus increase RFD and amplify your body to perform at its optimal level.

### **PAP 1: Squat to Vertical**

- Barbell Squat | 1-3 reps | @ approximately 80% of your 1RM
- Rest for 30-90 seconds
- Vertical or Box Jump | 3-5 Reps | As explosive as possible
- Regression: *Instead of barbell squats do a concentric focus isometric squat pushing up against safeties. Look at the example for an idea.*
- Example: <https://youtu.be/BG3bJAi03rE>

### **PAP 2: Sled Push to Sprint**

- Sled Push | 5-15 yards | @ 1-2x your bodyweight
- Rest for 10-20 seconds
- Sprint | 20-40 yards
- Regression: *Instead of sled push do wall sprints for 5 seconds.*

### **PAP 3: Bench Press to Med Ball Pumps**

- Barbell Bench Press | 1-3 reps | @ approximately 80-90% of your 1RM
- Rest 30 seconds
- Grab a 5-15 lb. Medicine Ball | Hinge Position | As hard and fast as you can, chest pass or "pump" the medicine ball to the ground 3-5 times.
- Regression: *Instead of bench press do heavy band pushups for 5 reps.*

# Cooldown

The **parasympathetic nervous system (PNS)** is more famously known as the rest and digest system, because that is what it does. When the body is calm, energy can be used for recovery and digestion as opposed to using it for physical activity. In order to effectively recover after a workout or game we want to tap into this system.

A training session gets the body into a heightened state via the **sympathetic nervous system (SNS)**. The body is in an inflamed state after training. This is good because this inflammation assists in muscle-building. The issue lies when the inflammation becomes chronic or systemic. This can lead to decreased recovery times, poor performance, extreme or lingering soreness, etc., and can come from more than just overtraining.

**Lack of sleep, poor nutrition, dehydration, stress, among other things can all add to the systemic inflammation that can decrease performance.**

Our goal is to bring the body into a parasympathetic state (state of rest). We can do this by cooling the body down post-exercise. There are many ways we can achieve this. The following are some of the more common ways to do so:

## Cooldown Methods:

### 1) Static Stretching

- On tight muscles
- 5 to 10 minutes is more than enough time
- Hold for 10-30 seconds, maintain core engagement and focus on breathing.

### 2) Sauna

- 5 to 15 minutes is a good range (or to tolerance)
- Focus on breathing and be present with your thoughts
- Don't stay in for too long or have temperature's that are too high

### 3) Walking

- Going for a walk is a great way to calm down while getting activity in
- Keep the pace light and the distance to a point that will not stress your body

### 4) Listen to calming music

- Upbeat or high energy music can actually negatively impact our ability to cool down
- Calming music or a podcast you really enjoy are good ways to calm down

### 5) Meditation

- A meditative practice is a highly effective way to cooldown. Find what works for you!

**Health Tip:** Avoid eating highly processed foods or consuming shakes immediately after a workout. First, cool your body down before doing so. Consuming these products when still in a sympathetic state may cause digestive issues.

## About the Author



Coach Mike Cruz is a Certified Strength and Conditioning Specialist (CSCS) through the National Strength and Conditioning Association (NSCA) and a Certified Personal Trainer (CPT) through the American College of Sports Medicine (ACSM). Mike also has a Bachelor's Degree in Biology from SUNY Oneonta and his Master's Degree in Fitness and Wellness Leadership from SUNY Plattsburgh. From a young age, Mike has always shown a passion in the health sciences and continues to speak on the importance of education and continually educating oneself.

Mike found his passion for fitness through athletics. Playing both football and baseball in high school, he then went on to play baseball in college. After his collegiate career ended, Mike immediately began coaching college baseball the following year. From there, he began using his experiences and education as an undergrad in biology and applying it toward baseball coaching and training.

Since then, Mike has worked with hundreds of athletes in all sports helping them become bigger, faster, stronger and healthier. Currently a collegiate strength and conditioning coach, he also has started training clients free lance style in-person and online.

Mike trains and teaches with a fundamental principle in mind:

**“Healthier people equals a healthier society”**

This means that when people are physically healthier, they tend to make better decisions with their diets and life, which leads to feeling better, feeling happier, being more productive, and ultimately being kinder and making decisions that benefit everyone.

## Where To Find Coach Mike Cruz

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Facebook: Coach Cruz (@coachmcruz)  
YouTube: <https://www.youtube.com/channel/UC14n0Dtm0JH41G6GrFrZmDA>

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