

Learn the Ropes!

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You've probably avoided rope jumping as a form of exercise because you've heard it was high impact and difficult to learn. But when it's performed the right way, the jump rope can involve less pounding than jogging. Many people jump rope incorrectly by jumping too high and landing heavy on their feet. This can cause lower body injuries of the knees, ankles and feet. The risk is increased from the continuation of incorrect jumping and landing on hard surfaces. Jump rope is a skilled movement and total body activity that requires correct biomechanics in the take off and landing, combined with proper timing and coordination of the rope swing with each jump.

History

Since the beginning of time, man has jumped for various reasons, whether it is in the form of ceremonial dancing, escaping an enemy or just playing. Jumping or hopping is a natural movement that has been essential to man's survival, growth and development.

The first concrete evidence of jump rope activity can be seen in medieval paintings where children rolled hoops and jumped rope down the cobblestone streets of Europe. Although the exact origin of jump rope activity is unclear, early explorers saw aborigines jumping with flexible bamboo and vines as a form of play.

In the past, rope jumping was a male ritual and prohibited for women for fear that blood vessels could burst in their legs. Later, it became traditionally viewed as a game for schoolyard girls who chanted rhymes while most boys looked on it as a girlish thing to do. Today, jump rope has become a part of recreational and health club programs, all level sports training and is a sport in itself where females hold some of the world's fastest speed records (five to six revolutions per second).

Why Jump Rope?

A jump rope is one of the simplest, most inexpensive pieces of exercise equipment. It can be used indoors or outdoors and provides many benefits in a short period of time. The merits of rope jumping rest in its ability to challenge all three energy systems (ATP/CP, Glycolytic, Oxidative).

When you learn how to jump the right way, rope jumping can be performed in five to 10 minute sessions as a warm up to exercises or as a conditioning tool to improve aerobic and anaerobic capacity and power at the discretion of the jumper. It is a building block to fitness and has been scientifically proven to produce positive mental, physical and physiological changes in the body in as little as 10 minutes a day.

Rope jumping is a total body activity that incorporates muscle groups of the upper and lower body and is a multi joint movement. It has greater fat burning benefits than most cardiovascular activities, especially those that emphasize only lower body muscle groups. It develops upper and lower body coordination, balance, agility, limb speed and muscular endurance. According to research, 10 minutes of rope jumping at 120 revolutions per minute produces the same cardiovascular fitness as the following activities.

Cycling	2 miles in 6 mins
Tennis	2 sets
Running	1 mile in 12 mins
Swimming	12 mins
Jogging	30 mins
Handball	20 mins

A person weighing 150 pounds jumping rope at an average speed of 120 RPM burns 720 calories per hour. Calories expended are

determined by body weight. Therefore, a heavier person would burn more calories during rope jumping. Rope jumping rates a close second to running in the amount of calories burned, and when arm and complex foot movements are added to a jumping session, its fat burning capacities are immeasurable.

Choosing the Rope

Lightweight PVC material is the most versatile material because it is designed with the proper weight and thickness to maximize the rope's aerodynamic properties, making it easier to learn the basic skills and maximizing the possible number of repetitions that can be executed per set. A lightweight, high performance speed rope can easily be controlled and adjusted, and it responds easily to low through high intensity training and directional change with minimum air resistance.

Wear the Gear

Choose cross training shoes with good forefoot padding. They'll help with propulsion and absorption for take off and landing while reducing impact and minimizing the risk of injuries. Women should avoid hair ornaments and jewelry and wear a good support bra.

Check List for the Beginner

1. Choose a wood, rubberized or padded floor surface (not concrete).
2. Hold handles firmly in hands with a comfortable grip.
3. Keep upper body upright, arms close to sides at a 45 degree angle. Look straight ahead to maintain balance.
4. Start with rope resting behind knees.
5. Practice swinging rope around to form an even arc without jumping over the rope.
6. Coordinate the rope swing with each take off and landing for the perfect jump.
7. Make two inch circles with wrists.
8. Jump only one inch off the floor and land softly on the balls of your feet.
9. Progress slowly, avoid too many jumps at one time.
10. Stretch before and afterwards, especially calves.

Let's Start Jumping

The Bounce Step and Alternate Foot Step are two basic jump rope techniques that will help you to develop the proficiency necessary to use jump rope training in your fitness program. In addition, they will improve your conditioning level, reinforce proper jump rope form and create the muscle memory necessary to master the foot patterns of other training techniques.

Bounce Step (see Figures 1 and 2)

The bounce step is simple and effective. Time the swing of the rope while jumping with both feet. Here's how:

1. Jump approximately one inch from surface or high enough to clear rope.
2. Land lightly on the balls of your feet.
3. Do not let heels touch on landing. Stay up on the balls of your feet, and reload to repeat steps 1 and 2.

Begin with only one jump per rope swing at a time to establish timing and rhythm for the perfect jump and landing. Increase to five jumps per set until you can eventually perform 140 jumps without a miss. Master the bounce step before attempting the alternate foot step.



Figure 1



Figure 2

Alternate Foot Step (see Figures 3 and 4)

This is a similar movement to the Bounce Step, but instead of jumping with two feet, alternate jumping between both feet as if running

in place. Jump a little higher than an inch from the surface. Jump by lifting the knees forward at 90 degrees to avoid catches of the rope. Like this:

1. Swing the rope around and jump over it with one foot. From this position, on the second turn of the rope jump over it with the alternate foot.
2. Continue alternating feet (lifting knees as if jogging in place) at a slow pace until you establish a comfortable jumping rhythm.
3. Count only the right foot and multiply by two to get the total number of jumps.

After jumping over with one foot, be sure to wait for the rope to pass over your head before jumping over it again with the opposite foot. Please Note: Kicking the feet backward or behind you while executing this technique will cause your feet to catch on the rope. Learn to master the basic bounce step before attempting the alternate foot step.



Figure 3

Figure 4

Mastering Techniques

Your goal is to build to 10 minutes of jumping three times a week. Begin with five to 10 jumps per set for a total of 10 sets per training session. Rest as needed between each set. Gradually increase the repetitions for each set by 10 to 25 reps as timing and jump capacity improve.

As your body develops muscle memory and your brain makes the proper neural connections, your timing, rhythm and endurance will dramatically improve and so will your conditioning. You will have developed a basic jump rope proficiency when you can perform 140 continuous jumps using both the basic Bounce Step and Alternate Foot Step.

As proficiency improves, build from 140 jumps to a basic jump rope capacity of 500 jumps. Combine the Alternate Foot Step and Basic Bounce Step and build from the basic jump rope capacity of five to 10 minutes of continuous jumping.

Six Week Jump Rope Program for the Beginner - Preparation Phase

The first goal is to master the "Perfect Jump" and become proficient at executing both the basic bounce and alternate foot step. At the end of the first week, you should have mastered the biomechanics of the perfect jump, which includes a safe take off and landing and jumping only high enough to clear the rope.

During this program, do not focus immediately on improving endurance or speed. Focus on technique to establish a solid jump rope foundation in order to progress safely. Remember to rest in between sets! Stretch calves before, during and after each jumping session. This is very important at the early stages of your jump rope program due to the increased demand placed on the calf muscles. Once you become more conditioned, stretching after each jump rope session will be sufficient.

Techniques: Basic Bounce and Alternate Foot Step

Tips: When using the Alternate Foot Step, count right foot only and multiply by two.

Week 1: Shadow Jumping (three steps) - 500 Jumps Without the Rope

MONDAY	WEDNESDAY	FRIDAY
<p>Basic Bounce (no rope) Step 1 - Jump without the rope. Land lightly</p>	<p>Basic Bounce (no rope) Step 2 - Jump while</p>	<p>Basic Bounce (w/ rope) Step 3 - Practice swinging rope around,</p>

on balls of feet and lower heels down without touching the ground.	turning rope in one hand to one side of your body.	forming a nice even arc. Do not jump through lope. Repeat and jump through loop one time = 1 rep
Reps: 25 Sets: 20 Rest: 15 sec or less	Reps: 50 Sets: 10 Rest: 30 sec or less	Reps: 25 Sets: 5 Rest: 60 sec or less
Alt Foot Step (no rope) Step 1 - Jump without the rope. Land lightly on balls of feet and lower heels down without touching the ground. *See instruction for this jump earlier in article.* Count right foot only.	Alt Foot Step (no rope) Step 2 - Jump while turning rope in one hand to one side of your body. *See instruction for this jump earlier in article.* Count right foot only.	Alt Foot Step (w/ rope) Step 3 - Practice swinging rope around forming a nice even arc. Do not jump through lope. Repeat and jump through loop one time = 1 rep *See instruction for this jump earlier in article.* Count right foot only.
Reps: 12 Sets: 20 Rest: 15 sec or less	Reps: 25 Sets: 5 Rest: 30 sec or less	Reps: 12 Sets: 5 Rest: 60 sec or less

Week 2: 100 Jumps Stop and Go

MONDAY	WEDNESDAY	FRIDAY
Basic Bounce Step - Jump over rope 2 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 5 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 10 times and then stop = 1 rep.
Reps: 5 Sets: 5 Rest: 60 sec or less	Reps: 2 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 5 Rest: 60 sec or less
Alt Foot Step - Jump over rope 1 time (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 2 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 5 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.
Reps: 5 Sets: 5 Rest: 60 sec or less	Reps: 2 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 5 Rest: 60 sec or less

Week 3: 200 Jumps Stop and Go

MONDAY	WEDNESDAY	FRIDAY
Basic Bounce Step -		Basic Bounce Step -

Jump over rope 10 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 20 times and then stop = 1 rep.	Jump over rope 25 times and then stop = 1 rep.
Reps: 2 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 4 Rest: 60 sec or less
Alt Foot Step - Jump over rope 5 time (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 10 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 12 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.
Reps: 2 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 4 Rest: 60 sec or less

Week 4: 300 Jumps Stop and Go

MONDAY	WEDNESDAY	FRIDAY
Basic Bounce Step - Jump over rope 30 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 38 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 50 times and then stop = 1 rep.
Reps: 1 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 4 Rest: 60 sec or less	Reps: 1 Sets: 3 Rest: 60 sec or less
Alt Foot Step - Jump over rope 15 time (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 18 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 25 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.
Reps: 1 Sets: 5 Rest: 60 sec or less	Reps: 1 Sets: 4 Rest: 60 sec or less	Reps: 1 Sets: 3 Rest: 60 sec or less

Week 5: 400 Jumps Stop and Go

MONDAY	WEDNESDAY	FRIDAY
Basic Bounce Step - Jump over rope 50 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 63 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 100 times and then stop = 1 rep.
Reps: 1 Sets: 4 Rest: 60 sec or less	Reps: 1 Sets: 3 Rest: 60 sec or less	Reps: 1 Sets: 2 Rest: 60 sec or less

Alt Foot Step - Jump over rope 25 time (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 32 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 50 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.
Reps: 1 Sets: 4 Rest: 60 sec or less	Reps: 1 Sets: 3 Rest: 60 sec or less	Reps: 1 Sets: 2 Rest: 60 sec or less

Week 6: 500 Jumps Continuously

MONDAY	WEDNESDAY	FRIDAY
Basic Bounce Step - Jump over rope 125 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 125 times and then stop = 1 rep.	Basic Bounce Step - Jump over rope 250 times and then stop = 1 rep.
Reps: 1 Sets: 2 Rest: 60 sec or less	Reps: 1 Sets: 2 Rest: 60 sec or less	Reps: 1 Sets: 1 Rest: None
Alt Foot Step - Jump over rope 75 time (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 75 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.	Alt Foot Step - Jump over rope 125 times (with the right foot and then the left foot, then stop) = 1 rep. Count right foot only.
Reps: 1 Sets: 2 Rest: 60 sec or less	Reps: 1 Sets: 2 Rest: 60 sec or less	Reps: 1 Sets: 1 Rest: None

In the next article, we will work on building jump rope endurance with safe progressions while learning additional techniques for a total body workout.

References:

1. Baker, J.A. Comparison of rope skipping and jogging as methods of improving cardiovascular efficiency of college men." Research Quarterly, 1969. Dr. Ken Cooper of the Cooper Institute.

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