

the **CrossFit** JOURNAL ARTICLES

The Back Handspring

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If you ask beginner gymnasts what skill they most want to learn, the most common answer is “a back handspring.” It is a visually impressive skill and is frequently used in performance arts and in movies. It is a functionally powerful movement and helps develop strength, power, and agility. Learning to do a back handspring properly and safely also requires individuals to overcome fear and override many reflexive instincts. Overcoming these obstacles is a valuable skill in itself—one that carries into other aspects of training—and life.

Fear is a significant factor in learning a back handspring. The fear response is a good thing. Executed improperly or without appropriate progressions, an attempted back handspring can lead to serious injury. Follow all steps correctly and thoroughly. Ensure that you have the right equipment (including mats and pads) and spotting for each of the stages.

The drills

The first step in learning a back handspring is learning how to sit back properly. The main direction of the back handspring is backward, not upward. This is somewhat counterintuitive, and you must learn how to sit back properly so your jump travels backward. Find a stack of mats that is just below hip height. Stand facing away from the mats with your heels about two feet away from them. From this position, sit back and jump backward onto the mats. You should try to travel as far across the mat as possible leading with your hands. During the sit, your torso and lower leg should remain vertical. You must bend at the hip and the knee so that your hips track well behind your knees, and your knees stay directly above, or just behind your feet. You will not

1 of 5

The Back Handspring (continued...)



Hips already open, which eliminates hip extension in the jump and severely limits power



Leaning forward, which results in a hip thrust during the jump that does not drive the back handspring backward



The sit is on balance, which will make the subsequent jump will go up, not backward



Correct sit: off balance, torso upright



Flight phase of jump drill; full extension

remain on balance; once the sit is initiated you will need to jump onto the mat, step, back or fall. At the beginning of the drill you will be looking at the wall in front of you. As you jump and land you will be looking at the ceiling.

A similar drill can be performed without a large mat, but it requires a spotter. The spotter will stand behind the gymnast with their hands on the gymnast's lower back. The gymnast will then sit and drive backward. The gymnast will not arch back as he would for the drill on the mat. This drill primarily trains the sit and jump phase of the skill. This drill reinforces that a back handspring is a jump backward, not upward.

Another drill trains the second half of the back handspring. Handstand snap-downs will help to develop the snap and block necessary to finish the back handspring with good positions and sufficient power to continue to another back handspring, or to an aerial salto skill.

Start with a panel mat or box that is about 12 inches tall. Kick to handstand on the mat, then



The Back Handspring (continued...)

snap your feet down off of the mat, back into your initial standing position. Do not allow your arms to drop after the snap-down. You should aggressively snap into a hollow position as you push off of the mat. Your goal is to land with your feet in front of your knees and your knees in front of your hips. Your upper body will be hollow and your arms will be by your ears. (See images following page.) This is a powerful move: if the snap-down is executed properly, you will need to walk or run backward to avoid falling down.

A back handspring is among the easiest skills to spot. Most people can become competent spotting back handsprings with just a few minutes of instruction. The spotter will kneel behind and off to one side of the gymnast. Assuming the spotter is kneeling on the gymnast's left side the spotter will place their left hand on the back of the gymnast's left leg just above the knee with the spotter's hand supinated. The spotter's right hand will be placed, thumb up, on the gymnast's lower back. At this point the gymnast will sit and jump back. The spotter will help support the gymnast as they jump back onto their hands. The spotter's left hand is to assist with rotation. Once the gymnast's hands have contacted the ground it is easy to assume that the dangerous part of the back handspring is over and the spotter can relax. Do not make this mistake. Quite often, especially in adults, the gymnast is completely lost and can come crashing to the floor as their legs rotate over their body. To help the gymnast finish the skill the spotter can move their left hand from the gymnast's leg to the gymnast's stomach. This will help slow the descent and help ensure that the gymnast's feet are the first things to contact the floor. (See images to right.) All instructions are reversed for a spotter being on the gymnast's right side. With two competent spotters, one on either side, most people can perform a back handspring safely.

Shoulder flexibility will aid progress in the back handspring. If you are unable to fully open your shoulders, it will affect the mechanics and flow of a back handspring. Practice bridges regularly to improve this flexibility and develop a feel for the arch required during a back handspring. When practicing bridges, be sure to push your head and shoulders out over your hands so the primary stretch is in your shoulders. Broomstick dislocates and cat stretches will also help improve flexibility.



The Back Handspring (continued...)



The common mistakes

An extremely common mistake is to turn your head as you jump into the back handspring. This is a natural reaction and often a difficult habit to fix. It is a fear response, so the best way to fix it is to reduce the perception of risk in the skill. With two spotters, perform slow back handsprings. Sit back while looking at the wall, and then extend into the back handspring. Be sure to follow your hands with your eyes. Focus only on extending and reaching back for the floor. Relax and take it slow. Two spotters can carry you through the skill slowly. As you become more comfortable accelerate the movement. Gradually add a stronger jump into the movement. As you progress, continue to ensure you are watching your hands.

Undercutting a back handspring occurs when the hips are thrown forward during the jump. This severely limits the power in the jump and will reduce the function of the skill, as well as increase the time it takes to learn a back handspring. If you thrust your hips forward during the jump, the power of your hip extension does not carry into the jump, and the only motive force for the jump comes from leg extension, which is not sufficient to drive the back handspring. The primary cause of the hip thrust is leaning the torso forward during the sit phase of the move. If your torso drops forward during the sit phase, it is very difficult to generate effective hip extension during the jump phase. The sit should occur with the torso upright. (There is an exception to this for certain special case back handsprings when the gymnast wants to loft the back handspring, but that should be limited to those with a strong basic back handspring.) If you are throwing your hips forward as you jump into the back handspring, back up and practice the sit and fall drills. Be critically aware of your torso position during the drills.

Even when all the drills leading up to a back handspring are performed correctly, it is still very common not to sit back sufficiently when performing a back handspring. This will result in a back handspring that goes too high, or in an ineffective hip thrust. A back handspring that goes too high will have limited power and will not flow well. When sitting back at the beginning of the move, be sure to have your knees behind your feet and your hips behind your knees. Regularly practice the sit and jump drills until this movement is natural and fluid.

A “monkey flip” occurs when the gymnast never fully extends into the back handspring, or rushes it by trying to bring their feet around too quickly. This is the mechanics used by monkeys when they perform back flips and back handsprings.

The Back Handspring (continued...)

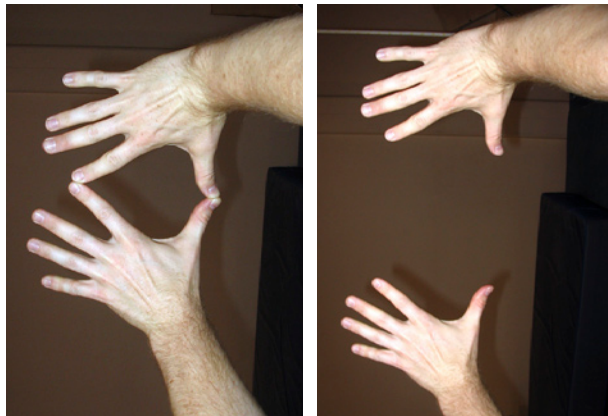
If you begin to pike or your shoulder angle closes before your hands contact the ground, you are doing a monkey flip. In a monkey flip, the gymnast's feet will land very close to their hands. This blunts the power carried in the back handspring and reduces its utility in terms of transfer to other skills.

Hand placement

Proper hand placement is also important to maximize function and power in a back handspring. In addition, proper hand placement will help reduce strain on the wrists. When your hands contact the ground, they should be turned inward and spread apart. To see the proper position, form a tear drop shape by putting your right and left index fingers and right and left thumbs together. Then separate your hands to about shoulder width. This is the position your hands should be in when they contact the ground.

This hand position allows for better function in the shoulders than with the hands turned out. It allows for the strong block into a hollow position that is required to properly complete a back handspring. A strong block (or push away from the floor with the arms) will allow the back handspring to turn over sufficiently, with the upper body traveling upward to connect it to additional back handsprings or to an aerial.

Keeping your hands turned out significantly reduces the strain on your wrists by increasing the angle between your wrist and your forearm, so that the wrist bend is not so radical. Additionally, if an arm bend occurs during the back handspring the wrist will not be compromised with your hands in this position. If your hands are turned out this will not be the case and bending your arms will dramatically increase the strain on your wrists.



Proper execution: Length, flow, and rhythm

A proper back handspring will travel. It should be low and long. This enables it to carry momentum effectively for transfer into subsequent skills. When practicing back handsprings you should try to cover a lot of distance. A standing back handspring should travel nearly twice the gymnast's height. A back handspring that follows another skill should be even longer.

Back handsprings should flow well. As a gymnast performs a string of back handsprings, they should be alternating between a standing extended arch reaching back with their hands to an inverted hollow position with arms by their ears. Subsequent back handsprings will accelerate and lengthen. Developing a good flow allows the gymnast's power to go directly into each handspring, rather than fighting poor mechanics.

Good back handsprings can be identified purely by sound. Timing between contact points with the floor will be even. The interval will begin to shorten with subsequent back handsprings, but there should be no difference in time between feet to hands and hands to feet. It is common to hear a pause between the feet contacting the floor and the hands contacting the floor, followed closely by the feet contacting the floor again. This is indicative of going too high in the back handspring.

Practice to keep your back handsprings long, low, and even. Proper mechanics will allow them to carry momentum, which will enable you to perform long series of back handsprings or connect the back handspring into aerial salto skills. A strong powerful back handspring is essential to performing higher-level back tumbling skills.



Roger Harrell is a former competitive gymnast with twenty years of experience in the sport. He has continued to train in the sport well beyond his competitive years. He has run several competitive gymnastics training programs and currently focuses on coaching adults and bringing the benefits of gymnastics to those outside the usual community. He is the developer, designer, and webmaster of www.DrillsAndSkills.com.