

“How Percussion Educators Can Help Students Prevent Injuries”

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Using Yoga to Help Prevent Percussion Injuries

by Dr. Brad Meyer and Sherri Fleshner

Playing percussion is a physically intense activity, especially when referring to the specific areas of percussion such as the marching arts and hand drumming. An important part of being a percussion educator is to help students avoid any preventable injuries by helping them understand how to take care of their bodies. Sherri Fleshner, a Registered Yoga Teacher and viola teacher and Dr. Brad Meyer, a member of the PAS Health and Wellness Committee, will discuss different yoga movements that will help increase flexibility in different areas of the body in order to help prevent injuries and increase relaxation while playing. Sherri Fleshner and Brad Meyer have created several short Youtube videos that describe and demonstrate the poses mentioned below. To view these videos, please visit Dr. Meyer's website - <http://www.Brad-Meyer.com/yogavids> - or search Youtube for "Using Yoga to Help Prevent Percussion Injuries."

FINDING YOUR PERFECT BALANCE

Mountain: Stand with your feet hip width apart. Connect your feet fully on the ground as you start to stack your joints and vertebrae. As you reach the top of your spine, balance your skull on top of your spine, reaching the crown of the head upwards. Inhale and exhale through the nose. Mountain poses helps with finding your balance and posture and helps to connect the body with the breath.

POSTURE AND UPPER BODY RELAXATION

Shoulder Rolls: Find Mountain pose. As you inhale, bring the shoulders up towards the ears. Suspend the breath as you press the shoulders back. As you exhale, let the shoulder blades slide down your back. Continue through a few rounds of breath. Shoulder rolls help to relax the muscles in the shoulders and help to relax the body and mind with the breath.

Crane in Flight: Start in Mountain. As you exhale, bend the knees and start to sit in an imaginary chair behind you. Feel the weight in your heels and keep the chest lifted. Cross your wrists in front of your legs. As you inhale, straighten the legs and open the chest as you bring your arms out to the side, elbows bent and fingers up. Continue to move with the breath. Crane in Flight helps with opening the heart and chest and counteracting any slouching that you might have been doing throughout the day.

Down Dog at the Wall: Stand facing a wall, arm's length away from the wall. Bring your hands onto the wall with the fingers pointing up. Step back one step until you are leaning into the wall as if you were in a push up position. Start to bring the tailbone back as your chest and head start to drop through your arms. Hold for a few breaths. Down dog at the wall is used to help stretch the shoulders and upper back.

Doing it against the wall (versus the floor as they do in yoga classes) helps to protect the wrists and hands.

SEATED STRETCHES FOR DRUMSET

Seated Cat and Cow: Sit at the edge of your chair, feet fully on the ground and find Mountain pose in your upper body. Bring your hands to your knees. As you inhale, start to lift the heart and the chest while gently letting the head drop back (Cow). As you exhale, start to round your back and let your shoulders open around the body. The head can start to drop forward (Cat). Continue through a few rounds of breath. Cat and Cow helps to stretch the upper back, lower back, chest and neck.

Seated Twist: Sit at the edge of your chair, feet fully on the ground and find Mountain pose in your upper body. Twists begin at the base of the spine and work up to the crown of the head. Begin twisting to the right, bringing your left hand across the right knee and your right hand on the seat back. Hold here for a few breaths. Untwist starting at the head and working back down. Repeat on the other side. Twists are great for your spine and core. Twists help to bring fresh blood and oxygen into the body.

HAND AND WRIST STRETCHES

Moving with the breath and interlacing fingers: Sit or stand in Mountain. As you inhale, bring your arms out to the sides and overhead. Press palms together as you exhale your hands down to your heart. On your next inhale, interlace fingers and press hands out in front, palms facing out. Continue to move your hands overhead, palms up. Repeat as many times as you like, always moving with the breath. This movement is great to loosen up the fingers, wrists and shoulders.

Prayer Hands: Bring your hands, palms together, in front of your heart. Start to rotate your fingers and wrists until the fingers point forward. Take a few breaths here. Return your hands back to prayer position. As you exhale, start to release your hands down. Try to keep your hands and fingers together as long as possible before they separate. Prayer hands pose is used to loosen up the wrists and fingers.

Fist Wrist Stretch: Find a comfortable seated position and bring your palms to face up. Make fists with your hands and bend the wrists in towards the arms, flexing the wrists. Without changing the bends in your joints, turn your arms over and press the top of your hands into your legs. Feel the stretch travel through the backs of your hands and wrists. Hold for a few breaths and release and gently shake out your hands. The fist wrist stretch helps to stretch out the wrists, hands, and forearms.

HIP OPENERS FOR TIMPANI PLAYERS

Sunflowers: Come into a wide leg stance, pointing your toes slightly out. As you inhale, bring the arms overhead and keep the legs straight. As you exhale, bring your hands to your thighs, bend your knees over your ankles, and hinge forward at the hips. Your spine is now parallel to the ground. Inhale, hinge your upper body back to center, straighten your legs, and bring your arms overhead. Continue through a few rounds of breath. Sunflowers help to open the hips, groin, and shoulders. They also help to warm up the body by using some of the bigger muscles throughout the movement.

Kneeling Lunge: From a standing position, bend into a forward fold, keeping a bend in the knees and release your hands to the ground. Step the right foot back and let the right knee come to the ground. Your left foot is in front, knee is stacked over the ankle. The right leg is back, top of the foot on the ground and the hip is slightly in front of the knee. Inhale and bring your arms overhead or to your front thigh. Feel the stretch in the front of the right hip. Take a few rounds of breath and release the hands down. Either switch sides or go into Lizard pose.

Kneeling lunge is a great stretch for anyone who is seated for long periods of time because it helps to open the front of the hips and the glutes.

Lizard: From your kneeling lunge, bring both hands inside your front leg. You can keep the arms straight or start to bend the arms to sink deeper into the stretch. For another variation, you can tuck the back toes and lift the back knee off of the ground, straightening the leg. Release and do other side along with the kneeling lunge. Lizard is another great hip opener. It is perfect for anyone who sits for long periods.

MISCELLANEOUS POSES

Camel: Start in Mountain pose. Make your hands into fists and bring them into your low back. Start to lift your heart and chest up to the sky as you come into a back bend, elbows pointing back. Camel stretches your chest and shoulders and brings you into a nice backbend, which is a counter pose to any forward bending and leaning over.

Shoulder Stretch with Strap: Stand in a Mountain pose. Hold a strap between your hands, keeping the hands shoulder width apart. As you inhale, bring your arms and strap overhead. Once directly overhead, see if you can bring the hands a few inches back while keeping the arms straight. On an exhale, release the arms. Repeat as many times as you would like.

Cobblers: Come to a seated position on the floor. Feel your sitz bones underneath you. Start to bend the knees and release them out to the sides as you bring the soles of your feet together. Feel free to stay here or start to hinge at the hips and forward fold. Hold wherever you feel the stretch and breathe into the stretch. Cobblers pose helps to stretch the hips, glutes and low back.

Supine One-Leg Stretch with Strap: Find a comfortable position on your back. You can have your legs straight on the ground or bent. Bring a strap around the ball of the right foot and bring that leg into the air. Keep the leg straight as you hold on to the strap and release your upper body onto the ground. Start to point and flex the right foot, observing how it changes the stretch. Then, release from the pose and switch sides. The stretch helps to keep your back supported while giving you a nice hamstring and calf stretch.

CONCLUSION

The yoga poses mentioned in this article are meant to be a starting point for individuals to begin exploring yoga and the numerous ways it can be beneficial to percussionists. Before starting any type of exercise program, be sure to talk with your doctor to make sure you are healthy enough to begin this or any type of exercise program. The best way to ensure you are doing these or any yoga poses correctly is to work with a trained yoga instructor either one-on-one or in a class setting. Yoga classes are offered in most areas and have differing levels depending on the level of intensity and experience you have with yoga. If you do any type of yoga pose or exercise and you feel pain, stop immediately to avoid injuring yourself.



Sherri has practiced yoga for over 15 years and has been teaching yoga since 2011. She has trained through YogaFit and the Living Yoga Program. She is a RYT-200 and has specialties in Therapeutic Back Care, Pre-Natal/Post-Partum, and seniors. She encourages her students to really listen to their body and to push themselves, but be mindful of their limits. Sherri also plays both the viola and violin.

Dr. Brad Meyer is the Director of Percussion Studies at Stephen F. Austin State University (Nacogdoches, TX). He is also a member of the PAS Health & Wellness Committee and Secretary for the Texas Chapter of PAS. More information about Dr. Meyer can be found at <http://www.Brad-Meyer.com>



Proper Instrument Height for Percussionists

by Dr. Brad Meyer

The most common problem young percussionists face is not knowing how to properly set their instrument(s) to the appropriate height in relation to their body. Proper height adjustment is crucial for all ages of percussionists as it can either help or hinder their development in obtaining the correct grip and stroke. There are “quick tricks” some educators give young percussionists to help them set their instruments to the appropriate height, but these shortcuts rarely end with the instrument being at the correct height for each student. Just as band directors take time to discuss embouchures and hand positions with wind/brass instruments, directors should also give the percussionists the appropriate amount of instruction on how to get instruments to the correct height. Students who learn how to adjust instruments to the proper height early on in their education have a steeper learning curve with fewer grip and stroke problems.

THE BASICS

Percussionists who play matched grip for concert and/or marching percussion should have their instrument set so their forearm is at a slight (approx. 10-15 degrees) downward sloping angle to the instrument. The palm should be parallel with the floor and the shoulders should be relaxed with the elbows close to the side. The elbows will be slightly behind the center of the students’ body (about 1-2 inches). A common way to describe the correct wrist/arm/shoulder position is to have the student relax as if they are standing up, talking with friends in the hallway. From that position, simply raise the hands while keeping the arm and shoulder relaxed until the forearm is gently sloping downward at about 10-15 degrees with the palms parallel to the floor. The proper wrist, arm, and shoulder placement can be seen in Example 1 and 2.

Example 1 and 2: Proper wrist, arm, and shoulder position



Here are some examples incorrect positions of the wrist, arm, and/or shoulders are shown in Examples 2-5.

Example 3:

*Instrument is too low/
Forearm at too much of an angle*



Example 4:

*Player is too close to instrument/
Elbows too far back*



Example 5:

Wrist turned over



Example 6:

Elbows too far from the sides of the body



A good way to figure out the correct height of an instrument is to have a student turn so they are facing backwards to the instrument they are going to play. Then, have the student set up their arms with the sticks or mallets in their hands. When

he/she is set up with his/her arms, wrists, and shoulders set up in the correct position, have them close their eyes. They should then turn 180 degrees so he/she's sticks or mallets are directly over the instrument as if they are ready to play. Then, have him/her open their eyes without moving. They will now be able to detect whether he/she has the instrument at the correct height. The instrument's playing surface should be one inch below the head/tip of the implement. If the instrument is more than an inch away from the head of the implement, then the instrument should be raised. If the student accidentally hits the instrument with the implement when he/she turns, then the instrument is too high and should be lowered.

SPECIFIC INSTRUMENTS

Concert Snare Drum - The drum's head should be flat and parallel with the floor with the sticks about one inch above the drumhead and parallel to the floor. Again, the forearm should be gently sloping downward to the wrist at approximately 10-15 degrees (Example 7). Many young students set up the snare drum too low, causing the sticks to be at a steep angle to the drum. Having the sticks hit the drum at an angle causes the stroke and rebound to suffer, and also usually results in the hands/wrists to turn over, creating a bad grip (Example 8).

*Example 7:
Good snare drum height*



*Example 8:
Snare drum too low/hands turned over*



Timpani - Timpani playing should always be done in a seated position to help the student play the timpani at the correct height and allow for more efficient pedaling changes (Example 9). The mallets should be one inch above the drumhead and parallel to the floor with the forearm gently sloping downward to the wrist at approximately 10-15 degrees. Timpani need to be oriented so the player can move from drum to drum without changing their wrist/arm/shoulder position. When moving between drums, the player should twist from their core/abs while maintaining the same shoulder, arm, and wrist position (Example 10). Many young

students sit too low to the instrument, causing their wrists to be above the their elbows, resulting in an unnatural wrist, arm, and shoulder position (Example 11).

*Example 9:
Good timpani stool height*



*Example 10:
Good posture playing an outside timpano*



*Example 11:
Timpani stool too low, causing bad wrist positioning*



Mallet Instruments - Students should position their body so their forearm is gently sloping downward to the wrist at approximately 10-15 degrees while their mallets are one inch above the keyboard. Also, students should position their mallets over the naturals so their elbows are only 1-2 inches behind the center of their body (Example 12). When reaching out to accidentals, students should move their arm forward from the shoulder (Example 13). Young students often stand too close to the instrument to make it feel easier to them when reaching for the accidentals

(Example 14). Standing too close to favor the accidentals will cause tension and also poor stroke/sound production.

*Example 12:
Good instrument height*



*Example 13:
Good use of shoulder to reach accidentals*



*Example 14:
Too close to the instrument/
Elbows too far back*



CREATIVE HEIGHT ADJUSTMENT SOLUTIONS

If you have instruments, especially mallet instruments, then students should be taught how to properly operate each piece of equipment's height-changing

mechanism. Unfortunately, not all band programs have height-adjustable instruments. Below are some creative solutions to increase the height of various percussion instruments:

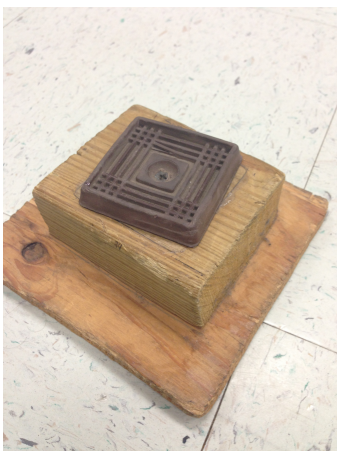
PVC pipe (2" to 4" coupler fitting):



Wood block with caster groove cut out (6" x 3" x 4" = Width x Depth x Height):



Wood block with rubber gasket on top (4" x 4" x 2"):



Wood boards (4' x 7" x 1.5"):



Most times, the issue of height has to do with raising an instrument, however, on rare occasion; you may have a student who is too short for an instrument. Cases like this are a little harder to solve because instruments typically are made to be playable to average sized middle-school percussionists. If you are in need of a lowering an instrument, there are several ways you can achieve this:

- 1) Build a platform the performer can stand on behind the instrument.
- 2) Find smaller casters to put on the instrument.
- 3) Remove the casters from the instrument completely (this usually isn't an option since percussion instruments need to be moveable).

CONCLUSION

All new percussionists need to be taught how to adjust their instrument appropriately to their individual body height. Students have a hard enough time with learning how to play rhythms, pitches, and dynamics correctly, it should be every percussion educator's goal to "set the students up for success" by teaching them how to position each instrument correctly to themselves. Having students properly positioned behind their instruments will ultimately lead to having a better stroke and grip, which will help them advance quicker through the initial stages of music education. This will ultimately not only help the student play better, which will result in the ensembles they play with sounding better as well.

BIO:

Dr. Brad Meyer (www.Brad-Meyer.com) is a percussion educator, artist, and composer with an extensive and diverse background. Currently, Brad is the Director of Percussion Studies at Stephen F. Austin State University (Nacogdoches, TX) where he directs the percussion ensemble and steel band ("Jacks of Steel"), teaches private percussion lessons and the percussion methods course, and is the



coordinator/arranger for the SFA Lumberjack Marching Band's percussion sections. Dr. Meyer frequently tours to universities and high schools both nationally and internationally to present recitals, workshops, masterclasses, and clinics on various topics, including: electro-acoustic percussion, contemporary marimba, concert snare drum, marching percussion, percussion ensemble, steel band, and world music. Brad is a composer with compositions for snare drum, multi-percussion, and percussion ensemble published through Bachovich Publications. Dr. Meyer is a proud endorsee of Yamaha Instruments, Zildjian Cymbals, Vic Firth Stick and Mallets, Evans Drumheads, and Tycoon Percussion.

Protecting Your Hearing Health

Student Information Sheet on Noise-Induced Hearing Loss

Standard Version

**National Association of Schools of Music
Performing Arts Medicine Association**

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Protecting Your Hearing Health

An NASM – PAMA

Student Information Sheet on Noise-Induced Hearing Loss

- **Hearing health is essential to your lifelong success as a musician.**
- **Your hearing can be permanently damaged by loud sounds**, including music. Technically, this is called Noise-Induced Hearing Loss (NIHL). Such danger is constant.
- **Noise-induced hearing loss is generally preventable.** You must avoid overexposure to loud sounds, especially for long periods of time.
- The closer you are to the source of a loud sound, the greater the risk of damage to your hearing mechanisms.
- Sounds over 85 dB (your typical vacuum cleaner) in intensity pose the greatest risk to your hearing.
- Risk of hearing loss is based on a combination of sound or loudness intensity and duration.
- Recommended maximum daily exposure times (NIOSH) to sounds at or above 85 dB are as follows:
 - 85 dB (vacuum cleaner, MP3 player at 1/3 volume) – 8 hours
 - 90 dB (blender, hair dryer) – 2 hours
 - 94 dB (MP3 player at 1/2 volume) – 1 hour
 - 100 dB (MP3 player at full volume, lawnmower) – 15 minutes
 - 110 dB (rock concert, power tools) – 2 minutes
 - 120 dB (jet planes at take-off) – without ear protection, sound damage is almost immediate
- Certain behaviors (controlling volume levels in practice and rehearsal, avoiding noisy environments, turning down the volume) reduce your risk of hearing loss. Be mindful of those MP3 earbuds. See chart above.
- The use of earplugs and earmuffs helps to protect your hearing health.
- Day-to-day decisions can impact your hearing health, both now and in the future. Since sound exposure occurs in and out of school, you also need to learn more and take care of your own hearing health on a daily, even hourly basis.
- It is important to follow basic hearing health guidelines.
- It is also important to study this issue and learn more.
- If you are concerned about your personal hearing health, talk with a medical professional.
- If you are concerned about your hearing health in relationship to your program of study, consult the appropriate contact person at your institution.
- This information is provided by the National Association of Schools of Music (NASM) and the Performing Arts Medicine Association (PAMA). For more information, check out the other NASM-PAMA hearing health documents, located on the NASM Web site at the URL linked below.
http://nasm.arts-accredit.org/index.jsp?page=NASM-PAMA_Hearing_Health



Marching band — a threat to hearing?

Updated 10/17/2007 2:21 AM | Comment | Recommend

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Enlarge By Thomas E. Witte for USA TODAY

Chris La Mar, 15, and sister Samantha, 12, now wear earplugs to indoor band practice at Dixie Heights High School.

By Joyce Cohen, Special for USA TODAY



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There's no bigger booster of his marching band than Mark Claffey. "I am a total band nerd!" declares Claffey, a drummer for the Golden Falcons at Franklin Heights High School in Columbus, Ohio.

There's just one downside. At age 17, he has painful ear damage.

He says that, after indoor rehearsals, his ears started hurting, then ringing.

Now, he's abnormally sensitive to sound. If someone cranks the car radio, "I get a sharp shooting pain in my right ear," says Claffey, who now wears earplugs when he plays.

The ringing in his ears is constant. "I get into a dead silent room and all I hear is my ears ringing," Claffey says.

It's the dirty little secret of the halftime show: Marching band, which exposes young ears to loud sounds, can cause irreparable hearing damage, according to Brian Fligor, director of diagnostic audiology at Children's Hospital in Boston.

Rock stars and music pros have known this for decades. But only in February did the National Association for Music Education issue a statement noting that music educators should recognize music as a cause of noise-induced hearing loss.

"The awareness of these issues is relatively new to the field," says Michael Blakeslee, the group's deputy executive director, adding that many hearing problems stem from young people's use of iPods and other such devices, which blast sound directly into the ears.

Typically, ear injuries don't heal, says Fligor, who says it's unconscionable that music students aren't taught to protect their hearing. "It's a tragic situation that is completely preventable," he says. There's no way to know who, like Claffey, is most susceptible to ear damage.

An estimated 2 million students in the USA play in middle- and high-school marching bands, along with 250,000 in college marching bands, says Drum Corps International. They practice for hours at volumes intended to "fill up a football stadium," often in small rooms that amplify sound, says Kris Chesky of the Texas Center for Music and Medicine at the University of North Texas in Denton.

Music ensemble is an "at-risk instructional activity, just like chemistry lab," he says.

Hearing damage tends to be cumulative, and problems often aren't evident for years. Little data exist on how often musicians of any sort are affected, Chesky says. But in one survey of more than 3,200 musicians he did in 2000, 32% of drummers, 25% of tuba players and 18% of flute players reported hearing problems. All had around eight years of experience as professional musicians.

Measurements taken by Joseph Keefe, a 2004 graduate of Duke University in Durham, N.C., who was a drummer in the marching band there, show that band members were exposed to sound levels of more than 100 decibels (120 decibels is considered the threshold of pain) for hours at a stretch. At that intensity, unprotected ears can be damaged in just 15 minutes, according to the National Institute for Occupational Safety and Health. Now, at Duke, earplugs are mandatory for percussionists and optional for others, says Jeff Au, director of athletic bands.

Marching bands are safety-conscious in some ways. At Dixie Heights High School in Edgewood, Ky., the Marching Colonels wear sunscreen outdoors and take frequent water breaks. Ear protection never came up, says band director Robb Dudley.

Sure enough, Dixie Heights drummer Chris La Mar, 15, didn't hear a peep about protecting his hearing. All he knew was that his ears "hurt pretty bad" after his three-hour drum rehearsals. "The next day we do it all over again," Chris says.

Last year, a bandmate's father provided earplugs for the entire drumline. Chris, relieved, credits them with saving his hearing.

But his sister Samantha, who plays the bells, still gets headaches after practice. Samantha, 12, a middle-schooler who plays with the high school band, is reluctant to wear her earplugs. The first time she tried, she didn't hear the instructions and played the wrong passage. "My instructor yelled," Samantha says. Some students say earplugs look dumb or are inconvenient to use. They can prevent them from hearing both the instructor and the nuances of the music.

Special musician's earplugs, custom-made earplugs tend to soften sound without too much muffling, but

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Special musician's earplugs or custom-made earplugs tend to soften sound without too much muffing, but these can irritate the ear canals, Chesky says.

The real problem with marching-band culture, however, is that students are afraid to complain, says James Forger, dean of the College of Music at Michigan State University. "You are in a power structure, lining up, and you do what you are told," he says.

"There is an assumption that if you get injured, you are not strong or talented enough," adds his colleague Judy Palac, associate professor of music education. "The fact is, it is criminal to put students at risk."

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