

Senior Distinction Project

Preparing the Body and Mind for Dance Class

By

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## **Preparing the Body and Mind for Dance Class**

*Abstract: Previous scientific research has discovered successful components of a general warm-up practice, however, I have yet to observe the physical application and creation of individual warm-ups intended to educate dance major students. The purpose of this study is to design preparatory warm-up sequences that will serve as guidelines to better clarify and suggest successful methods to prepare the body and mind for college level dance courses. Over the past academic school year, I have devised a series of preparatory warm-up sequences that focus on specific anatomical regions proven to be most prone to muscle/joint instability: the hips, knees, and ankles. The movement material and methodology behind the sequences were created in conjunction with data compiled from an in-depth literature review examining the most effective components of warm-up exercises, my personal knowledge acquired through academic course work in and outside the Department of Dance, and two physical practice skill sets: Yoga and Gaga. Moreover, I have built a public website platform that displays video demonstrations of each warm-up accompanied by contextual information. Dance major students are able to access the public website and physically apply the innovative preparatory warm-ups prior to class allowing them to better physically and mentally prepare for any dance class in the future.*

### **I. Introduction:**

Preparatory warm-up for college dance majors is an area that is often left out of the core curriculum, as it is expected of the individual dancer to properly take care of the body and focus the mind prior to dance technique class. Over the past four years, I have observed an ineffective warm-up culture flourishing in the OSU Department of Dance. My observations lead me to ask: what are the proper ways a dance major should prepare for class in order to avoid common dance related injuries? It is crucial for all dance majors to know how to prepare their bodies for the studio in order to advance their physical skill sets, avoid fatigue during a dance class setting, and prevent long term injuries that could affect their future goals. In order to gather information on effective methods for a body and mind warm up, I have reviewed scientific literature on the physiological and anatomical importance of a general warm up as well as the most common dance related injuries. In conjunction with the literature review, I practiced

yoga, a traditional physical, and mental practice, and Gaga, a modern day movement language created by contemporary dancer, Ohad Naharin, in order to broaden my perspectives of the connection between the mind, body, and sensory modalities. Both of these movement practices, as opposed to other forms, were able to help me fuse my own mind-body connection. Through the conjunction of these two information sets, a review of literature and physical practice, I have developed a series of pre class warm ups on my own body. I suggest that these pre class warm up movement sequences are an effective method to properly warm up the body and mind prior to dance class.

## II. Why warm up?

Typically, a collegiate dance major schedule includes four to six hours of dance class in a single day supplementary to a full academic course load. This rigorous routine is strenuous on the joints, ligaments, and muscles as well as one's mental capacity. Just as a musician cannot perform without his/her violin or cello, a dancer cannot perform, create, or even maintain a stable job without a healthy body. It is important, therefore, for collegiate dance students to understand the importance of preparing the body for a challenging day in the studio. According to Dance Scientists associated with the Imperial Society of Teachers of Dancing, a practical and efficient warm up should act as a period of adjustment from rest to exercise (Fish). It is important for dancers to fully invest in this period of adjustment in order to decrease the body's risk of injury and effectively prepare the mind for dance class (Fish). Preparing or warming up the body to dance in a healthy and effective style, will ultimately prevent collegiate dancers from missing rehearsals, technique classes, and/or performances due to injury.

## III. What makes a good warm up?

An effective warm up should ultimately “prepare dancers both mentally and physically” (Figueroa) through a series of simple stretching, cardiovascular warm up, balance exercises, and breathing activities. Although a total mind body connection is the ultimate goal, a successful warm up should analogously include simple stretching to increase the level of elasticity in the muscles and tendons (Fish). A simple stretch is a type of active stretch that targets specific muscle groups (Types of Stretches). An example of a simple stretch would be bending over the legs to touch the floor, elongating the hamstrings and calf muscles, or a low lunge, stretching the iliopsoas muscle group. Simple stretching will increase the flexibility of the targeted muscle group, which can reduce the risk of injury (Fish). Physical therapist, Dr. Tiffany Marulli, a member of the Performing Arts Medicine team at The Ohio State University Sports Medicine Center, suggests that a dancer should accomplish simple stretches in a dynamic flow prior to dance class. This means that a dancer should combine movement with simple stretching for ultimate muscle strength and elasticity. Dr. Marulli emphasized that muscle tissue should be stretched during dynamic movement rather than in a static position to better prevent muscle tear or injury.

From a physiological perspective, skeletal muscles are composed of different tissue layers called fascicles. These larger fascicle layers are broken down into even smaller units called myofibrils made up of even smaller structures called filaments. When a skeletal muscle is stretched, these microscopic filaments line up accordingly without any overlap or congestion, allowing muscle fibers to lengthen and stretch to their full capacity (Brown). According to physiological research, when stretching is over-looked or neglected, the muscle filaments will stay in a contracted or shortened state “which can

lead to chronically tight muscles ... which will limit range of motion and flexibility” (Brown). It is therefore extremely important for dancers to incorporate stretching exercises, such as the yoga pose downward facing dog or rolling down the spine in a parallel position, prior to the start of dance class. This will help balance the opposite forces of extreme flexion and extension of muscle tissue found in contemporary dance technique. Overall, dynamic stretching can help override muscle fiber contractions and create supple elastic muscle fiber tissue better suited for dance class.

In addition, muscle elasticity is heightened by gradual cardiovascular exercise. As blood saturation levels rise, the internal body temperature increases, allowing for a greater degree of muscle elasticity (Fish). For example, muscles can be compared to a piece of chewing gum. Just like a piece of chewing gum, which dries out without proper moisture and heat, muscle fibers found within environments of low blood saturation levels and decreased internal body temperatures will also stiffen (Fish). Dance Scientists at the Trinity Laban Conservatoire state that in order to combat this negative effect, a beneficial warm up should increase heart rate and blood circulation gradually. Cardiovascular warm ups will increase blood saturation levels and prevent muscle tightness (Figueroa). From my observations, I have noticed that many dancers do not include cardio fitness in their daily warm up routine. However, research proves that a cardiovascular warm up, such as continuous muscle movement in a warm-up series, will increase the body’s temperature, which can further enhance the elasticity of muscles fibers. It is important for dancers to maintain a high level of elasticity in their muscle fibers in order to explore larger more expansive ranges of motion during technique class.

Furthermore, research states the importance of balance exercises for dance specific warm up series. Balance is closely related to proprioception, or knowledge of “where your body part is in space” (Physio Works - Physiotherapy Brisbane). For example, a healthy individual will be able to close their eyes and touch their nose simply by utilizing their proprioceptive network (Steve Haines; Body Maps and Interception (LBP 015)). An individual’s level of proprioception is an unconscious process that may be hard to improve effectively (Physio Works - Physiotherapy Brisbane). However, balance is closely related to a similar level of proprioception (Physio Works - Physiotherapy Brisbane). Therefore, if a dancer challenged their internal balance, they will simultaneously be working on their level of proprioception. It is important for dancers to maintain a high level of proprioception and balance in order to execute a variety of simple balance structures like releve passé or more complex dynamic movement such as pirouettes or knee spins. Many practicing Physical Therapists use balance or wobble boards to improve levels of proprioception and balance (Physio Works - Physiotherapy Brisbane), however, I have found many benefits in the variety of yoga balancing postures in my own physical practice and research on yoga. I believe that both methods, a wobble board or yoga pose; are suitable for dancers to better improve their overall balance and proprioceptive levels.

In general, breathing is also a simple and effective way to warm up the body. As breathing becomes fuller and deeper, the level of oxygen in the body increases (Fish). This increased level of oxygen flow is used by muscle tissue for energy production. This energy is then converted into an internal physical force produced by the relationship of muscles and bones. Research states that inhaling extra or larger supplies of oxygen

naturally saturates the blood with oxygen used to purify the blood stream and vital organs (Howell). Heightened levels of breath can be produced through continuous movement sequences as well as a variety of breathing techniques found in traditional yoga practice. Similar to the relationship of balance and yoga, the variety of breathing techniques offered by traditional yoga practice provides meaningful breathing methods that increase oxygen supply (Howell). Specifically, dancers should incorporate breathing into their warm up series in order to elevate the level of metabolic energy in the body. This will ultimately help energize the body and propel dancers through space. I have found that both methods, either cardiovascular or yogic breathing, are efficient methods to warm up the body prior to dance technique class.

#### IV. What are the most common dance related injuries?

An effective warm up prior to dance class should include basic physical components, such as dynamic stretching, cardiovascular warm up, balance, and breath work, while also considering the most common dance related injuries. A recent study published in the Journal of Dance Medicine and Science, by medical professionals and experts: Selina Shah, David Weiss, and Raoul Burchette, examined the incidence of injury in professional modern dancers. This study was limited as there has been no large-scale study to evaluate professional modern dancers in the United States. However, Shah, Weiss, and Burchette found that in this specific study “the foot and or ankle was the most common site of injury, followed by the lower back and the knee” (Shah, Weiss, and Burchette). 40% of the participants in this study reported a foot or ankle injury while 17% and 16% were found to have lower back and knee injuries, respectively. Although this study does not primarily focus on collegiate dancers, many of the same movement styles

and techniques practiced by professional modern dancers are found within collegiate dance education.

#### V. What are the warm ups I created?

In order to appropriately prepare the body for contemporary dance technique class, I have created a series of pre class warm ups for dancers that focus on the three regions of the body most susceptible to injury in modern dancers. I have devised a series of preparatory warm up sequences that focus on three specific anatomical regions demonstrated by Shah, Weiss, and Burchette to be most prone to muscle and joint instability: the foot or ankle, hips, and knees. First, in order to address the region of the foot and ankle, I created a warm up that aims to stretch the muscles, increase blood circulation, and improve balance and stability of the foot and ankle muscles and ligaments (Appendix A). Specifically for the hip, I created a warm up that aims to increase awareness of the lumbar region of the spine, the external and internal rotator muscles of the hip, and the hip joint. Many of the exercises I created for the hip region help find a balance between hip stabilization and mobility (Appendix B). For the knee region, I created exercises directed to help stabilize the knee. Since the knee is simply a fluid filled space between the upper thigh and lower leg, connected by ligament attachment, I deemed it necessary to stretch the muscles, increase blood circulation, and improve balance and stability of the upper thigh and lower leg muscles (Appendix B). An increased strength and stability of the upper thigh and lower leg will further help support the intrinsic ligaments on the knee (Marulli, Tiffany, PT, DPT).

#### VI. How do you prepare your mind for dance class?



For the past year I examined, studied, and explored the physical practice of yoga, a mind and body practice rooted in Indian culture, and the more modern full body language of Gaga, created by Ohad Naharin the artistic director of the Israeli based contemporary dance company, Batsheva Dance Company. Both of these physical practices integrate the mind with the body through breath control, mindfulness awareness of the present moment, and sensory imagery. Throughout my research process, I have invested my body into these movement forms in order to better understand the variety of pathways in which the mind and body can intersect. Through Yoga and Gaga, respectively, I have found that the use of breath can help center the mind, better preparing the body for class, while sensory cueing from the mind can help inform the content and action of the body in space.

I found Hatha yoga to be the most beneficial form of yoga on my own body. Hatha yoga is the most widely practiced form of yoga in the United States, which emphasizes the mind body connection (Dykema, Ravi). This branch of yoga views the mind-body connection from a non-dualistic point of view, valuing the strong interconnection between breath, postural alignment of the body, and meditation (Dykema, Ravi). For the purposes of my own research, I integrated a variety of Hatha yoga postural alignments into my warm up movement sequences. For example, I use two balance poses, Eagle Pose and Tree Pose, to help find better stability in the ankle and foot region (Appendix A). From my own personal experience, I have found that these two poses, specifically, have better improved my overall proprioception and balance. Research shows that proprioceptive awareness and balance are key elements of an effective warm-up (Physio Works - Physiotherapy Brisbane). Therefore, many yoga

poses like Eagle and Tree Pose can be used as supplemental body tools to find a strong sense of balance in the body. Furthermore, I decided to integrate the cat-cow postural flow found in Hatha yoga into my warm-up sequences to increase stability and mobility in the lower back, pelvic, and hip region (Appendix B). Previous research shows that the lower back, pelvis, and hips are prone to instability during contemporary dance technique classes, and that core mobility and stability in the lower abdominal region can help strength this area of the body (Shah, Weiss, and Burchette). From my own physical practice, I have found that the cat-cow exercise brought awareness to the deep transverses abdominis muscles and psoas muscle, further protecting and stabilizing the lower back. Finally, I incorporated chair pose into my warm-up movement sequences to better support and strengthen the muscles around the knee (Appendix C). Chair-pose strengthens the anterior upper thigh muscles that are important for knee stabilization. From my own physical investigation and practice of yoga, I found that chair-pose has helped me find a correct knee alignment in a plea position. Therefore, the integration of yoga postures in the pre class warm up's has helped increase my own proprioception and balance, mobilized and stabilized my lower back, pelvis, and hips, and finally has helped strengthen my upper thigh muscles to better support the knee.

In addition, the use of breath is another fundamental concept of Hatha yoga, which supports the mind-body connection (Dykema, Ravi.). From my own personal experience, I have found that a strong mind-body connection is vital when preparing for dance class. The three breathing techniques practiced in Hatha Yoga that I found to be most beneficial in my body are: simple breath awareness, Ujayii pranayama, and nasal cleansing breaths. First, simple breath awareness helped me integrate my general mental

awareness with my physical body. This mindfulness approach to breathing continues to center my mind in order to become more aware and present in the dance studio. Also, I explored the use of Ujayii pranayama, a Hatha Yoga breathing technique that generates heat the body (Dykema, Ravi.). I found this breathing exercise to be beneficial both before and after the warm-up movement series to increase the temperature of my own body prior to dance class. Finally, the nasal cleansing breath technique has helped increase my own awareness before class. This specific breathing exercise purifies the nasal passageway through an alternating flow of breath between each nostril (Dykema, Ravi.). By channeling air through one nostril at a time, I have found that I am able to better center and clear my head before the start of class. Overall, the use of postural alignment and breathing exercises found in Hatha yoga have informed the creation of my pre class warm up movement sequences and has strengthened my own mind-body connection.

Parallel to my physical engagement in Hatha yoga, I have invested my body in the contemporary movement language known as Gaga. This particular movement language aims to increase one's awareness and stamina of the physical body through a creative framework that uses the mind and imagination as the baseline of movement (Gaga/People). Similar to yoga, I found that this specific movement language strengthened my own mind-body integration. Since this movement language does not have codified postural alignments as seen in yoga, I could not directly use physical movements from the movement language to influence the pre class warm up sequences. However, I was able to take general concepts of Gaga and apply them to the warm up's, such as creating a shake in the pelvis, to help bring awareness to the pelvic region

(Appendix B). Many of the cueing words used in Gaga, such as shake, quake, or float also influenced the creation process of the pre class warm up sequences. Overall, I continue to explore this unique movement language in conjunction with yoga practice to better strengthen my own mind body connection.

#### VII. What supplemental gear did I use or find to be effective?

A key component to the pre class warm ups is the use of supplemental gear such as foam-rollers, massage balls, and rolling sticks. In general, foam rolling could be thought of as a passive way to increase blood flow to the muscles (Marulli, Tiffany, PT, DPT). Massage and foam rolling are both highly regarded by physical therapists to better help prepare the muscle fibers for dance class. Dr. Tiffany Marulli, a performing arts medicine physical therapist, recommends using a rolling out device when there is extra time after dynamic stretching (Marulli, Tiffany, PT, DPT). Specifically for my individual pre class warm up sequences, I incorporated foam-rolling techniques into each warm-up for the designated region of the body. For the ankle and foot region, I used a small round pink ball as well as a cylindrical foot roller to better help massage the fascia and connective tissue on the bottom of the foot (Appendix A). Also, I used the small round pink ball as a method to help open up the hip by placing the small ball under the gluteus maximums muscle in order to penetrate the hip socket and joint (Appendix B). Finally, I utilized a large foam roller and rolling stick to better massage the muscle tissue of the upper thigh and lower leg (Appendix B, Appendix C). In all, rolling-out, or general tactile muscle massage, is a beneficial, yet passive, tool to increase blood flow to a designated muscle region.

#### VIII. Final reflection. Where is this project headed?

I would like for this project to expand and become accessible to a larger community. Rather than simply thinking of ways only dancers can focus on the mind body connection, I would like to create more exercises focused on the body and mind that can be used daily by a greater percentage of the population. I hope to create ‘warm ups’ or simple movement exercise ‘flow sequences’ that could be used by individuals in the work force who find themselves disengaged from the body. I believe that non-dancers could complete many of the warm-ups that I have created in a non-traditional dance setting. Since the warm ups and movement sequences are short and concise and link the mind to the body through breath awareness and flow, I believe that many people of the general population could benefit from the pre class warm-up’s that I created specifically for dancers.

A major setback for my research project was the inability to apply the pre class warm up sequences on college dance major students. I was unable to teach my pre class warm up sequences to dancers in the department of dance since I had limited time to apply for an IRB. I found that without proper IRB paper work, I could not record any of the information or data I found when working with the dancers. Consequently, my creation process was very personal, seeing as I took time alone in the studio to create and determine an effective warm-up sequence on my own body. This process helped me tune into my own physical and mental needs prior to the start of dance class. Since my research was designed around my own physical form and cognitive state, it would be interesting to see how other dancers take to the warm-ups I created. In the future, I would like to continue my research on dancers, testing to see if the warm-ups I created on my own body efficiently warm-up other bodies before technique class. I could measure the

outcomes quantitatively (ie. testing to see if there is an increase in heart rate) or qualitatively (ie. surveys of how the dancers feel and perceive their experience in dance class after practicing the warm-up sequences). At the Denman Forum, I received positive feedback from my peers and a variety of academic judges. Many of the judges suggested I expand this project and test the effectiveness of the warm-ups on collegiate dance major bodies. Some judges encouraged me to share my website with other online platforms, such as Ohio Dance, so larger, more inclusive, communities could benefit from the acquired knowledge and information on my site. I hope to expand this research project either as an independent or a graduate student in a university setting.

Over the past year, I have refined the pre class warm up sequences to effectively strengthen and stretch my body and center my mind before dance technique class. After my physical exploration and creation of the foot/ankle, knee, and hip warm-ups, I am confident in the fact that I can use all three of these warm-ups before any dance technique class in the future. I view these warm-ups as guidelines to better influence the way I prepare for dance technique classes beyond my collegiate dance major career. I know that if I practice each warm-up prior to dance technique class, I will have enough physical strength, flexibility, proprioceptive awareness, and endurance to improve my technical skill sets. Moreover, I found that yogic breath practice has the capability to transition my mind from an academic, mind-oriented, class to a more physical dance class setting. Yogic breath practice, in general, has strengthened my overall mind-body connection. Overall, this project has inspired me to consider the multiple ways I can physically prepare and adapt my body and mind to any dance technique style in the future.

## Appendix: Pre-class Warm-up Sequences

This is a written outline of the three pre class warm up sequences I created for my senior research project. Originally, this outline started off as a script to coincide with the video recordings of each warm-up. Now, the reader has the opportunity to read the textual information alongside the video recordings. To view the video demonstrations please visit: [www.preparetomove.com/danapodell](http://www.preparetomove.com/danapodell)

### Appendix A: (foot/ankle)

- **Tactile Touch:** Begin with tactile touch of foot. Rub entire foot to create heat and energy on the surface of the skin. Then go ahead and physically wiggle each toe beginning with digit 1. Next, place your fingers in between your toes to abduct each of the toes. While in the abducted position, create circles with your ankle and shake out the foot. Finally, slap your foot with cupped hands and slide hands on dorsum and plantar side of foot, meeting at the big toe. Repeat for second foot. **Breath:** slow/steady/natural. No control, simple awareness.
- **Foot flop:** Begin by lying down on your back, with the feet up creating a 90-degree angle with the knees. Start to flop the feet (foot flop) for about ten seconds. Increase the intensity of the flop as the numeric counting increases. Continue with the foot flop for another ten seconds, however this time engage the core by flexing the trunk in closer to the thighs. **Breath:** slow and steady breathing while back is on the ground. Move into open mouth exhales during core stabilization.
  - Push up through the ankles all the way into a full leg extension. This force should be enough to pull your torso into an upright position. **Breath:** exhale when the feet come down from core foot flop. Pause and take three deep inhales/exhales while lying down. On the next inhale; begin to push out through the feet until you ride the wave all the way to a sitting position. Then exhale and fold over feet.
- **Ankle strength:** Once seated, complete ten sets of demi point-big toe-all toes through both dorsiflexion and plantarflexion positions. Then take a Theraband® and repeat using the band ten times per foot. **Breath:** slow and steady but no control. Simple awareness.
  - Roll back down with controlled abs. Continue rolling onto the back, letting your legs swing overhead. Push up into a tabletop position, and push back into down dog. Here you can stretch out calves. **Breath:** exhale roll back with controlled abs, inhale roll onto back letting legs swing over head, exhale cross legs, inhale table top, exhale down dog.
- **Trace Fingers:** Trace fingers along medial side of foot and leg, all the way up through your core leading you into a stable releve position. **Breath:** inhale, exhale when you reach the hips, and inhale up into releve.
- **Barre work:** Walk over to the bar and complete ten releve. Make sure the weight is over the big toe. Balance on 11<sup>th</sup> revele. Stretch calves, repeat in first position. **Breath:** slow steady, but full awareness preparing you to actually breathe during technique class.

- **Yoga poses:** Additional yoga balance poses for ankle: eagle and tree. **Breath:** slow and shallow.
- **Roll out:** Roll out feet with either a foot roller or a pinky ball.

#### Appendix B: (lower back/pelvis)

- **Lower Back Massage:** Wrap arms around both legs, bringing your knees into your chest. Simply roll side to side, feeling the weight of your knees shifting in the coronal plane. Separate knees with both hands, and begin to peddle out the knees and hips moving in the sagittal plane. **Breath:** open mouth exhales.
- **Supine Twist:** Supine twist both sides, trying to keep the shoulder blades on the ground. **Breath:** slow and natural.
- **Massage Ball:** Place massage balls under hip rotators for about 20-30 second each side. **Breath:** continue with open mouth exhales.
- **Pelvic Clock:** Move into a series of pelvic clockwork. For the pelvic clock, imagine that the pubic bone is the number 12 on a clock, the right ASIS is the number 3, the belly button is the number 6, and finally, the left ASIS is the number 9. Slowly rotate the pelvis in clockwise rotations, aiming to circle around each number on the clock. **Breath:** should be slow and steady, however keep awareness.
- **Core Work:** Lay down on back, knees bent, and feet on the ground. Begin to gather the arms, and contract abs into a sit up position. On the way back down, sweep out the arms, and use the momentum and core to sweep back up into a contracted position. **Breath:** inhale on the up, exhale coming back down.
- **Pelvic Shake:** Swipe right arm overhead, and roll up into a straddle position. Initially, give some tactile awareness to rotators and adductors. Simply rub the skin and send sensory information. Begin to shake pelvis on the ground, letting the energy of the shake move through all of the limbs in the body. This shake should heat up the core as well engage the core muscles. **Breath:** keep the mouth open the entire time, taking large and dramatic breaths.
  - Send right pinky out, fall onto right side, swing right leg in, roll onto stomach, and push back into child's pose. **Breath:** feel connected more to the ujayi pranayama.
- **Cat-Cow:** Push up into cat-cow. For cat, inhale and bring the belly button into the spine. For cow, exhale and drop the belly button down to the floor. **Breath:** exhale cat, inhale cow.
- **Pelvic Circle:** Push back onto forearms, legs straight, and roll up. Grab the pelvis and roll pelvis into large extremes of different anterior/posterior tilts. Continue the large circles, making them smaller with each revolution until you find the sweet spot of neutral with vertical length in the core muscles. **Breath:** slow and steady.

#### Appendix C: (knee)

##### 1. The thigh (Anterior and posterior ie. Quads and Hamstrings)

- **Tactile Touch:** Begin with tactile touch of the thigh. Simply rub the surface of the skin with the palms of the hand, generating heat in this area of the body. Next, use the palm of the hand to massage the connective tissue around the knee



connecting the thigh to the patella through the patellar tendon. **Breath:** slow and aware using open mouth exhales.

- **Roll Out:** Take a foam roller and roll out the IT band, and posterior thigh muscles. **Breath:** it is really important to use open mouth exhales especially since this can be extremely painful.
- **Rolling Stick:** Take the rolling stick and roll out the anterior thigh muscles and adductors. **Breath:** it is really important to use open mouth exhales especially since this can be extremely painful.
- **Quad Stretch:** Begin with legs out front feet parallel. Medially rotate the right hip and bring the heel to the sitz bone. Roll down to either the hands, forearms, or all the way down to the back. **Breath:** inhale in seated position; exhale on the way down into the stretch.
- **Hamstring Stretch:** Come back up the way you went down into the stretch and bring the feet together. Place fingers around the toes and stretch over, stretching hamstrings. Repeat Quad stretch on the left side. Come back up to sitting. **Breath:** simple awareness.
- **Chair Pose:** Swing legs to one side, push out into the tabletop, push back into down dog, then roll up, and finally sit back in a chair. This is a great quad strengthener. Hold for about 10 seconds. You can keep the arms out or bring them to heart center. **Breath:** Exhale swing legs, inhale table to, exhale down dog, inhale roll up, exhale transition into chair.
- Sit all the way into chair until the sitz bones reach the ground. **Breath:** slow steady exhale.

## 2. Lower leg

- **Tactile Touch:** Begin with tactile touch. First simply rub the skin, bringing heat and nerve sensations to this area of the body. Next, feel free to slap your lower leg with the cupped hands see done with the ankles. Repeat on both sides of the body. **Breath:** slow steady with simple awareness.
- **Rolling Out Calves:** Take the large foam roller and roll out the posterior lower leg. **Breath:** open mouth exhales. Take the pinky ball and roll out the anterior and lateral regions of the lower leg. **Breath:** open mouth exhales.
- **Ankle Pumps:** Slowly rolling down, bring the right leg to the chest and repeat ankle pumps for about ten sets. Then move onto ankle rolls. Repeat other foot. **Breath:** inhale dorsiflex, exhale plantarflex, and slow steady breathing for the circular ankle movements.
- **Heel Slides:** Next, you're going to slide the heel on the ground all the way out and then bring it back into meet the sitz bone. Repeat for about ten times. Repeat on left leg. **Breath:** inhale- leg reaching out; exhale- leg coming back into meet sitz bone.

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