

SANDDUNE Stepper



**Exercise Guide to Help You
Build
Balance, Strength and Stamina**

www.sanddunestepper.com

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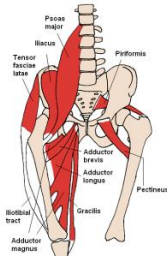
INTRODUCTION

What is the SANDDUNE Stepper and how does it work?

It is a special flexible foam neurotrainer that mirrors the contractile rate or effort of the neuromuscular system of your body - how your muscles respond to activity. It is low impact, easy to use and effective in challenging your core balance, strength and coordination.

Experiencing weight bearing activity on a compliant surface such as the SANDDUNE Stepper, engages use of proprioception (your internal GPS). Exercise on this apparatus safely recruits muscle fiber without the traditional tearing that occurs on hard surfaces.

Learning the subtleties of how the body aligns and connects through the resistance option of both uphill and downhill positions teaches postural integrity. The uphill slope is higher and simulates walking uphill. The downhill slope is lower and simulates walking downhill.



Once you step off and resume walking on a normal surface, you will begin to notice subtle changes in your posture. This is your new way of educating and retraining the foundation of your core balance, strength and coordination.

Getting Started

The purpose of this booklet is to give the new user an idea of some of the basic exercises and suggestions for all level of users. We recommend that people encountering the modality for the first time, **simply stand** on the SANDDUNE™ to become **familiar** with experiencing their Center of Gravity on a yielding surface.

Do this on the uphill surface. Notice any small weight shift as your heels sink. Then shift left and right several times, then forward and backward, and explore the sensation of diagonal movement as well.

We then suggest padding for at least 2 weeks to become acquainted with the SANDDUNE Stepper's unconventional surface. Padding is simply walking but keeping constant contact with the surface. This is suggested for

EVERYONE, including high functioning athletic types. Resist the temptation to jog. Why? Because you are retraining every muscle and joint in your body including long and short muscles closest to the bone.

Finally, while standing on the equipment begin creating small dime size circles clock-wise and counter-clockwise under your foot, noticing how the sensation moves up your legs into the trunk and into the hip sockets.



Now turn the SANDDUNE Stepper around and sense the same exploration downhill.



Observe of how you feel more stretch in the toes on the

downhill slope versus more stretch in the back of the legs on the uphill slope?

This is “mindful” centering with the somatasensory body (whole body meaning bottom of foot to brain) –a new way of educating and retraining the foundation of your physical body (neuropath ways) using the SANDDUNE Stepper. Simply holding on to a bar and learning to stand on one leg with your other foot raised slightly above the pad after you have centered yourself; will help you begin to retrain your foundation.

Begin these exercises slowly, building speed and momentum. It will not feel like much to start, but the results will definitely make themselves known or felt in a relatively short time as the muscle activation becomes stronger and the movement easier. **Gentle padding is also recommended between each exercise for muscle recovery.**

Since the SANDDUNE Stepper, assists in building the linear functioning muscles or those used in running, cycling, walking, etc.(the quadriceps, glutes and hamstrings), it is important to remember to stretch your inner leg muscles known as Adductors. Stretching and strengthening these interior leg muscles is important before and after your SANDDUNE Stepper workout.

Never Hold Your Breath! Remember to breathe slowly and evenly as you stretch and throughout your workout.



Athletes who use multidirectional (forward, side, reverse, twist) movements in sports such as gymnastics, football, skiing or golf, tennis use a wider range of muscles, including the adductors so their range of motion is more fluid, stronger and flexible. Weak adductors lend themselves to groin strains and knee pain. It can also indicate problems with the lower back and the. psoas muscle/hip flexor.

If you are a beginner and you don't know how to stretch, notice the notes that are added to the back of the book.

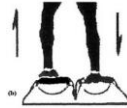
Helpful Hints:

- Hold each stretch for 30 seconds to 1 minute. Do not bounce or jerk.
- Stretching should be done after a warm-up.
- Stretching should be done after a workout.
- Stretching should be done before a workout.
- Stretching should be done after a workout.
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- Stretching should be done after a workout.

**ORIGINAL SANDDUNE
AEROBIC/ANAEROBIC EXERCISES
FOR BUILDING OR REBUILDING YOUR BODY'S FITNESS AND BALANCE**

AEROBIC EXERCISE

A - Padding helps to reestablish strength and stamina which is why it is suggested that this single exercise is the first and only exercise to begin rehabilitation.



Gentle padding is recommended between each exercise for muscle recovery. Keep feet on footpads

B - Aerobic Run – build strength and stamina or maintain a level of condition between and or in addition to their target training sessions for their sport. This is the core for the **Cardio Burst Exercise Challenge**.



Within a 2-week period you should be able to realize a doubling of your cardiovascular capability. This workout is equivalent to 3 hours of cardio work a week.

Cardio Work on the SANDDUNE Stepper

- To warm up – pad slowly for 1 minute. Do not get your heart rate up.
- Run for 2 minutes as fast as you can.
- Pad slowly for 2 minutes
- Run for 30 seconds as hard as you can.
- 2 minutes of slow padding.
- 30 seconds of running as hard as you can
- 2-minute cool down.



Running Knee Bend or Huff

- Alternately compress the footpads while running in and out of a squat position, dropping your hands to your knees or holding them steady in front of you.



Low Assault - Get Low to Stay Low

- Drop your hands to the edges of the SANDDUNE Stepper or to the floor if your flexibility is sound and strong.
- 4 thrusts up and 4 thrust down is one run.
- Try for 15 minutes on both uphill and downhill slopes.
- Shift knees from left to right.
- Place hands on back as though skiing.
- Try jogging or running hip circles.
- Considered for firefighters, football,



tennis, runners at all distances, jockeys, floor exercise gymnastics, hockey, skiing, cycling or any sport where sustained and or explosive muscle strength, reaction time and speed are required.

ANAEROBIC EXERCISE

Compression Exercise

Toe Work:

- Alternately compress the footpads with toes and ball of the foot.
- Good for dancers & gymnasts.
- Suggested for people with plantar fasciitis, foot surgery/injury and drop foot.



Foot Rocking: In between Toe and Heel work is Foot Rocking which works the foot and ankle, challenging the core to keep still as the feet rocks back and forth. The motion simulates a rocking horse motion.



Toes and heels are firmly pressed into the pads. This also helps create a mindful focus on where your body is in space when moving.



Heel Work:

Alternately compress the footpads with the heels of your foot but letting your body's weight sink the heels into the pads depth. Suggested for people with drop foot, plantar fasciitis suffers and foot surgery/injury.

For added safety use a barre or sturdy support when doing this unless your balance is sound.

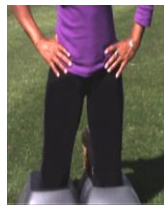


Finish this series off with **The Shake**.

- Bounce up and down gently, like a salt and pepper shaker and allowing your heels to come slightly off the pads simultaneously.
- This action allows the body to reorient and resettle itself. Good to do after any of the exercises.

Knee Work:

- alternately compress the footpads with the knees upright as pictured
- also do this standing with your hands on your hips.
- Variation: raise same arm to leg (left arm/left leg) straight up to stretch your side or curl the arm gently over head in opposite direction for a greater stretch in that same side of the torso and hip region.
- This exercise brings the core and pelvic girdle into a stronger and more flexible alignment.



At first your hips may swing wildly from side to side, but after time the swing will decrease as the muscles become more toned and flexible. The pelvic girdle receives more “active movement” than it usually does on a day to day giving the organs within the girdle a workout too.

This exercise teaches you to:

- raise your hips off of the pad as it activate the psoas muscle which is short and very weak in many people.
- to lift your foot higher than you have in general and if you have a tendency to drag your feet or shuffle

when you walk. If it is too difficult standing, kneel and place your hands on the floor in front of the device and compress the pads as illustrated.



Floor Plant:

- Compress footpads while standing in front of, behind or to the side of the SANDDDUNE Stepper.
- If leg strength is good, variations of lunges, step ups



squats may be performed. Strengthen quads, hamstrings and inner thighs.

Bridge work:

- Hands on floor in Body positions A or B.
- Alternately compress the footpads with the heels.
- Execute Planks on elbows or fully extended arms.
- Up/Down or Split Dog with hands or feet on the SANDDDUNE Stepper can also be done.



COG or CENTER OF GRAVITY TRAINING

Hip Circles: Alternately compress the footpads with feet while rotating hips in a circle. If balance is being built, beginning with small circles is best. Your feet will roll.



Once
knee
joints



the
are

supple and accustomed to the motion, try with bent knees. Tennis, golf, success, football, and skiing enthusiasts may like this.

Positional Leans: This stretch is for the very advanced with excellent balance. Alternately compress footpads with feet while touching toes to upright then arched back. Toes can be straight, pigeon-toed or duck-footed (straight, turned out or turned in). Dancers and gymnasts may want to consider this. Golfers with advanced balance and strength may like it as core is stronger and more flexible. Have a barre, spotter or sturdy apparatus at hand.



SEATED/GROUND WORK

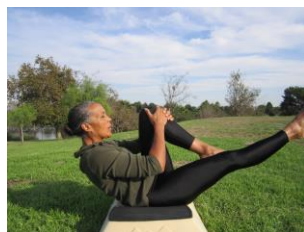
Sit-Ups:

- Seat self in center of modality with the downward slope forward or in center of pad as pictured below if you have poor core strength.
- Balance and lean back within your comfort and core strength capability, bringing your knees to a jackknife position, touching your hands to your knees or placing your hands behind your head.
- Another variation is to cup your hands behind your head and bring your knees and elbows together in a crunch style sit-up.



If unable to do the conventional sit up, sit as instructed with hands placed on the floor behind, beside or in the front and lift the knees as high as is comfortable in center of pad or downward slope.

For yoga buffs, the “half-boat or full-boat (or “batfink”) is easily executed as well and a nice challenge.





Arm Carriage: Imitate running or walking arm swing and time the arm action to the rebound movement. Simulation of drive arm action **SEATED** with the downward slope forward.

Exaggerate or reach for the ceiling alternating right and left arms. Utilized for people who are reestablishing upper body movement after injury or illness. Use hand weights if appropriate.

STRETCHING

The Seated Stretch on the floor, is an great way to learn correct posture and activate your whole body, especially if you have a tendency to slouch. If you do yoga, this is the staff pose.



- Begin with sitting **flat** against a wall (no arch in back) with a blanket folded twice under your hips if you have tight leg muscles or back problems. You will need the extra support when starting out if this is the case and will make it more comfortable to do the exercise.

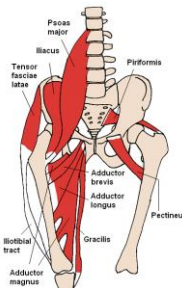


- Once seated comfortably, make sure your head and neck are in line with your spine down to your tailbone.
- Your rib cage should be lifted, not sticking out.
- Shoulders are dropped, not drawn up “around your ears.” Gently slide shoulder blades down your back as well.
- Close your eyes, visualize the movements of bone and muscle stretching in your upper body in preparation.
- Now begin the stretch from your feet by bringing them toward your body, helping to begin the releasing action of the tightness in the legs and lower back.
- Hands are next to your hips with finger tips or palms on the floor pointed forward for balance and support.
- As you align your pelvic region, the stretch in the upper body will begin as you **simultaneously, press** your hips and legs into the blanket or floor, stretching “down into the ground.”

You are now initiating “sitting taller.” Your pelvic area is becoming alive and active because of the movements in the upper body and lower body as it connects both regions with this small but very important body movement centering in this region. Be mindful of **Sitting Tall All Day**. Do this for 1 to 3 minutes.

Anterior Hip

Muscles



The **Lying Butterfly Stretch** or **Reclined Cobbler's pose** is an easy yet effective way to start opening up the hip and groin area.

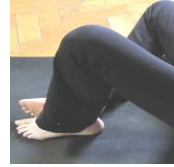
- Start by lying on your back with a rolled or folded blanket under your knees and feet. Make sure your back is flat on the floor with relaxed shoulder, arms about 7 inches from your body, palms up. Some people need a blanket under the back and head with the head a little higher than the back.
- Place your heels together and let your legs drop open to the end of their natural range of motion.
- As you become accustomed to this stretch, you can gently press your thighs into the blanket by placing your hands on your inner thighs and pressing down gently until you feel a comfortable resistance in your muscles. There may be little movement at first unless you are a seasoned pro at this. Do not force the stretch. Try this for a count of 10-30 seconds up to 2-5 minutes. Repeat if you wish.



As time goes on, you will only have the blanket under your knees, then no blanket as your torso opens and engages with your lower back and body. Done on a regular basis, a greater range of motion will be experienced.

Another variation of this stretch has you beginning on your back, knees together once again. You do not need a blanket for this one.

- Drop only one leg to the side, keeping the opposite leg stationary.
- Let the leg fall open to a comfortable degree without forcing it so that the adductors become accustomed to this new stretching movement.
- Your foot will naturally rollover on to its side. Bring the knee back to its starting point and repeat on the other side.
- Repeat 5 to 10 times for 2 sets on each leg.

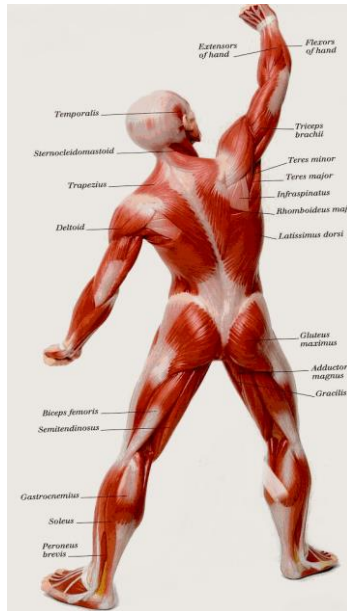


As you progress in flexibility, you can do the “traditional” Butterfly stretch.

- Sit against a wall on a rolled or double/triple folded if you have a weak back/ tend to slouch or tight hamstrings and not used to sitting up straight. When doing this you again learn how to use muscles to keep your back straight.
- Begin with straight back and knees together.
- Drop your knees open to their natural range of flexibility and put the bottoms of your feet together. If you choose, you can gently press your knees down with your own muscle power, elbows or hands.
- **Do not “bounce” your legs, just gently press your legs open.**
- Try this for a count of 10-30 seconds 2 or 3 times.



Be mindful of pinching and pain in the psoas area of the lower back as this may be part of the inner thigh or adductor strain you are coping with if that is your problem.



HELPFUL HINTS

- Recuperate with an aerobic run or padding
- Take rest intervals by padding or walking after anaerobic workouts.
- Pay attention to the tempo of your exercise. Listen to your body.
- **Wearing shoes will limit the foot's ability to interact with the footpads, reducing the exercises effectiveness as well as your ability to balance.**

GOOD POSTURE IS IMPORTANT

- For MOST exercises, keep a flat back, shoulders back and elbows close to your trunk.
- Brushing your thumb against your hip when running is a good rule of thumb to help you keep from drawing your shoulders up toward your ears.

Aerobic Workouts: Incorporate the heel and flat foot compressions.

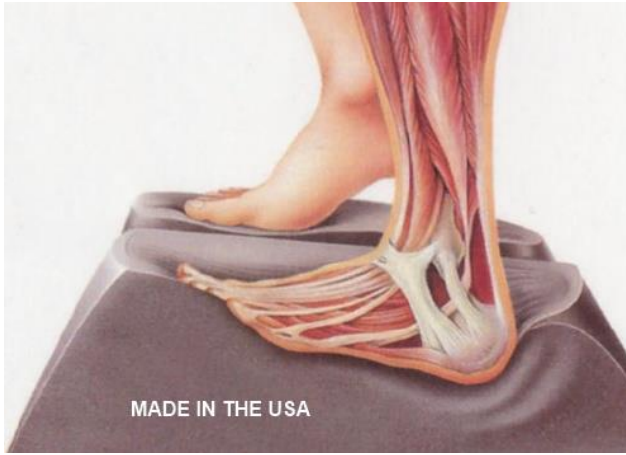
Anaerobic Workouts: Incorporate the forefoot and toe compressions. Using stationary objects to supplement balance is strongly suggested.

Perform these exercises at your own risk. Take all safety precautions for a safe workout with any exercise apparatus or program.

When beginning any diet or exercise program, it is **ALWAYS** important to consult your health care professional with any questions you have about physical exercise. Exercise according to your fitness level and capabilities. Individual results may vary. **If you feel any discomfort, stop and immediately call your doctor.**

Working with your healthcare providers to create a personalized program is ideal!





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