

Model ID

Name: Tee Jones

Sport: Football, arena league

Job: Strength & conditioning
assistant, James Madison
University

Size: 6'1", 210 pounds

Speed: 4.41 forty-yard dash

Vertical Jump: 42"

Hang Clean: 325 pounds

Squat: 500 pounds

What's the first thought that comes to mind when you think of stretching before training, practice, or a game? Sitting in some contorted position doing boring and sometimes painful static stretches? Stretch, hold for 10 to 30 seconds, and relax—we've all gone through this form of stretching at some point and chances are you still do it. But have you ever asked yourself, "Why am I doing this?" Think about it: when was the last time you attempted to relax and hold a stretch while actively playing your sport? You see where this is going. Not to say that static stretching doesn't play a role in the total training package, but prior to training and competition there's a better way to get yourself ready for top performance—*dynamic* stretching.

DYNAMIC WARM-UPS FOR DYNAMIC PERFORMANCE

Being flexible is one thing —
making flexibility work for
peak performance is another

By Greg Werner, MS, CSCS, ACSM-HFI,
and David Bass, CSCS

RATIONALE

Athletes get hurt all the time from pulling muscles or straining tendons. The point is that static stretching doesn't prepare you adequately for the dynamic activities you do on the field or in the gym. With an understanding of research, you'll see why.

The human neuromuscular system possesses a reflexive component known as the stretch reflex. This is the same reflex your doctor is testing when she taps you with a rubber mallet below the knee and/or above the elbow. It's also the same reflex

Current research has revealed that static stretching causes a temporary decrease in available power output—it makes you weaker.

that causes you to shake and tremble after a few seconds of holding a challenging static stretch. As its name implies, the stretch reflex is activated by stretching a muscle. The reflex is in part a protective mechanism built into your physiology to prevent you from overstretching a muscle. When a muscle is stretched to a certain point the stretch reflex is activated, sending a signal to the contractile components of the muscle, which causes a forceful contraction of the muscle in an effort to return the muscle to its resting length and prevent it from further stretching and damage.

You might now be wondering what allows you to overcome this reflex and engage in static stretches in the first place. At issue is the rate or speed of a stretch, which influences the stretch reflex more than the degree or length. So, when a muscle is stretched slowly, as in static stretches, you have time to relax and prepare for the coming stretch and mentally subdue the stretch reflex. That's not to say that you can just shut it off: it's a reflex and reflexes can't be shut off. But, after

several static stretches, the stretch reflex does subside to a certain degree and thus reduces its stimulation of contraction.

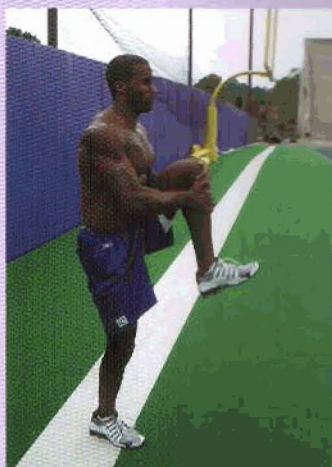
Unfortunately, what do most of you do after you finish your static stretches? Probably just get up and start playing, right? But after sitting and attempting to relax through your static stretches, jumping up and taking to the field or the weights isn't a smart idea.

But there's more. Current research has revealed that static stretching causes a temporary decrease in available power output—it makes you weaker. It's therefore not wise to perform static stretching before high-intensity activities (i.e., lifting, jumping, sprinting, and agility-specific sports). What the research shows is that intense stretching shouldn't be undertaken just before an event in which your success is related to maximal strength. The best time for such stretching is at the end of your training or game, when your muscles are their warmest and when you actually want to get into a relaxed state. The best way to prepare for high-intensity activity is to perform a pre-activity, dynamic movement series that emphasizes body movement and not passive, elongated, isolating stretches.

THE DYNAMIC STRETCH SERIES

Before you start the dynamic stretches, do a three- to five-minute total body warm-up consisting of jogging, rope jumping, or some other form of large muscle group, total body movement. The warm-up raises the body temperature, increases blood flow to the muscles, and lubricates the joints. Always remember, you warm up to stretch, you don't stretch to warm up. If executed properly, the dynamic stretch series will develop not only flexibility but also balance, coordination, and stabilization strength.

Perform all movements on a flat clean surface (i.e., turf, grass, weight room floor, or indoor court). Make sure you have good traction before starting: avoid wet or frozen surfaces and clean the soles of your shoes. Perform all movements for approximately 10 yards (or in-place for 10 reps if in the gym), rest at least 10 seconds, and repeat.



WALKING HIGH KNEE PULLS

upright posture. Stay on the balls of your feet; take a step forward, driving your knee up as high as possible; grab it and pull it higher to your chest if possible. On your return trip, execute the pulls with an internal rotation of the hip by supporting your knee and ankle and pulling your leg inward as you walk.

1. Walking High Knee Pulls

Keep your head in a neutral position, and focus forward. Hold your chest up while keeping your shoulders relaxed. Your elbows stay bent at a 90-degree angle with your hands relaxed and thumbs facing up.

Maintain a tall,

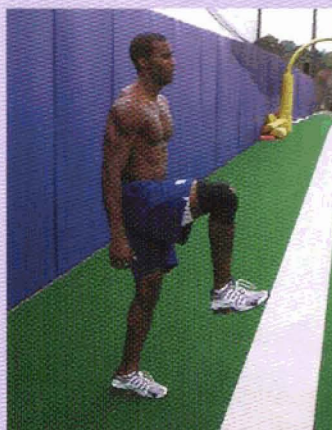
2. Walking Lunge

Keeping your focus forward, your hands behind your head, and your torso upright, step out as far as possible, striking your heel of your forward foot and extending onto the toes of your back foot. The knee of your forward leg should be at 90 degrees.



WALKING LUNGE

Complete the cycle by bringing your trail leg through and standing upright, then repeat the exercise with the opposite leg.



WALKING PULL-KICK-LUNGE

3. Walking Pull-Kick-Lunge

This is the same as the walking lunges except you

drive the knee of the forward leg up as high as possible and then kick forward and drop into the lunge.



WALKING STRAIGHT-LEG KICK

4. Walking Straight-Leg Kicks

Walk forward while keeping your leg straight. On your first trip across, kick your foot up only about halfway, being cautious not to overstretch your hamstrings. Then

on your trip back, kick as high as possible, trying to

touch your toes to your opposite hand held parallel to the ground. Repeat the cycle with the opposite leg and back again until you have walked 10 yards.

5. Side Lunge

Take a long stride out to the side and bend your knee to 90 degrees. Hold your arms in front of your body and your torso upright. With your back leg straight, push into the stretch.

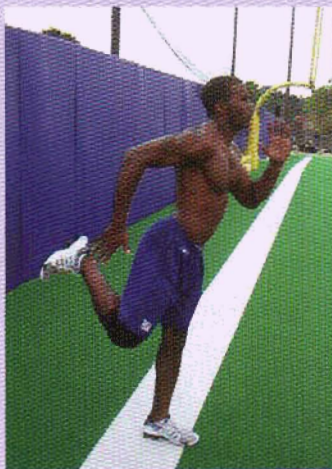
Keeping your hips low, shift your body weight to the opposite leg, and apply the stretch to the



SIDE LUNGE

other groin. Recover by bringing your feet together and standing upright. Repeat the cycle for 10 yards.

DYNAMICS



RUNNING BUTT KICKS

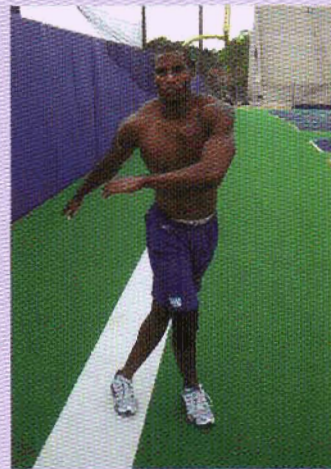
Maintain good running form: your head in a neutral position focused straight ahead, chest out and shoulders relaxed, elbows at 90 degrees, relaxed grip. Begin running by flexing at the knee and bringing the heel of your foot back and up to your butt. Maintain a slight forward lean, staying on the balls of your feet and swinging your arms. Complete 20 kicks within 10 yards.

6. Running Butt Kicks

Maintain good running form: your head in a neutral position focused straight ahead, chest out and shoulders relaxed, elbows at 90 degrees, relaxed grip. Begin running by flexing at the knee and bringing the heel of your foot

8. Running Carioca

Turn to the side; stay on the balls of your feet, with your torso upright and hips in a low, semi-squat position. Begin the exercise by twisting your hips and crossing one leg in front



RUNNING CARIOCA

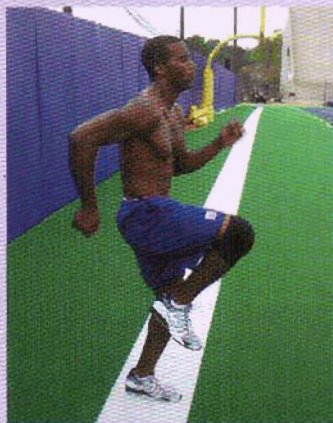
bring the trail leg through, and cross your lead leg behind your trail leg. This drill is done very quickly. Your shoulders should remain square through the entire drill.

If executed properly, the dynamic stretch series will develop not only flexibility but also balance, coordination, and stabilization strength.

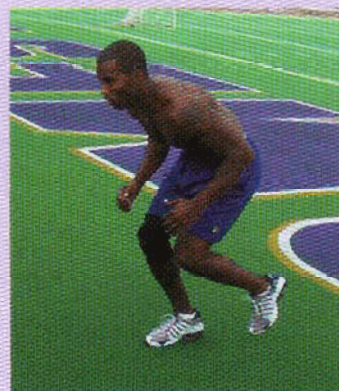
7. Running High Knees

This exercise is done in a rapid-fire running fashion. Keep your head focused straight ahead, elbows bent at 90 degrees, arms swinging.

Maintain a slight forward lean, stay on the balls of your feet, and drive your knees up and down as quickly as possible 20 times over 10 yards.



RUNNING HIGH KNEES



BACK PEDAL

9. Back Pedal

On your first trip across, use short choppy steps, keeping your hips and knees bent and your shoulders forward. On your return trip, open your stride and kick back.

10. Lying Scorpion Cross

Lie in a prone position, with your arms extended straight out in front. Cross one leg



LYING SCORPION CROSS

behind the other to the opposite side of your body; try to touch your foot to the ground.

Cross the leg back to the start position and repeat the process with the opposite leg. Do this exercise in a quick and continuous manner, trying to maintain your chest, shoulders, and arms on the ground at all times.



ARM SWINGS FORWARD

Arm Swings, Forward and Back

Start with your arms out to the sides and parallel to the ground. Swing your arms forward, so they cross each other, and back continuously.



ARM SWINGS BACK



SIDE BEND

12. Side Bend
Standing upright with your feet shoulder-width apart, bend to one side while holding your arm overhead. Push into the stretch and then quickly reverse direction and stretch the opposite side.

This exercise should be done in a controlled continuous fashion for 10 stretches on each side of your body.

13. Power Skip

Hold your head in a neutral position, with your chest out, shoulders relaxed, and elbows bent at 90 degrees. The movement is executed by doing an explosive, exaggerated skip while emphasizing height rather than distance. Swing your arms and drive your knee up, get airborne, land, and skip.



POWER SKIP

DYNAMATIZE

If peak performance on competition day or every day in the gym is your goal, then you should prepare yourself for that day's work with a warm-up protocol that's similar to what you're going to do. Doing static stretches won't prepare you sufficiently and may even diminish the strength that you can

The stretch reflex is built into your physiology in order to protect your muscles.

demonstrate. Leave that form of stretching for after the workout or competition. Get into the dynamics of a series of dynamic stretches to prepare yourself for peak performance.

RESOURCES

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