

STRETCHING FOR INJURY PREVENTION

with Liz Navarrete

FACT SHEET

LENGTH: 20 MINUTES

PROGRAM SYNOPSIS:

This program will make you a believer in the importance of stretching as part of an injury prevention routine. Liz Navarrete explains that the movements, postures and positions we take on each day while working can cause harm to our muscles and joints, as they are forced into awkward or strained positions. To prevent injury and remain pain-free, our major joints and muscles need to be stretched in the opposite direction in order to “undo” the damage and remain flexible and pliable. To achieve this, Liz demonstrates eight simple stretches that can be used as a whole-body stretching routine, including stretches for the neck, upper back, lower back, shoulders, hips, knees, ankles and hands, wrists and elbows. While demonstrating these eight stretches with a live audience, Liz also discusses the importance of incorporating posture, balance and body mechanics into our daily movements and activities. Liz explains that true injury prevention happens when proper posture and body mechanics become a habit and frequent stretching becomes part of our daily routine, both at work and at home.

PROGRAM OBJECTIVES:

After watching the program, the participant will be able to explain the following:

- Why it is important to find out what our wrong movements are and reverse them by stretching in the opposite direction;
- Why a stretching routine should be customized to a specific person and his or her job duties;
- Why it is necessary to keep muscle tissues flexible and pliable to reduce the risk of injury;
- What roles good posture and good body mechanics play in keeping our joints in good alignment;
- Why frequent stretching should become part of our daily routine, both at work and at home;
- How to perform each of the eight stretches that can be used as a whole-body stretching routine.

INSTRUCTIONAL CONTENT:

LIZ NAVARETTE'S PASSION FOR PREVENTING INJURIES

- Liz Navarrete is a physical therapist with over 14 years of experience helping people recover from work-related injuries.
- As a physical therapist, Liz Navarrete understands what causes these types of injuries and more importantly, how to prevent them.
- Liz has a passion for helping workers and their employers avoid the pain and expense caused by torn muscles, strained backs and other soft-tissue injuries.
- Liz Navarrete knows that incorporating stretching, posture and body mechanics into each person's daily routine is the key to preventing injuries.

MATCHING STRETCHES TO THE TYPE OF WORK BEING PERFORMED

- When I speak with employers and workers about stretching, the most important thing is to find which stretches are going to help to undo the type of damage that comes with the work that they do.
- So, a lot of postures and positions that we do throughout the workday, such as bending down or looking down or reaching high overhead, we need to find stretches to undo those movements because they can cause damage and we want to do the opposite of that.
- Instead of looking down, for example, a good stretch would be to look up. The more we can find the right movement, it will undo the wrong movement.
- Today, we're going to talk about stretching: why we stretch, what we need to stretch and show you how to do it, but first we're going to talk about muscles.

STRETCHING MUSCLES HAPPENS IN OPPOSITES

- So, when we're stretching a muscle, we are lengthening the muscle. Let's find an example. Everyone, bend your elbow and notice what's getting stretched.
- Our bicep is getting shortened and our tricep is getting lengthened or stretched, but if you straighten your elbow, the tricep muscle is getting shorter and the bicep is getting stretched.
- Stretches with muscles always happen in opposites. You can't stretch one muscle without contracting or shortening a different muscle and you can't shorten a muscle without lengthening its opposite muscle group.
- Opposites is important because almost everything we're going to talk about today with stretching at work is going to involve finding out what's the wrong movement and reversing that and stretching the opposite direction.

- So, whenever we're thinking about stretching, we want to think about opposites. If you feel like you're maybe in a strain position or an uncomfortable position, maybe that joint or that group of tissues just needs to be stretched the other way.
- Certain things are placed on a stretch all day, so if you're on your phone, for example, and you're looking down, which is not the right way to be on your phone that should be up here higher, but if it's down, then remember, you're in a forward bent position and that's something that we should probably try to find a stretch to undo that.
- So, your stretch for, if you found yourself looking down and you're having some discomfort, the stretch would be to look up.

EVERYONE'S STRETCHING NEEDS ARE DIFFERENT

- When I work with organizations, they're usually surprised to find out that I recommend a customized stretching routine for every person. Different departments and different individuals have different stretching needs based on their job duties. So, we want to customize a stretching routine to that specific person and their specific job duties.
- I want you to think about your job and when you're working. It's certain activities that are actually challenging muscle groups just like it would be if you were going to the gym.
- You might be lifting all day, so you're really working your leg muscles all day or you might be reaching overhead all day and then your shoulders are getting a workout.
- You really want to target your specific needs. Your needs and stretching are different than her needs and different than his. So, everyone's needs are a little bit different and the routine that we will do in a few minutes will cover pretty much the whole body and then you can pick which ones you need the most.

KEEPING TISSUES FLEXIBLE AND PLIABLE

- Because everyone has different stretching needs, it's important to have a routine that is simple and basic for the general employee and each person then can take the specific stretches that they need for their job.
- The important part of stretching is to keep the tissue flexible and pliable and when we do that, then we will not get as many injuries.
- It's really important to understand that you want everything to be pliable, so flexibility is going to keep you very mobile with your tissues. If they're pliable, they're less likely to break, so we don't want tears in the shoulder, tears in the knee, tears in the back.
- Just make sure that you're kind of warming up your tissues before doing anything strenuous. That's the best way to prevent injuries: stretching things the right way and combining that together with good posture.

PRACTICING THREE THINGS TO PREVENT INJURIES

- Stretching alone is not enough to prevent injuries. We have to incorporate three major things. Number one is stretching, number two is proper postures and number three is proper body mechanics, which is how you use your body in the right way and having good balance between different muscle groups and different joints, using them properly.
- As we use things properly and practice these three things, we form good habits and good muscle memory and that is when injury prevention really happens.

GOOD POSTURE AND GOOD BODY MECHANICS

- So, let's talk about good posture. Stand nice and tall. You want your ear, shoulder and hip to be aligned vertically, kind of like standing at attention.
- You want to be as straight as possible because when you're in that neutral position for your spine, nothing is really being shortened and nothing is being lengthened; it's balanced.
- Finding that balance in all your different joints is important, especially for your spine, because so many people get back issues because their alignment is off. But all your joints need to understand what neutral posture is.
- It's important to understand that postures are what your joints and spine are doing when you're not moving, whereas body mechanics is what your spine and joints are doing during movements.
- We want both of those to be correct and each of those joints to have their neutral position or their strong and safe position. One of the best ways to practice good body mechanics is a squatting exercise.
- It's really important when we're talking about stretching that we include and incorporate good body mechanics because what's the benefit of good stretching if in between your stretching routines you're doing wrong activities and wrong movements?
- Hopefully, the more you practice the good postures and the good body mechanics, then it'll just become more of a habit. That's the goal: to just have that habit of what it feels like to have those joints in good alignment.

STAYING INJURY-FREE AWAY FROM WORK

- So, good postures, good body mechanics and good stretching are going to be three of your biggest components to keep you pain-free and injury-free while you're working and at home too.
- Posture comes into play when you're sitting at home; body mechanics comes into play when you're lifting groceries or doing yard work.

- Anything you do could be done with proper mechanics or improper body mechanics, so it's not just work that this applies to. Everything, every day from morning to evening, putting your shoes on, brushing your teeth, you can do it safely.

THE WHOLE-BODY STRETCHING ROUTINE

- In addition to teaching the squat as a body mechanics reminder and an overall good warmup, we're going to teach a whole-body stretching routine, starting with one stretch for the neck, one for the upper back, one for the lower back, one stretch for the shoulder, another stretch for the elbow, wrist and hand together and then one stretch for the hip, one for the knee and one stretch for the ankle. But again, it's important that each person select which of those stretches to do.

THE NECK STRETCH

- Alright, so we are going to stretch our neck. Go ahead make sure you're standing neutral and face sideways so everyone can see.
- You're going to stand tall. You can have your hands at your side or on your hips if you want and you're going to look up until you feel a stretch and go as far as you can handle and then release back to the middle.
- The neck stretch is called a neck extension, which is looking up, and the reason for that is we want to undo all of the looking down that we do all day.
- We're just going to go slowly, about 10 times, lift until you feel a stretch, pause and then release to neutral. Don't release down; remember, we don't want to go the other way.
- Don't hurt yourself, so don't push so hard where you feel like you're going to break something, just gentle. We're just gently warming things up, getting things stretched. So, that's our neck stretches, extension.

THE UPPER BACK STRETCH

- The upper back and lower back stretches are also extensions, meaning backwards movements. Those are really good to undo all of the damage in your spine from the forward and downward movement that we do throughout the day.
- Upper back is going to be a little bit more challenging; stand sideways so everyone can see.
- You're going to put your hands kind of clasped behind your neck, then bring your elbows kind of close, if you can, and then you lift. So, lift until you feel a stretch in your upper back and then come back to the middle.
- You don't have to go so far where you bend your knees or anything. Lift until you feel a stretch in the upper back, release back to the middle, again.
- Lift until you feel a stretch here, keep those elbows kind of close and then release back to neutral. Remember, we're not releasing to a flexed position; we always release to neutral.
- Lift until you feel a big stretch in that upper back. Remember, these are joint stretches more than anything else and you'll be stretching different muscles, but we're focusing on the upper back joints, those vertebrae in your upper back.

THE LOWER BACK STRETCH

- I always want to be able to see from the side to get the best view from the side.
- Hands will be on your hip. If you really want to, you can put them on your back. You're going to bend backwards, of course, until you feel a stretch in your lower back and then release back to the middle. And stretch backwards, release back to the middle.
- You don't have to look up, but you can if you want to. Backwards, make sure you're going far enough to feel a good stretch and release back to the middle.
- It's really important, though, when you're between each extension exercise, when you release that you come to a neutral position. You don't want to come down to a forward position.

THE SHOULDER STRETCH

- No matter what movements we're doing during the day, we are almost always pulled into forward positions with our shoulders, meaning they're flexed. So, reaching forward, reaching up, lifting, carrying, all movements pull us forward.
- It's really important that our shoulder joints get stretched and that we stretch them into backwards positions. You may not think about stretching your shoulder, but the shoulder is a very large joint and it needs to be stretched in order to prevent shoulder injuries.
- You're going to clasp your hands behind you and lift them back until you feel a stretch in your arms and shoulders and release back down to your hips. Then lift again until you feel a stretch, pause and release.
- If you cannot lace your fingers, that's okay. You can still reach and do the exercise just by reaching back. So, just reach back and if you feel like that's a better stretch, that's fine.
- Modifying the shoulder stretch by not clasping your fingers together, but simply reaching back, is a good example of how you can modify any stretch. You don't want a stretch to hurt or cause any sort of joint pain, so you need to modify in order to go into the range of motion that you can handle. Then as you continue to stretch, you'll notice that flexibility and range of motion will steadily improve.

THE ELBOW, WRIST AND HAND STRETCH

- Daily stretching of the elbow, wrist and hand is very important to prevent injuries such as carpal tunnel syndrome, golfer's elbow and tennis elbow. So, if you have a job that requires lots of use with your hands, it's very important to do these stretches very often.
- Arm is going to be up and you're going to take your other hand and pull until you feel a stretch. Pause for a second or two and release to neutral. Okay and then again. Go ahead and do several on each arm.
- Notice, we're not doing the other direction. Everything is backwards here, good. Don't go so far where you're feeling pain, just a stretch.
- Make sure you do both sides, so take a few at least five to 10 reps each way.

SQUATTING

- Another stretch I really like to talk about is the stretch for the hip joint, which is squatting. One of the greatest benefits of squatting is the reinforcement of good body mechanics, so if you squat properly with your back straight, then it helps to prevent lower back injuries.
- We practiced squatting earlier, but I can't leave out squatting in our stretching routine because it is so important for body mechanics.
- You're going to squat; okay, back is straight perfect and come back up. Good, your hands can be on your hips, squat, perfect.
- Notice her spine is straight. Remember that alignment. Ear, shoulder and hip are still aligned.
- Squat and come back up. Spread your feet, keep your spine really straight. Very nice.
- It's up to you how far you go. If you have any issues or something, don't feel like you have to go too far.
- If you really want to strengthen, you can go further. The reason we're practicing this is for body mechanics, to practice and get that muscle memory and the right way of reaching and lifting.
- Go ahead and keep squatting; back is straight and then come back up. One last one, squat with your spine straight and then straight on the way back up.

THE KNEE STRETCH

- One thing to keep in mind while you are stretching is that you need to maintain good postures and good body mechanics, which mean your back needs to be straight.
- When people stretch their hamstrings and they bend over to touch their toes in order to stretch out the back of their legs, the problem with that is that it is stretching the hamstrings, but it is also doing damage to the lower back.
- So, I'll teach you a stretch for your knee which can help to stretch the hamstrings without bending your lower back.
- We're going to face sideways and one leg is going to go in front and you're going to bend the leg that's back and come to a pretend sitting position and hold. So, it's almost like sitting back onto his leg and this knee is straight.
- Come back up. It's almost like sitting back, kind of a backwards lunge almost, and release again.
- If you want to put your hands on the knee of the back leg that's bent, that's fine. Come back up.
- Again, this is for your hamstring. This is the right way to stretch your hamstrings.
- Now, if you're going to go for a run or go play soccer, you might want to do this for some 30-second hold times, but within the industry, let's just do two or three-second hold.
- Go ahead and switch legs, one leg forward. The leg behind you, you're going to bend that knee and you sit back onto it and your toes are pretty much straight up. Make sure the one in front of you, the knee stays straight just like that.
- Your spine is relatively straight the whole time. Notice his spine is still fairly straight and every time you come back to that stretch position, you should feel it behind the right knee. He'll feel it behind the right knee when he's doing it this way.

THE ANKLE STRETCH

- So, one leg is in front and then you just kind of lunge until you feel a stretch in the calf behind you. Pause for a second or two. Of course, your spine is straight. Release to here.
- Your hands can be on your hips or wherever you want. One or two seconds, release, keep going and then switch legs.
- Lunge forward until you feel a stretch in your calf back here. That's where his stretch is happening.
- Continue a couple more reps and the one behind you, make sure the heel stays down. You don't want the heel to come up because then you're losing that stretch.
- Everybody got it? Looks like you're doing it right, you just want to make sure those toes are facing forwards.

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ANSWERS TO THE REVIEW QUIZ

1. b
2. c
3. c
4. b
5. a
6. a
7. a
8. a
9. b
10. c

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REVIEW QUIZ

Name _____ Date _____

The following questions are provided to determine how well you understand the information presented in this program.

1. When we're stretching a muscle, we are _____ the muscle.
 - a. Shortening
 - b. Lengthening
2. The most important part of stretching is to keep the muscle tissue _____.
 - a. Stiff and rigid
 - b. Firm and stable
 - c. Flexible and pliable
3. The neck stretch, upper back stretch and lower back stretch are all examples of _____, meaning backward movements.
 - a. Contraction
 - b. Compressions
 - c. Extensions
4. When performing a stretching exercise, you should release the stretch to a flexed position.
 - a. True
 - b. False
5. No matter what movements we're doing during the day, we are almost always pulled into _____ positions with our shoulders.
 - a. Forward
 - b. Backward
 - c. Neutral
6. A stretch should be modified in order for you to go into a range of motion that doesn't hurt or cause joint pain.
 - a. True
 - b. False
7. _____ stretching of the elbow, wrist and hand is very important to prevent injuries such as carpal tunnel syndrome, golfer's elbow and tennis elbow.
 - a. Daily
 - b. Weekly
 - c. Monthly
8. Squatting properly with your back straight helps to prevent lower back injuries.
 - a. True
 - b. False
9. Which stretch is effective for stretching your hamstrings?
 - a. The lower back stretch
 - b. The knee stretch
 - c. The ankle stretch
10. When lunging forward during the ankle or calf stretch, you will feel a stretch in your _____.
 - a. Ankle
 - b. Knee
 - c. Calf