- Check yourself for correct body positioning.
 - Stop BEFORE you feel pain or are tired.
- · More repetitions and less weight is safer.
- with 10 and increase as the muscles get stronger). Strengthening (THINK REPETITIONS - start
- Stretch out before and affer exercise and work.
 - PAIN!!...and NO BOUNCING!!
- As your muscles relax, stretch further, but NO

BREATHE!!

- Hold the position for 20-30 seconds and
 - (IINIA9 ON TUB)
- · Stretch out to a point where you feel tightness
 - Stretching (THINK CALM! 2-5 repetitions)

Safely....

How to Stretch and Strengthen Muscles

and activity level.

- Try to regain your normal range of movement
 - stretching/strengthening to prevent injury. · Warm up muscles with light activity prior to
- and inflammation (no more than 20 minutes). Use ice or frozen vegetables to reduce swelling

day - read the medication instructions before Tylenol, ibuprofen: 1-2 tablets three times a

- Take anti-inflammatory medications (e.g.,
 - or too uncomfortable
- injured muscles, but STOP BEFORE it is painful
- · Gently massage, stretch and strengthen the
 - · Rest, drink water, sleep, eat healthy foods.
 - . If you feel pain or discomfort, STOP!!!

Your WMSD Things You Can Do to Relieve

Tight, inflexible muscles.

- · Medications, illness, pain, depression.
 - Poor or inadequate nutrition.
 - Not getting enough rest or sleep. sufficiently hydrated.
- Not drinking enough water and staying

you at Risk for WMSD... Personal Factors that Can Put

equipment.

- Unsafe work behaviors or incorrect use of turning and lifting, especially overhead.
 - Repeatedly bending, stooping, twisting, repeatedly throughout the day.
 - Doing the same activity frequently and

at Risk for WMSD... Work Factors that Can Put You

Get plenty of rest and sleep.

dehydrate you.

cottee, tea and soft drinks because they · Drink plenty of water and avoid alcohol,

and avoid sugar and white flour.

- Eat plenty of fish, meat, fruits, vegetables,
 - cracks and calluses.
- Keep your skin well moisturized and free of
- jod, lift weights, etc.) and stay in shape.
- Exercise (e.g. play sports, work out, walk or before and after work.
- Maintain physical flexibility and stretch out
 - Change hands and/or work positions.
 - If possible, do a variety of job tasks.

Musculoskeletal Discomfort (WMSD).... How to Prevent Work Related

Stretching and Strengthening Activities

The following stretches and exercises are designed to increase the strength, endurance, and flexibility of your muscles. Do these stretches and exercises on a regular basis to prevent and/or reduce WMSD.

Looking Over Your Shoulder...

- . Seated or standing hold your head straight and face forward
- . Turn your head and look over your shoulder as far as possible, without pain.
- . Make sure your neck is straight.
- · Keep your shoulder blades together.
- . Hold, rest, then repeat.

Side Bending (Trapezius Stretch)...

- · Seated or standing hold your head straight and face forward.
- . Bring your ear down toward your shoulder as far as possible.
- · Make sure your neck is straight
- · Keep your shoulder blades together.
- . You can hold onto the side of the chair opposite to the direction in which you are bending your head for a better stretch
- · Hold, rest, then repeat

Chin Tucks...

- . In either a seated or standing position ,hold your head and neck straight and look forward.
- · Keep your shoulder blades together.
- . Bring your chin down toward your chest.
- · Hold, rest, then repeat.





Head Pushes...

- Lay down on your back with your knees bent, your back flat, and your head and neck resting straight on a pillow.
- · Push your head straight back into the pillow
- . Hold, rest, then repeat.



Where to Go for Help to Address Your WMSD....

- Talk with your wife/significant other, co-workers, friends, or boss/supervisor.
- Talk with your local pharmacist
- Talk with a physician, nurse, or physical therapist.
- Visit a community health clinic or hospital.
- . If it is an emergency, dial 911 or go to the local hospital emergency room or urgent care center.
- Talk with members of your religious community



NIOSH Southeast Coastal Agromedicine Center 1157 VOA Site C Road Greenville, NC 27834 (252) 744-1000

Design and production: Theresa Costello, M.S., PT Translation: Maria Gonzales, Jose Miranda, Leonor Tolosa Artwork: Kay DeMarino.

Are You or Someone You Know Experiencing Pain/Discomfort from Working, Especially in Agriculture, and Would like to Understand

Why you are experiencing pain/discomfort? How you can prevent it from occurring? What you can do to relieve it?

...here are some helpful tips...

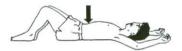


Shoulder Blade Squeezes...

- · Lie down with your back flat, your knees bent, and head and neck straight, facing the ceiling.
- . Bend your elbows and bring your arms away from your body, even with your shoulders.
- . With your hands pointing toward the ceiling, squeeze your shoulder blades together.
- · Squeeze without moving your arms or arching your back.
- . Hold the squeeze, rest 1-2 seconds, repeat.

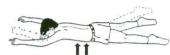
Back and Trunk Strengthening Exercises...

- · Lie down with your back flat, your knees bent, and head and neck straight, facing forward, with your arms at your
- . Pull your navel into your spine and roll your hips toward your head, hold 3-5 seconds, rest, repeat.
- · As you gain trunk control, add other movements: e.g.,the arms can be raised overhead either one at a time or together, you can march with your feet; lift the hips toward the ceiling, etc.



Prone Extension Exercises...

- · Position yourself face down on your stomach with your arms stretched out over your head. Pull your navel into your spine to keep the back flat, NOT arched.
- . Lift one leg toward the ceiling keeping the knee straight.
- . Hold, rest for 1-2 seconds, repeat with the opposite leg.



Repeat the same movement with the arms, raising one arm at a time.

. As you gain strength and control of the arm and leg exercises, progress to raising the right leg and the left arm at the same time. Hold for 3-5 seconds, rest, then repeat with the left leg and right arm.

Stretch for the Hip Flexors and Chest Area...

- · Position yourself face down on your stomach with your arms stretched out over your head.
- . Pull your navel into your spine to keep the back flat, NOT
- . Bend your elbows prop yourself up on your forearms.
- . Hold, rest, then repeat.



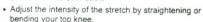
Hamstring Stretch ("Door Frame" Stretch)...

- · Position yourself in an open doorway as shown in the picture: knee of the leg in the doorway bent, the other leg supported against the wall with toes pointed toward your body.
- . Keep the back flat, head, and neck straight, and control the trunk by pulling your navel into your spine. DO NOT arch your back!
- · Move closer to the wall as the hamstrings become more flexible. NO PAIN. Hold the stretch for 1 minute. BREATHE and allow the muscle time to relax. Rest. repeat 2-3 times then switch legs
- . To stretch the outside and inside leg muscles, the leg against the wall can be turned with the foot pointing inward or outward (MAKE SURE TO TURN THE LEG AT THE HIP. NOT THE ANKLE!).



Total Body Stretch with a Twist...

- · Lie on your side with your hip and knee bent to a 90 degree angle
- . Take your top leg and bend it back behind you.
- · USE YOUR LOWER ABDOMINALS TO KEEP YOUR BACK STRAIGHT ... pull your navel into your back!



- . Take your top arm, reach overhead, and lie down on it with your palm down.
- · Hold, rest, repeat.

Squats for Trunk and Leg Strengthening...

- · Position yourself against a wall with your feet apart to shoulder width (move away from wall with increased strength and control of lower abdominal muscles).
- . Bend your knees and lean back against the wall.
- · Use your lower abdominal muscles to keep your back straight (i.e., pull your belly button into your back.).
- . Slowly move up and down by bending and straightening your knees and hips.



Shoulder/Arm Stretch (lazy hitchhiker...)

Shoulder Stretch with Clasped Hands...

- · Either standing or seated, hold your head erect and look straight ahead.
- · Take your arms behind you keeping your elbows straight.
- . Turn your outward and down toward the ground.

· Clasp hands together behind

· Lift your arms up away from

head/neck and back straight.

· use your lower abdominals

to stabilize your hips (i.e,.,

pull your navel into your

· slightly bend your knees so

you are squatting.

. Keep your shoulders.

. DO NOT ARCH YOUR

BACK!! Instead:

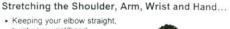
spine.);

· Hold, rest, repeat.

· Hold, rest, repeat.

your back.

your back.



twist your wrist/hand counterclockwise (your thumb ends up pointing down and backwards).

· Enclose your thumb inside your fingers and make a fist.

· Maintaining that position, move your arm backwards until you feel a good stretch, but NO PAIN!!

· Hold, rest, repeat.



Prayer Stretch for Wrists and Fingers...

- · Place your palms and fingers together with your elbows and wrists bent to 90 degrees.
- . NO PAIN!!
- · Rotate your hands clockwise toward your stomach.
- · To increase intensity:
- · spread your fingers apart.
- · Move pairs of fingers away from each other.
- · Hold, rest, repeat.



Table Stretches for the Forearms and Hands...

· Stand in front of a table

- · Keeping your elbows straight, place both hands with palms down flat on the table, then bend your wrists to the point of tightness. NO PAIN!.
- . Start with the thumbs pointing toward your body,
- . Change the position of the hands in small increments such that the thumbs end up pointing outward.
- . Then, reverse the movement until thumbs are pointing toward your body.
- . Hold each position for 10-30 seconds, repeat 2-5 times.
- · Move in small increments. BREATHE!!

Stretching the Thumb...

- . Using the left hand, push the right thumb down toward the right little finger.
- · Be careful to put pressure at the base of the thumb, not at the tip of the thumb.
- · Hold, rest, repeat.



Foot Strengthening Exercises...

· Progress by picking up marbles, etc.

minute, rest, repeat.

. Draw circles, letters, etc.

· Other exercises:

with your foot.

· Either seated or standing, position your foot on a towel or

cloth, and using your toes, crunch up the towel for 1

- . Keep the back flat, head, and neck straight, and control the trunk by pulling your navel into your spine. DO NOT arch your back!
- · Position one leg in front with the knee
- · Position the other leg behind with the knee straight and keep the heel on the floor!!
- . To increase the stretch, bend the front knee.
- · Be sure to keep the trunk straight and your head behind your knees.

NOTE: sit-ups and crunches are not included because they can exacerbate neck, shoulder and back problems. A lower abdominal focus is safer and equally, if not more effective,







