



**ST. LUKE'S**

---

**IOWA HEALTH SYSTEM**

*Working together. Making a difference.*

# ***IMPACC PROGRAM:***

## ***WORKSMART: "THE INDUSTRIAL ATHLETE"***

Prepared by:

**Erik N. Nieuwenhuis, • MSPT**  
Work Injury Claims Prevention Specialist and  
**Faye Tompkins, RN • Employee Health/Wellness**

**St. Luke's Health System  
July 16<sup>th</sup>, 2001**

<b><u>Table of Contents:</u></b>	<b><u>Page:</u></b>
<b>Table of Contents</b>	<b>2</b>
<b>What is Personal Ergonomics</b>	<b>3</b>
<b>What are Musculoskeletal Disorders (MSD's)</b>	<b>4</b>
<b>What causes MSD's</b>	<b>4</b>
<b>What are Signs and Symptoms of MSD's</b>	<b>5</b>
<b>Early Reporting</b>	<b>5</b>
<b>WorkSmart Stretching Plan – At Work</b>	<b>6-8</b>
<b>Egoscue-Cises for Back Pain Suppression</b>	<b>8-9</b>
<b>After Work Back Recovery</b>	<b>10-13</b>
<b>WorkSmart Techniques for Computer Workstations</b>	<b>14</b>
<b>WorkSmart Techniques for Proper Lifting</b>	<b>15</b>
<b>Self Care Techniques</b>	<b>16-19</b>
<b>Contact Information</b>	<b>20</b>

**Disclaimer:**

This program is intended to provide general instruction on the IMPACC at work stretches to avoid workplace muscle fatigue; at home work exercises, and self care techniques for your working/aging body. These types of exercises may not be appropriate for all individuals. Before beginning this or any other type of exercise program, consult with your physician and/or physical therapist to determine what exercise program is suitable for you. If at any time while performing these exercises you experience any pain, numbness, and/or tingling, discontinue performing these exercises and contact your physician immediately.

## What is Personal Ergonomics? What Does it Mean to Me?

“**Ergonomics**” is the science of work design. Using ergonomics, engineers try to design jobs to reduce physical demands on the working body.

“**Personal Ergonomics**” is the science of **YOU** working smart; Learning to move and position your working body to reduce stress on muscles, tendons, ligaments, and joints. The objective is to avoid **FATIGUE** and the damage to your body.

Well-designed jobs for workers who work smart will keep a **good blood supply** to working muscles, tendons and joints. The worker is productive and comfortable as long as working tissues get enough circulation. And these structures **must be kept flexible, strong, and healthy**.

It is the responsibility of **management** to provide a **safe workplace**. However, it is **your responsibility** to **properly use and care for your working body**. We will be explaining how you can improve your work postures, learn efficient work methods and effective self care techniques for your working body. The techniques you learn for work should be used at home as well. We all want to be more comfortable at work and have **MORE ENERGY** left over at the end of the work day to do those things which we enjoy; spending time with family and friends, going to see a ballgame/concert or play, recreational activities, or reading a book, etc...

The workplace will provide comfortable and successful jobs only if **EVERYONE WORKS TOGETHER** to constantly improve work design and worker habits. This protects your body, your family’s security and your job. Productivity and quality will improve. Costs stay down. **EVERYONE WINS!!** This is the **NEW American Work Ethic**.

## **What are Musculoskeletal Disorders (MSD's)?**

An MSD is a disorder of the muscles, nerves, tendons, ligaments, joints, cartilage, blood vessels, or spinal discs. **MSD's may include muscle strains and tears, ligament sprains, joint and tendon inflammation, pinched nerves, and spinal disc degeneration.** Your doctor might tell you that you have one of the following **common MSD's such as:**

- Carpal Tunnel Syndrome
- Tendonitis
- Low Back Pain
- Rotator Cuff Syndrome
- Sciatica
- Herniated Spinal Disc
- Trigger Finger
- Tension Neck Syndrome
- Raynaud's Phenomenon
- De Quervain's Disease
- Epicondylitis (Lateral – Tennis Elbow, Medial – Golfers / Little League Elbow)
- Hand-arm Vibration Syndrome; and
- Carpet Layers' Knee

## **What Causes MSD's?**

***MSD's are caused by exposure to the following risk factors of Job Design and Worker Posture/ Body Mechanics of doing the Job:***

1. **Awkward Postures (Repeated or Sustained):** Posture is the position your body is in and affects muscle groups that are involved in physical activity. Awkward postures include repeated or sustained forward head/ rounded shoulders, reaching, twisting, bending, kneeling, squatting, working overhead with your hands or arms, gripping, pinching or holding fixed positions.
2. **Repetition:** Doing the same motions over and over again places stress on the muscles and tendons. The severity of risk depends on how often the action is repeated, the speed of the movement, the number of muscles involved and the required force.
3. **Forceful Exertions:** Force is the amount of physical effort required to perform a task (such as heavy lifting) or to maintain control of equipment or tools. The amount of force depends on the type of grip, the weight of an object, body posture, the type of activity and the duration of the task.
4. **Contact Stress:** Pressing the body against a hard or sharp edge can result in placing too much pressure on nerves, tendons and blood vessels. For example, using the palm of your hand as a hammer, resting your forearm on the edge of a work surface can increase your risk of suffering an MSD.
5. **Vibration:** Operating vibrating tools such as sanders, grinders, routers, drills and other saws can lead to nerve damage.

20% of MSD's are caused by Job Design (Ergonomic Issues)

80% of MSD's are caused by worker posture, faulty body mechanics and poor fitness for work.

**What are signs of MSD's that you should watch out for?** MSD signs are objective physical findings that an employee may be developing an MSD.

*Examples of MSD signs are:*

- Decreased range of motion
- Deformity
- Decreased grip strength
- Swelling/Inflammation
- Cramping
- Redness/Loss of color
- Loss of muscle function; and
- Inability to do everyday tasks

**What are symptoms of MSD's that you should watch out for?** MSD symptoms are physical indications that an employee may be developing an MSD.

*Examples of MSD symptoms are:*

- Pain
- Numbness
- Tingling
- Burning
- Aching/Cramping; and
- Stiffness

**Note: Early Reporting** of signs and/or symptoms of MSD's are encouraged by St. Luke's Health System

*If MSD signs and symptoms are not reported early, permanent disability may result.*

**Thus, it is important that you report MSD signs and symptoms right away to avoid long-lasting problems. Contact the following persons to report MSD signs/symptoms or MSD hazards:**

<b>Name</b>	<b>Phone</b>
<b>Faye Tompkins, RN Employee Health</b>	<b>712-279-3530</b>

**Or contact your supervisor in your work area: THANK YOU**

## WORKSMART STRETCHING PLAN

Frequent stretching is important to keep proper blood supply flowing to working tissues. These should be done twice per day, or up to every hour, carried out very gently. They should never be forced, never cause any pain. These are our best general suggestions. Exercises should, ideally, be customized by a professional to match job demands and workers should be specifically trained how to do them properly.



**Chin Tuck Stretch:** This helps correct the position of forward head posture, thus relieving symptoms of headaches. The idea is to gently over-correct your posture to stretch the tissues that became tight with bad posture. Simply tuck your chin into your neck as you bring your head up tall, as in a position of military attention. Hold this stretch for ten seconds.

### Neck Stretch:

**A: Upper Trapezius  
"Neck Stretch"**



**Picture A:** Tight neck muscles can squeeze nerves and blood vessels to your arms, leading to fatigue and pain. These muscles respond to gentle stretching. Sit upright. Place your left hand on top of your right shoulder. Hold that shoulder down as you tip your head to the left. Keep your face pointed straight ahead. Hold this stretch very gently for ten seconds. Repeat for the other side.

**B: Levator Scapulae  
"Stiff Neck/Headache"**



**Picture B:** While holding your right shoulder down, turn head to look to opposite (left) shoulder. Repeat other side.

**C: Sternocleidomastoid  
Scalene**



**Picture C:** Do the same as letter A, except now with your eyes look up and above the right shoulder you are holding down. Repeat other side.



**Relaxation Response:** Constant work activity on any job can gradually tighten your working muscles. This tension is wasted muscle work. Try this procedure to relieve Neck/Shoulder and Upper Back stress, see how much better you feel at the end of the day. Sit upright. Inhale deeply as you shrug your shoulders and clench your fists (do not clench your teeth!). Hold this position for 2-3 seconds. Then exhale and relax your upper body fully, for five seconds. Do this twice. This will result in deeply relaxed muscles that will tolerate work much better and leave more energy after work.



**Wrist Stretch:** Hand work can tighten forearm muscles, putting pressure on tendons as they pass through your wrist. This may lead to problems in the wrist or hand. Hold your right hand palm up with your arm fully extended. Place your left hand fingers atop your right palm. Gently pull your right hand backward and hold for ten seconds. Repeat this stretch with your other arm.

**Elbow Stretch:** Lifting or pulling across the wrist, typing and/or mouse work at you computer workstation, doing work activities in a thumbs up or palm down posture can over-work forearm



muscles that originate near the elbow. Stretching these muscles will help reduce the risk for elbow problems. Stand up tall and look at the back of your right hand. Gently make a fist, bend your fist away from you, slowly extend your elbow. You should feel a pulling stretch along the top of



the forearm. Hold this stretch for 10 seconds, then shake your hand loosely. Repeat with the other arm.



**Standing Back Bend:** Sitting, bending or lifting can stress your lower back. This stress can be reversed with back-bending stretches. Stand, feet apart. Place your hands on your low back. Gently lean backwards at your low back only as far as comfortable. Do not tip your head backward. Hold three-five seconds, and do 2-3 repetitions. Do these often when working bent over or sitting or lifting, but at least every hour, your back will Thank You!

**Shoulder Pendulum:** If you do a lot of shoulder reaching or overhead work then you should include this stretch. Lean over at your waist, hanging one arm down loosely at the shoulder. You may wish to lean on your other hand placed on a chair or table top. Swirl the relaxed arm around in a slow, lazy circle for ten seconds. Repeat for the other shoulder. Do this frequently during shoulder work.



**Sitting Forward Bend:** Standing all day can cause excessive pressure on your lower back joints and tightness in their muscles. If you stand all day at work, squat and/or sit for a few seconds every hour. The idea is to frequently stretch out of the sustained position. **An alternative is to sit in a chair and bend forward to place your chest on your thighs.** Hold this stretch ten seconds.

**Egoscue-Cises: Taken From Pete Egoscue's book “The Egoscue Method of Health Through Motion” and “Painfree”**

For those who are hurting somewhere with musculoskeletal pain, **start** with the **Static back press**, **Supine groin stretch**, and **Air bench** until the pain ceases. These exercises will help to reposition your hips, helping to restore proper functional alignment. **YOU must take responsibility for the pain and dysfunction to discontinue.** The exercises can't do it without you. Gravity will do it, but sometimes depending on the severity of the dysfunction, it could take two hours or more. Your two hours today may be ninety minutes tomorrow and after a few weeks it could be fifteen minutes. Each person will be different with the time required to restore function and suppress pain.

**Static Back Press/90-90 Position:**  
**(Principle Back Pain Suppression Exercise)**

*Remain in this position as long as needed.* Get down on the floor, lie on your back with both legs bent at right angles on a chair, bench, or sofa. Rest your hands on your stomach with palms down or at your sides below shoulder level with palms up. Abdominal muscles should rise as you inhale and fall as you exhale. Hold this position as long as needed until your back pain is suppressed. Stay in this position for at least ten minutes.



Static Back Press/90-90 position



**Supine Groin Stretch: (To tame the powerful hip flexor muscles)**

Lie on your back with one leg resting on a chair, the knee bent at a ninety degree angle, while the other leg is extended (straight out) and resting on the floor. Make sure that both legs are aligned with the hips and shoulders. The foot of the extended leg should be propped upright to prevent it from rolling to the outside (Use books or a block, etc). Relax in this position for at least ten minutes, then switch sides. An alternative way to time this E-cise is to use the thigh test. Contract the thigh of the extended leg and determine where you feel the strongest part of the contraction. Initially it will be felt near the knee, recheck every three to five minutes. When the contraction gets to the mid thigh or above it's time to switch sides. Repeat the same on the other side.



SUPINE GROIN STRETCH

**Air Bench: (To train the muscles of your thighs (quadriceps/ hamstrings) that they are supposed to be supporting the trunk, not the hip flexors!)**

Stand against the wall with the small of your back and the hips pressing into the wall. Place your feet shoulder width apart in front of the wall. While pressing your hips and the small of your back into the wall slowly walk your feet forward while simultaneously sliding down into a sitting position. Stop when you've reached roughly a ninety-degree angle with the knees over the ankles, not the toes. If you feel any pain in your knees raise your body up the wall to relieve the pressure. Hold this position for one to three minutes. You may have trouble with this one initially, welcome to the club! A lot of people have difficulty because it forces their leg muscles, instead of their hip flexors, to do the work of holding the body off the ground. Remember to breathe and come out of this position by leaning forward, and use your hands to push off of your thighs and then walk around for a minute.



## AFTER WORK BACK RECOVERY

Going to bed with a stiff back after a day's work **may cause your back to heal improperly, often with too much scar tissue.** This leads to a gradual weakness and stiffness (getting old) that can put you at a higher risk for a back problem. **Investing just five minutes of gentle stretching exercises after work, before sleep, will allow your back to heal properly, relieving the stress of a day's work.** Your back regains its' younger flexibility and strength. These exercises are designed for a healthy back. If you have a back problem, you should seek advice from a professional physical therapist who can evaluate, treat and recommend exercises for you.

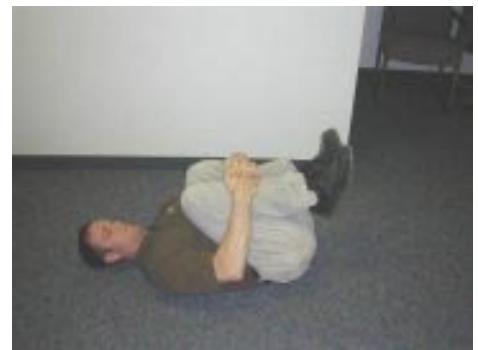
### **Sitting Piriformis Stretch**

Sit up TALL in a chair, place right foot atop left knee; turn torso (upper body) to the right so you are looking over the right knee; gently pull your right knee with both hands toward your left shoulder. You should feel a stretch in your right buttock/thigh region. Hold for 20 to 30 seconds. Repeat on the other side.



### **Low Back Stretch (Double Knee to Chest)**

Lie on your back. Gently pull both knees to your chest. Hold for 20 to 30 seconds. Then relax and lie flat.



### **Hip Flexor Stretch (Single Knee to Chest)**



Lie on your back. Bend one knee to your chest. Grasp it and hold it to your chest for 20 to 30 seconds, keeping the other leg down flat. Repeat on the other side.



### **Side Lying Rotation Stretch**

Lie on your left side with your legs bent up toward your chest and your chest curled forward toward your legs. Rotate your chest backward so that your chest faces up and reach with your right hand away from your body. With left hand hold your knees together.



Stretch 20-30 seconds. Avoid if painful. To facilitate better relaxation, take slow deep breathes in through your nose and out through your mouth, trying to reach further on each exhalation (breath out). Repeat other side.

### **Back Bend Stretch (Prone on Elbows)**

Lie on your belly. Place your elbows on the floor just beneath your shoulders. Press up so that you hold your upper body up on your forearms for 30 seconds. If this hurts, skip it and instead do a gentle standing back bend for five seconds. Repeat 2 – 3 times.



### **Cat & Camel Stretch**

Get on your hands and knees. Arch your back up like an angry cat for 3 seconds, then let you back sag like a camel for 3 seconds. Keep elbows straight. Move up and down gently 5 times. Breathe slowly in your nose and out through your mouth.



### **Seated Twist**

While sitting up tall in your chair, place your right hand on the outside of your left knee. Gently twist your body to the left side as you look over your left shoulder. To stretch further you can put your left shoulder/ arm behind the back of your chair. Breathe deeply to achieve muscle relaxation allowing further twisting to



### Seated Twist ...continued.

occur. Hold for 20-30 seconds. Return to starting position slowly. Repeat other side by placing left hand on the outside of your right knee. Gently twist your body to the right side as you look over your right shoulder. This is also an excellent stretch to do during the workday if you sit for long periods of time.

### Hip Bridging

Lie on your back with your legs bent and your feet flat on the floor and arms at your sides. Raise your buttocks 6 to 8 inches. Hold for three seconds. Relax.

**Repeat ten times.**



### Hip Power Bridging

Lie on your back with your legs bent and your feet flat on the floor and arms at your sides. Raise your buttocks 6 to 8 inches. While holding your buttocks raised, lift and straighten your right leg. Hold for 3 - 5 seconds, return right leg to starting position, and straighten left leg as you continue to hold buttocks up. Hold for 3 - 5 seconds, return to starting position.

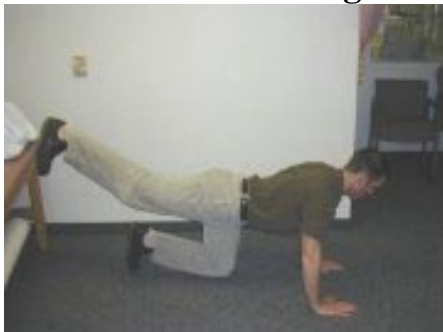
**Repeat 3 - 5 times.**

### Upper Back Strength

On your hands and knees, raise and reach forward with right arm. Hold for 3 seconds. Switch to reach forward with left arm. **Repeat 5 - 10 times.** Do this exercise with slow and controlled movement.



### Lower Back Strength



On your hands and knees, raise and reach right leg. Hold this for 3-5 seconds. Switch to the left leg. **Repeat five to ten repetitions with each leg, or to fatigue.** Do this exercise with slow and controlled movement.

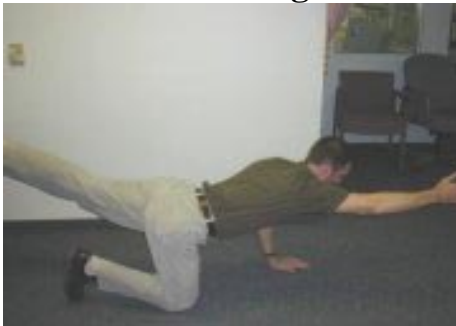
### **Abdominal Oblique Strengthening**



Lie on your back with legs bent and feet flat on the floor. Take slow breath in through your nose and out through your mouth. While **breathing out** slowly reach with your right arm across body towards your left knee. Your right shoulder blade should only slightly come off of the floor. Hold for 1-3 seconds. Repeat to other side. Always exhale slowly with the reach of your arm, and twisting your trunk.

**Repeat to fatigue.**

### **Full Back Strength**



Combining the previous two exercises. Get on your hands and knees. Reach forward with your right arm and backward with your left leg. Hold this for three seconds. Switch to the other arm and leg and hold for three seconds. **Repeat five to ten repetitions, or to fatigue.** Do this exercise with slow and controlled movement.

If unable to do this with proper balance, start by raising a single arm or leg at a time and work up to opposite arm and leg.

### **A Word Of Caution**

These exercises are designed to keep a healthy back strong and healthy. They can improve the strength and flexibility of your back. **However, if you have an active back problem, you should seek a Professional Physical Therapist and/or Physician** who can evaluate your back and design an exercise program to fit your particular problems.

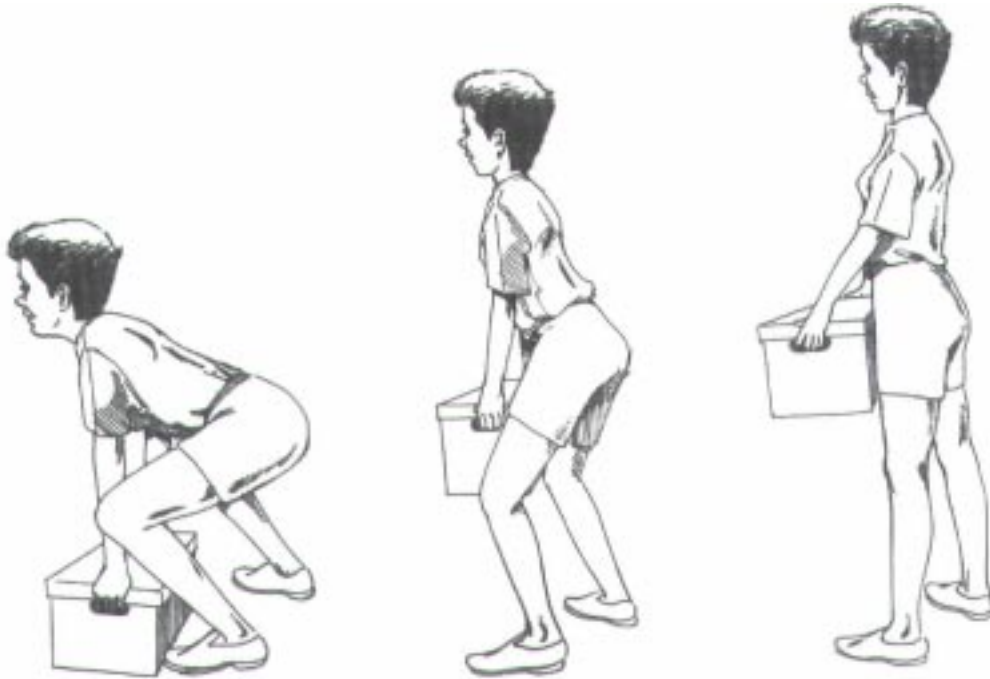
#### **Disclaimer:**

This program is intended to provide general instruction on the IMPACC at work stretches to avoid workplace muscle fatigue; at home work exercises, and self care techniques for your working/aging body. These types of exercises may not be appropriate for all individuals. Before beginning this or any other type of exercise program, consult with your physician and/or physical therapist to determine what exercise program is suitable for you. If at any time while performing these exercises you experience any pain, numbness, and/or tingling, discontinue performing these exercises and contact your physician immediately.

## WorkSmart Techniques For Computer Workstations

1. **Chair:** Height adjustable, forward tilt of seat pan which allows upright sitting posture, lumbar roll/support with chair lumbar properly positioned, if arm rests available should have arms relaxed at your sides and approximate 90 degree angle with elbows bent.
2. **Monitor:** Squarely in front of you and not to the side with monitor height placing your eyes horizontal from the top line of your monitor and approximately 25 inches (approximately arms length) or greater from your head.
3. **Desk:** Height places elbows at 90 degrees with the fingers on the keys. Push equipment back to give space in front of keyboard for padded arm rest/ wrist pad and allowing upper extremity weight bearing support. (This significantly reduces muscle fatigue during the work day) Keep your elbows as close to your sides as possible when typing. Paperwork on document holder near midline to avoid turning head. Vary this position for posture variety. Keep things used frequently at workstation within an easy arms reach.
4. **Mouse:** Keep elbows as close to your sides as possible when using mouse to reduce neck/ shoulder/ arm muscle fatigue. Have your mouse pad pushed in to allow arm to rest on work surface and within 15 inches or easy arms reach to avoid fatigue. Avoid reaching when using the mouse, especially to the side. Perhaps switch often between mouse and trackball or touchpad for variety.
5. **Shade:** To cut reflected glare. Have a light/white colored screen background with dark print to cut down on glare. May also purchase an anti-glare screen for your monitor if above not effective.
6. **Telephone Headset:** Replaces handset if much phone work is done during work day. *Avoid having phone positioned between neck and shoulder, as this posture will significantly add to muscle fatigue in the neck/shoulder/arm/hand.*
7. **Pen/Pencil:** Padded or purchase thicker diameter tool to reduce pinch stress to wrist.
8. **Bi/Tri Focal:** If you wear either Bi or Tri focal glasses, you may be able to wear a standard pair of reading glasses when working at your computer to avoid stress of repeated extending of your head.
9. **Stand to Stretch Often:** Set chime from clock/computer to remind you to stop and do the stretches of the neck/shoulder/arm and lower back (backward bend) frequently throughout the workday. *Your body's health is worth the effort!*

## WorkSmart Techniques For Proper Lifting



- **Keep your head up.** This maintains the arch in your lower back.
- **Stand with your feet apart, one foot slightly ahead of the other.** A wide stance helps your balance during lifting. If you plan to move the load to the left, position the left foot slightly back and turned out toward the left.
- **ARCH YOUR BACK INWARD** and locks it with muscle power: Tuck your chin as in military attention, and stick out your chest to arch your back. **Then squat down to the load. Grasp the load securely.** Curl it to your body. Keep your chin tucked and lift smoothly. Do not lift with a sudden, quick pull.
- **Keep the load close.** Holding the load close to your body greatly reduces the stress to your back. Holding a load away from you at arm's length can increase the load on the spine by ten times! Remember to maintain your locked back position as you put the load down. Keep your head up to create an arch in your back.
- **A successful worker is committed to always using their spine properly.** The best rule for proper lifting is very simple. *Think!* **It is the only back you have. It is your back for life.**

## Self Care Techniques

### ***Self Care Techniques:***

Do the *Upper Body, Standing Backward Bend and Static Back Press/ 90-90 Position stretching exercises*, described in this packet, at home and at the end of the workday before bedtime. This restores the flexibility you lost during the day's work...allowing your body to heal itself properly during tonight's sleep. Applying moist heat before doing the exercises can help increase blood flow and relax your muscles. Take a brisk walk. This can greatly help your neck, back and total body.

### ***Headache relief:***

Headaches are a very common problem in society today, but the *good news is most occur as a result of our posture habits*. Forward head and rounded shoulders posture is one of the key risk factors for headaches. Headaches can be treated naturally by a variety of means such as; Chin tuck stretch performed multiple times followed by chin tuck with head extension (leaning your head backward), stretching the levator scapulae muscle and lying on tennis balls. By lying on two tennis balls, tied up tight in a sock, this works to relieve the muscle tension/ tightness at the sub occipital muscles, which are at the base of your skull. Initially this area will likely be very tender or uncomfortable. With time this discomfort should lessen and your headaches will bother you less or be completely relieved.

### ***Trigger Point Release:***

To treat posture trigger points (sore areas) another technique that works very well is to use "deep sustained pressure" over the trigger point (sore area). Have you ever had that spot at the top of your shoulder or between your shoulder blades and it felt much better while and after you pushed down hard over this area. This is the same technique. You can use many variations to apply the deep sustained pressure such as; your fingertip, someone's elbow, or use a purchased pressure/trigger point applicators, lean into a tennis ball against the wall, (Tennis balls in a sock as mentioned above to treat your headaches), etc. A Thera-Cane is a device used to treat these trigger points by physical and occupational therapists at St. Luke's. If you are interested in trying out this device stop by any St. Luke's clinic or these may be purchased at any St. Luke's Rehab location.



***Friction Massage/ Ice Massage:***

(To get rid of elbow/ shoulder tendonitis and/or pain).

Press your fingertip firmly into the sore spot at your elbow/wrist/shoulder, etc...Rub hard, side to side for 10-30 seconds the opposite direction that you feel the muscle/ tendon going. Warning this technique does hurt, but it is needed to properly clear out the inflammation and scar tissue built up in the tendons and muscles. You may do this technique over the same site 2-3 times or search for another sore spot nearby. Next treat these sore spots using Ice Massage. Ice Massage is done by filling a Dixie cup, or Styrofoam cup with water, place this into the freezer and allow to freeze. Tear off the top portion of the cup and rub the ice directly over the painful area for a couple minutes or until the area is NUMB. With cold you should feel the following progression; Cold-burn-ache and then the area goes numb. The numb sensation is the end point of using the ice. Ice massage can be done daily as needed or 2-3 times per day to relieve soreness, inflammation, and pain. Friction massage should only be done a couple of times per week (2-3 times).

***Proper Shoes and Arch Supports (Spenco):***

If you spend most of your workday on your feet either standing or walking it is very important to have good shoes with arch supports. The posture muscles in the feet which support the arch get fatigued as we age and most people have a tendency to get flat or pronated (turned out) feet. If you suffer from heel pain or plantar fasciitis by purchasing spenco arch cushions/ supports this may help to relieve your problem. They are important because they help restore proper biomechanics of the foot and ankle when we walk. Spenco arch cushions or supports can be purchased at any St. Luke's Rehabilitation Clinic location or they can be purchased in stores such as Scheel's, Tradehome Shoes and Footlocker. If arch cushions or supports don't help your problem schedule an appointment with a physical therapist at any St. Luke's location for an evaluation to determine the cause of your problem. The physical therapist will give you exercises to restore proper function and body mechanics, education about your posture, lifestyle habits among others to determine the CAUSE of your problem.

***Lumbar Roll:***

If you spend most of your workday sitting, driving or you spend time in this position at home a lumbar roll is for you. This will help to maintain the inward curve of your lower back (Lordosis) while at the same time improve the posture of your head and shoulders thus significantly reducing or eliminating forward head posture (cause of headaches----YEAH). Thus your body will fatigue slower and you will have more energy at the end of the day. You should slowly increase your tolerance in using the lumbar roll to improve your sitting posture. These come in a variety of sizes and can be purchased at any St. Luke's Rehabilitation location.

***Cervical Roll:***

This is placed inside of your pillowcase while you sleep to restore proper lordosis posture (inward curve) of your neck. This can be used if you sleep on your back and/ or either side to keep a neutral head posture while sleeping. These too can be purchased at any St. Luke's Rehabilitation location.

***Ice vs Heat:***

Many people question whether they should use ice or heat. If ever in doubt use ice. Sore or painful body parts at the end of the work day (At home or during/ after any recreational activity) is a warning to your body signaling the inflammation process and thus why ice is needed to reduce the pain and control inflammation. When using ice you want to keep the ice applied until the area goes numb. Heat helps to increase blood flow and relax your muscles. Because of stress being so prevalent in society today most people enjoy heat or massage to relieve this muscle tension. By relaxing the bodies muscles blood flow (oxygen) to your working muscles is restored, reducing stress and improving your bodies' function.

***Breathing:***

Taken from the book;

The Master Key to Self Healing by Andrew Weil, M. D.

“There’s no single more powerful---or more simple---daily practice to further your health and well-being than breath work.”

***The Relaxing Breath:***

The Relaxing Breath is the most powerful relaxation method I know, and one that I teach to almost every patient I work with. You may feel a little lightheaded when doing it for the first time, but the sensation will disappear as you practice this breath regularly.

Inhale through your nose quietly and exhale through your mouth noisily, exhaling around your tongue (it helps if you purse your lips). The sound you make when you exhale is a kind of whoosh. Try this a few times so you become comfortable exhaling through your mouth around your tongue.

- Begin the Relaxing Breath by exhaling through your mouth completely.
- Then inhale quietly through your nose to a count of four.
- Hold your breath for a count of seven.
- And exhale through your mouth for a count of eight.
- Repeat that for a total of four breath cycles.
- Do a minimum of four breath cycles twice a day.
- After a month, you can increase the number of cycles to eight, twice a day.
- Never do more than eight breath cycles twice a day as this is a very powerful technique, and it has profound effects on your body’s physiology.

The important thing is to maintain the ratio of four, seven, and eight for inhalation, hold, and exhalation. Notice how you feel and are breathing after completing four cycles.

If you are having any Musculoskeletal pain and/ or problems doing any daily functional activities at home or work, or with any recreational activity you enjoy, etc... Tell your physician you would like a referral to see a Physical and/ or Occupational Therapist at St. Luke's Health System. We will give you the education and exercises your body needs for proper rehabilitation and function. At St. Luke's we are working together, making a difference to improve the health of the people of Siouxland.

Thank YOU for Choosing St. Luke's Health System!!

**For more information concerning any of the topics covered please contact:**

**Erik N. Nieuwenhuis, MSPT  
Work Injury Claims Prevention Specialist  
St. Luke's Rehabilitation Services  
3410 Futures Drive  
South Sioux City, NE 68776  
402.494.2065  
NieuweEN@stlukes.org**

**IMPACC WorkSmart Program “The Industrial Athlete Approach” to  
Ergonomics and Wellness in the Workplace.**