



Stretch It Out!®

Working Smarter...

...not harder.

Sample of Employer User Manual & Stretch Coach Handbook

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Physiology of Stretching

► The Phases of a MSD Injury

Blood supply to muscles and tendon tissues comes from the vasculature that supplies the attached muscle and bone by way of the myotendinous junction and teno-osseous junction respectively. Degenerative changes occur within these viscoelastic structures creating “micro tears”, which leads to the presence of discomfort and eventual injury. People commonly do not feel the effects of these tissue changes, but careful observation of work postures and techniques often reveals the presence of fatigue - - which is the initial phase of developing an MSD injury. Muscle fatigue results from decreased blood flow and oxygenation at the tissue level. In fact, Doppler studies have demonstrated that a decrease in blood flow to muscle tissue occurs within 30 seconds of maintaining a static posture! Fatigue eventually gives way to discomfort (Phase 2). However, most workers “tolerate” discomfort and often associate this symptom as “part of the job” or part of “just getting older”. Discomfort eventually will lead to pain (Phase 3). People respond to muscle or joint pain in various manners. Some choose to ignore it, others consider the impact the pain may have on completing their task at hand, while others may simply connect this symptom with an “old” injury. Regardless of the person’s response, ***injury results when discomfort and pain symptoms are left unaddressed.*** This entire process is illustrated in Figure 3.0 below:

The Phases of a MSD Injury

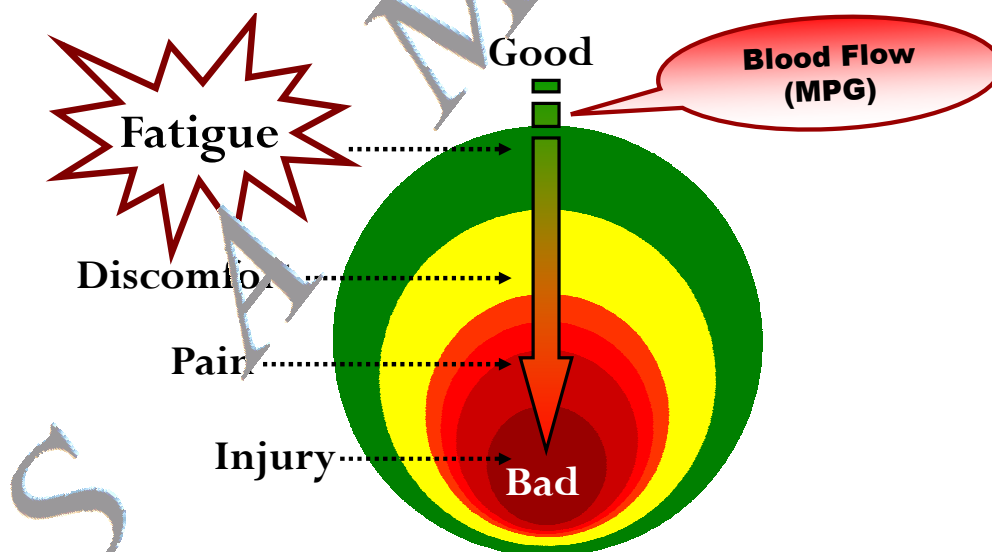


Figure 3.0

► Blood Flow = Miles Per Gallon

Adequate blood flow leads to optimal muscle function in performing a given task. An easy concept to remember this process is by use of the **Miles Per Gallon** approach (see Figure 3). Methods that help increase our fuel supply (i.e. oxygen from blood flow) enable us to function (i.e. increase our mileage) to perform certain tasks over a period of time. Blood flow is impacted by certain worker characteristics, job/task design, and work methods. Factors such as force, awkward/static postures, repetition, and worker characteristics (age, strength, flexibility, gender) can work to have either a positive or negative impact on our MPG with any given task. *Measures that focus on promoting a worker's MPG at the "fatigue" level will ultimately lead to reduction of discomfort, pain, and eventual injury.*

► Core Concepts of Stretch It Out!®

No one likes to come home at the end of the day feeling sore, being in pain, or unable to reasonably function. Stretching has long been recognized for its positive health benefits. Stretching is important for promoting good posture. Stretching also improves flexibility and energizes the body. It can also be said that stretching, in general, is not rocket science. After all, what is the first thing you do when you get out of the car after driving 3 or 4 hours - - stretch!! This concept is easy to understand once the **Miles Per Gallon** model is grasped. ***The core concept behind the development of Stretch It Out!® is to promote blood flow to commonly used muscle groups.*** Healthy blood flow provides the vital source of oxygen that allows our muscles to function efficiently. Without a proper supply of oxygen, our muscles simply will not be able to optimally perform or recover at a level that is required for various work tasks. In addition, tight or inflexible muscles have been shown to contribute to a variety of acute and/or chronic muscle and tendon disorders. Common disorders that are often linked to muscle fatigue and overload in the work place are identified in Figure 1.0. The majority of these conditions are treated with physical modalities and exercises that promote blood flow in the rehabilitation setting.

Research does not clearly support the statement that "a stretch a day will keep the doctor away". However, there are several studies that identify the physiological damage incurred to muscle and tendon tissues as a result of overexertion and/or repeated stressors. There are also several studies that demonstrate the positive benefits of stretching for muscle and tendon healing. The physiological responses to stretching benefit employees both at work and home. In short, stretching increases our blood flow (i.e increases our MPG), improves our energy levels, reduces discomfort, and helps us feel better at the end of the day!



Stretch It Out!®

Sample Project Outline

Purpose:

To further enhance the current musculoskeletal disorder prevention efforts already initiated at *[insert name of employer]*. Stretch It Out!® (SIO!) is not intended to replace the need for ergonomics, but rather provide an avenue that helps promote the health and wellness of our workforce. In short, SIO! helps reduce injuries, promotes safety, and allows people to feel better at the end of the day.

Training Methodology:

- Pilot program for *[insert department name or area]*.
- *[Insert SIO! Champion name]* will develop the stretching routine and training process.
- Stretch Coaches will attend a 60 minute training session prior to being instructed with the stretches. The purpose of the training is to provide the rationale why stretching is important, the role of this process in the overall prevention process, and address any questions/concerns. The training will also be completed by *[insert name and title]*.
- Instruct stretches during the training session. Employees to perform the stretches in class.
- Stretch Coaches will also receive a SIO! Handbook that illustrates all of the stretches.
- A handout will be developed as a resource for the employees.

Proposed Process:

- 5-10 minute stretching at the start of their shift and after their lunch/dinner break
- Mandatory participation is advised.
- The stretches will be led initially by *[insert Stretch Coach names]*. After the initial 1-2 weeks, group participants will lead the stretch sessions to allow the Coaches to assist employees with use of proper technique.
- A Stretch Coach Handbook will be utilized as part of the training. The Handbook demonstrates the proper stretching methods, as well as alternative stretching techniques.
- Trial period: 4 weeks

Measures of Success:

- Employee feedback (scale 1-5) regarding benefit, support of process, and program design.
- Baseline employee measurements can be taken prior to program and then four weeks later.
- Ability of employees to demonstrate all stretches independently without technique cues.
- Comfort surveys before and after pilot.
- Injury/near miss/first-aid records.



Stretch It Out!®

Stretch Coach Handbook

Background & Responsibilities

Welcome to **Stretch It Out!**® (SIO!). SIO! is a copyrighted work place stretching program that your employer has purchased a license to use at your location. This manual was created to assist individuals who have either volunteered or were “nominated” by their supervisor to fulfill the role of a “Stretch Coach” as part of the SIO! program. The primary responsibility of the Stretch Coach is to instruct the SIO! stretches to the employees in their designated stretch team and to serve as a communication liaison between the area supervisor and the SIO! Champion.

Muscles, Blood Flow, and Your MPG

The question “Why stretch at work?” is an important question that all Stretch Coaches should anticipate and be able to address. Muscles require “fuel” to work properly. As we work throughout the day in various postures and positions, the demand for fuel increases. Movement and stretching promotes blood flow, which improves the supply of oxygen to our muscles. It is oxygen that provides the “fuel” to our working muscles. Thus, increased blood flow increases our Miles Per Gallon, which reduces muscle fatigue and discomfort. Think about it, what’s the first thing you do when you get out of the car after driving several hours - - stretch! In addition, stretching helps prepare our muscles for activities such as work or exercise. In short, brief stretching increases our MPG, reduces discomfort, and helps us feel better at the end of the day.

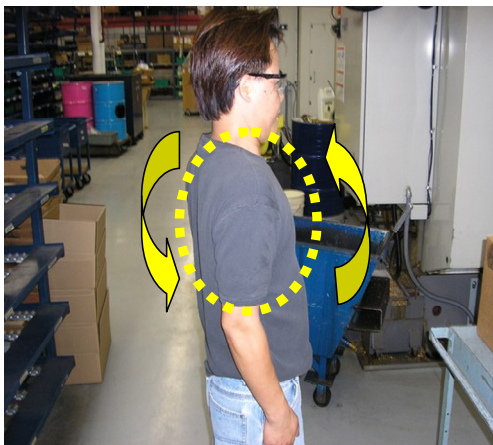
The Role of the Stretch Coach

Your role as a Stretch Coach is critical to the overall success of the SIO! program. The Stretch Coach will complete an initial training process in preparation for leading their assigned stretch team. The primary role of the Stretch Coach is to serve as a communication liaison between the area supervisor and the SIO! Champion. To achieve long-term success, ALL employees within their stretch team will eventually participate in leading the stretching sessions. This “ownership” relieves the Stretch Coach of the responsibility to “lead” each stretching session so they can observe and interact with the members of their stretch team to encourage use of proper technique and address concerns/questions.

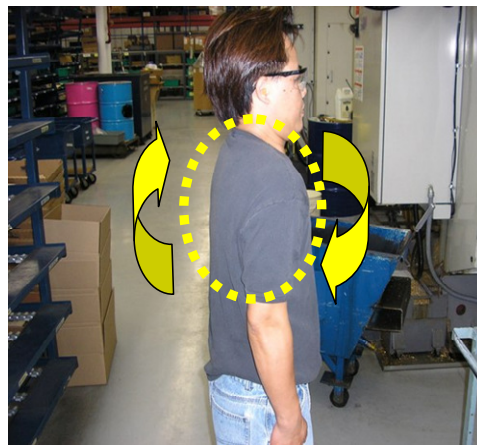
Stretch It Out!®

Shoulder Rolls

S A M P L E



Roll Backward



Roll Forward

Roll shoulders in large circular motions. Keep your arms by your side. Five reps forward and five reps backward.

Alternative: Raise and lower both shoulders up/down. Five reps up and down.

Stretch It Out!®

Forward Bend

S A M P L E



Actual



Foot too high



Foot too low

Stand and place right foot on a skid/chair/box. Bend forward while keeping left leg straight. Bring left shoulder down and across the right knee. Hold 10 seconds. Switch sides.

***Alternative:** Place right foot on prop (i.e. chair) and place both hands on top of the right knee. Bend slightly forward using both hands/arms to support the trunk. Hold ten seconds. Repeat to left side.*

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Palm/Forearm Stretch

S A M P L E



Actual



Alternative

Extend right elbow. Gently bend wrist and fingers backward using the left hand. Avoid grasping the finger tips. Hold ten seconds. Switch sides.

Alternative: Bend right elbow and gently bend wrist and fingers backward using left hand. Hold ten seconds. Switch sides.

Stretch It Out!®

Hamstring Stretch

S A M P L E



Actual



Improper

Place left foot on a sturdy surface around knee height. Straighten the left knee. Do not bend at the waist. Hold ten seconds. Switch sides.