MSD PREVENTION

Most musculoskeletal or movement system disorders (MSD) are the result of a PREVENTABLE imbalance that affects the muscles, tendons, and nerves (the soft tissues) of our movement system. Each day we use our body; physical stress and strain sometimes produces microscopic wear and fatigue to our soft tissues. Normally, this fatigue is fully repaired by rest, circulation, and nutrition through the blood supply. When there is a balance between this fatigue and the repair process, we maintain good health. But too much fatigue, coupled with too little repair ,can lead to MSD.

RISK FACTORS

WORK:

- Excessive Force
- Awkward Posture
- Repetition
- Poor Body Mechanics
- Poor Ergonomic Design

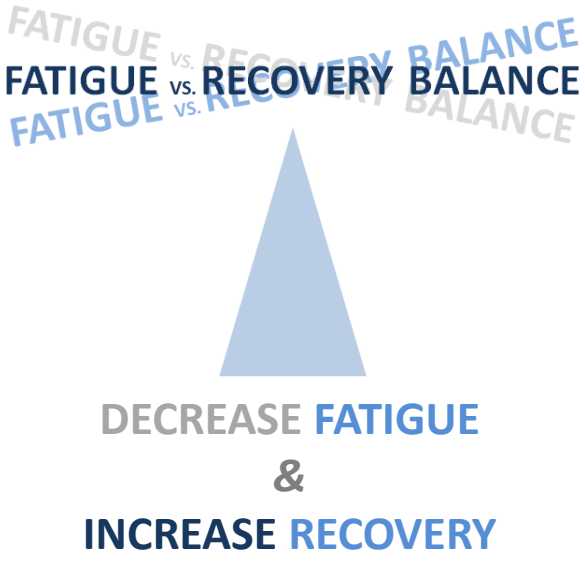
LIFESTYLE:

- Dehydration
- Poor Nutrition
- Fatigue & Inflammation
- Poor Physical Fitness
- Muscle Imbalance

LIFESTYLE CAUSES OF MOVEMENT SYSTEM DISORDERS:

- **Dehydration:** Healthy muscles are comprised of at least 70% water. Dehydration causes muscle fatigue, strain, tendonitis, and other disorders of the movement system.
- **Poor Nutrition:** Eating too many "empty" calories that don't contain the nutrients our body needs is a primary cause of injuries and disorders of the movement system.
- **Inflammation:** Inflammation causes many lifestyle-related disorders, including heart disease and movement system disorders. Too much sugar and fat within our diet can contribute to inflammation.
- **Fatigue:** Adequate amounts of rest and sleep are very important ingredients for our health.
- **Poor Fitness:** Poor levels of physical fitness increases the risk of disease and injury. The lower the level of fitness, the higher the risk of injury.

WHEN FATIGUE = RECOVERY… BALANCE IS ACHIEVED.
WHEN BALANACE IS ACHIEVED…OPTIMAL HEALTH IS MAINTAINED



DECREASE FATIGUE:

- Ergonomics
- Proper Body Mechanics
- Proper Lifting Techniques
- Pre-shift Stretching
- Reverse Stretching

INCREASE RECOVERY:

- Proper Hydration
- Good Nutrition
- Vitamin Supplements
- Proper Sleeping Habits
- Good Physical Fitness

Here's the good news… MSDs are absolutely preventable. MSD prevention strategies seek to reduce daily fatigue and enhance your body's recovery process. Employing prevention strategies can have an immediate impact on the quality of your life. You can go home with more energy left to do the things that make your life more enjoyable!

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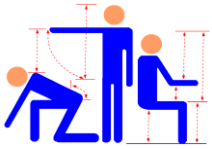
MSD PREVENTION

Prevention is a **shared** responsibility! The company is responsible for a safe work environment and procedures, and all workplace athletes are responsible for using their body properly and keeping their body fit for work.

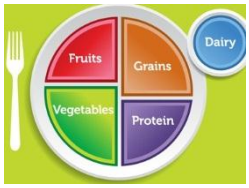


Ergonomics is about working smarter! An ergonomics improvement process seeks to maximize efficiency and to limit worker fatigue and discomfort. This is part of management's commitment to building an environment that is safe for work. The improvement process identifies ergonomic work process problems and eliminates them.

Proper warm-up & body mechanics will reduce daily fatigue and give you more energy left over at the end of the day! We are ALL athletes in life, so we need to warm-up like athletes to improve our performance and to reduce risk of injury. We should also plan to work smarter… not harder! Proper body mechanics tips to avoid injury: Use two hands to lift objects when possible. Slide parts rather than lift. Keep objects close to the body when carrying and lifting. Push rather than pull whenever possible. Always pivot feet if frequent change in direction is necessary, and never twist the lower back when lifting.

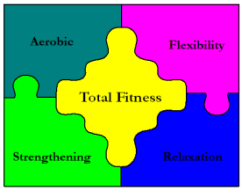
Drinking plenty of water is one of the most important things you can do for your health! Healthy muscles are comprised of at least 70% water. Dehydration of the muscles and tendons is a primary cause of muscle fatigue, strain, tendonitis, and other disorders of the movement system. How much water do you need every day? Your Body Weight ÷ 2 = # oz. of water per day (Example: 160 pounds ÷ 2 = 80 oz. of water per day)

Healthy eating is one of the most important weapons that we have to fight against injury and illness. The foods we choose to eat determine what our bodies look like on the outside and how well our body functions on the inside. Try to eat fewer "empty" calories from dead foods, and eat more calories from living foods. Living foods include fruit, vegetables, nuts, and seeds. Living foods are harvested. Dead foods are not harvested: they're processed and not very good for you.



Adequate amounts of **rest and sleep** are very important ingredients for our health. When we don't get enough sleep, increased release of stress hormones raises the level of inflammation in the body. If rest and sleep deficits persist, we become more vulnerable to injuries and chronic diseases. Sleep experts generally agree that most adults require between 6.5-9 hours of sleep each day to maintain optimal health and safety.

We need to maintain our **physical fitness** levels to prevent injuries and illness. There's a correlation between poor levels of physical fitness and increased risk of disease and injury. The lower the level of fitness, the higher the risk of injury. We should incorporate four types of exercise into our fitness plan: 1) Aerobic or cardiovascular exercise, 2) strength training, 3) stretching exercise, and 4) relaxation exercise.



Workplace athletes can use **ice or cold therapy** to control fatigue and soreness after activity. Ice application should be between 15 to 20 minutes applied directly onto the skin of the affected area. Preferably, crushed ice should be used in a plastic bag with the air removed from the bag. An initial aching and/or burning will be felt when the ice is on the skin. After 5 minutes, this should go away as the ice takes effect. Ice is a great anti-inflammatory! Never use heat after activity.

Vitamin & mineral supplements are not a substitute for healthy eating, but they can fill in the gaps and help combat fatigue and inflammation. Many nutrition experts recommend three daily supplements: 1) a high quality multivitamin and mineral supplement, 2) a vitamin D supplement with calcium and magnesium, and 3) an omega-3 fatty acid supplement.

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