# Ergonomics Strategies for Healthy Backs!

# Open: Bodies and Basketballs

## Bodies and basketballs have something in common

## Both need to be RESILIENT!

## What can we do to help ourselves be more resilient?

# Working Smarter, Not Harder!

## Strategies for Healthy Backs!

## Working Smarter, Not Harder!

## What does that mean?

# Ergonomics Principles

## Neutral Position

## Reach Zone

## Power Position

## Fatigue Control

## Tools and Equipment

# 30 Day Challenge

## Come up with 5 changes

## Work on them for 30 days

## YOU decide if it made a difference!

# Neutral Position

## Foundation of the body?

### Is it the feet?

## Consider if a person sprains an ankle?

### Pair of crutches they still get around

## What if person “sprains” their back?

### Significant problem even getting out of bed to get to the bathroom!

## Neutral Position: Spine and Pelvis

## Spine neutral position

## S-shape (side view)

### Inward curves in low back and neck

### Outward curve in midback

## Spring-like shape

## Deal with compression and shear stresses

## Stone fence concept

## Neutral Position in Action!

### Work Position Before

#### Issues?

#### Ideas?

### Work Position After

#### What do you think?

# Reach Zone

## Where we use hands to do work

### How long hold 10# load at arm’s length?

### Gets heavy fast!

### Hold it as close to body as you can

## Operating range

## Reach Zone

### Determined by arm’s length

### Sphere

## Reach Zone: Operating Range

### Look at this example

### Working in his Operating Range!

# Power Position

## Power Zone

### Related to Reach Zone

## Handle largest loads

### Green Zone

#### Mid-chest to mid-thigh level

#### Close to body as possible

### Yellow Zone

#### Caution

### Red Zone

#### Limit/avoid manual material handling

#### Mechanical handling equipment

## Power Position

### Lift or move parts, containers, equipment

### Neutral Position best position?

### As it turns out – it’s not!

### Power Position is better way to go!

#### Feet shoulder width or slightly wider

#### Good footing so you don’t slip

#### Spine maintained in neutral

#### Hips and knees bent slightly

#### Head and shoulders upright

### Sports ‘Ready Position’

#### Used in just about any sport as ‘ready position’

#### Probably have used it yourself

### Power Position At Work

#### How about at work?

#### Lifting materials

#### Using tools and equipment

#### Setting up work area

### Power Position: Water Fountain

#### Drink at the water fountain!

#### Rather than just bending over at waist with knees straight

#### Use Power Position

#### Give it a try!

### Power Position and Lifting Techniques

#### Do Lifting Techniques have an impact ?

#### Ask professional weightlifters – what is more important

##### Strength or Technique?

Technique!

#### Power Lifting Basics

##### Planning

##### Think lift through

##### Know where load will end up

##### Decide if manual or power equipment

##### Get help if needed

##### Good communication

##### Partner: Lift in unison

#### Power Lifting Basics

##### Planning

##### Critical component to any material handling

##### Power Lifting Basics

###### Base of support

###### Shoulder width

###### Stagger foot stance

###### Good footing

###### Build a Bridge

##### Power Lift technique

###### Feet wide

###### Maintain neutral spine

###### Keep load close

###### Good grip

###### Look UP!

#### Manhole Cover Removal

# Fatigue Control at Work

## Word “Control” and not “Eliminate”

### Physical fatigue is normal occurrence

### Not possible to eliminate fatigue

### Recognize and control effects of fatigue

## Personal Health and Wellness

### Recover from day’s fatigue

### Rest, hydration, nutrition and exercise when not at work

## Fatigue Control: Recognize Fatigue

### Recognize fatigue at work?

#### Muscle tiredness

#### Decrease in general physical strength and coordination

#### Make mistakes

#### May be more likely to experience injuries

### Fatigue Control Strategies

#### Mix up job tasks

#### Breakup larger task into smaller tasks

#### Drink plenty of fluid

#### Appropriate recovery breaks during shift

#### Replenish energy supplies

#### Stretching to promote blood circulation and joint lubrication

### Fatigue Control: Warm-up

#### Warming up prior to physical activity

##### Lifting

##### Pushing

##### Tool/Equipment use

##### Recovering from physical activity

##### Replenish energy supplies

#### Back Bend

Back Bend Stretch

#### How Should You Warm-up?

##### Absolutely have to follow Doctor's orders for any restricted activities

##### Technically correct

##### Energy Input/Output

##### Neutral Position

##### Joint Noises

##### Don’t hold breath

##### Regular and Consistent

##### Intensity/Controlled Stretching

# Tools and Equipment

## Correct Tools and Equipment

## What does “Correct” Mean?

## Apply ergonomics principles

### Can job be performed

### In reasonably neutral positions?

### Within acceptable Reach Zones?

### Within Power Position?

### With adequate technique?

## If YES . . . more than likely it is correct

## If NO . . . need to understand why not and make appropriate changes!

## Impact driver

## Power Over Manual!

### Remember the safest lift is . . . the one you don’t do!

## Problem Solving!

### Every day we make decisions how best to accomplish our job tasks

### All about problem solving!

### Coming up with better methods!

# Close: Strategies for Healthy Backs!

## Work Smarter, Not Harder!

## Strategies for Healthy Backs!

## Integrate principles into day-to-day routines

## Practice for next 30 days!

## Never too late to find out for yourself!

## Thanks for your Time and Attention!