

# **The Ergonomics of Brewing: Avoiding Injury and Staying the Course in the Brewery**

Steve Finnie, PT, DPT, Brewer/Brewery Owner

Little Thistle Brewing Company  
Rochester, MN





ROCHESTER  
MINNESOTA







**BREWERS AT WORK**

- **Review Ergonomics and common types of brewing injuries**
- **Review correct lifting, sitting and work station ergonomics**
- **Top stretches for brewing professionals**
- **Top core strengthening exercises for brewing professionals**
- **How to create an easy injury-prevention program.**
- **Resources/When and where to seek help**
- **Summary and Questions**

# WHY SHOULD EMPLOYERS SUPPORT THIS?

- **Reduced no. days lost due to injury**
- **Potential \$\$ Saving**
- **Improved staff morale**
- **Great way to support staff if can't offer benefits**
- **Increased productivity**
- **Improved safety and ergonomics**
- **It's good for you!**

## • Kegs



## Course Library

The Online Brewery Safety Training course library has 14 courses, each addressing a different procedure in the brewing process. The courses consist of videos, quizzes and resources.

### FREE Safety Courses

Grain Handling

Mashing

Transfer and Boiling

Whirlpool and Cooling

Fermentation Cleaning and Sanitizing

Fermentation and Cellaring

Filtering and Carbonation

Filtering and Pumping

Keg Cleaning

Keg Filling

Bottling

Canning

Grain Handling and Grain Silos

Powered Industrial Trucks

## Assessments and Certificates

Upon completion of each course users will receive a certificate documenting completion of that portion of the training. All portions of the course must be completed along with a passmark of 80% on the final post quiz in order to receive the certificate.



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# Safety



**Fall prevention**

**Respiratory hazards**

**Hazardous chemicals and gases**

**Thermal hazards**

**Pressures**

**Fall hazards**

**Confined spaces**

**Working surfaces**

**Noise**

**Personal protective equipment**

**Operating machinery (canning/forklifts)**

**Elevated platforms**

***Ergonomics***

# ***Ergonomics*** - *the Study of people's efficiency in their working environment*

**Force**

**Repetitive motions**

**Lifting malt bags**

**Lifting hoses**

**Leaning**

**Reaching**

**Bending/Awkward Postures**

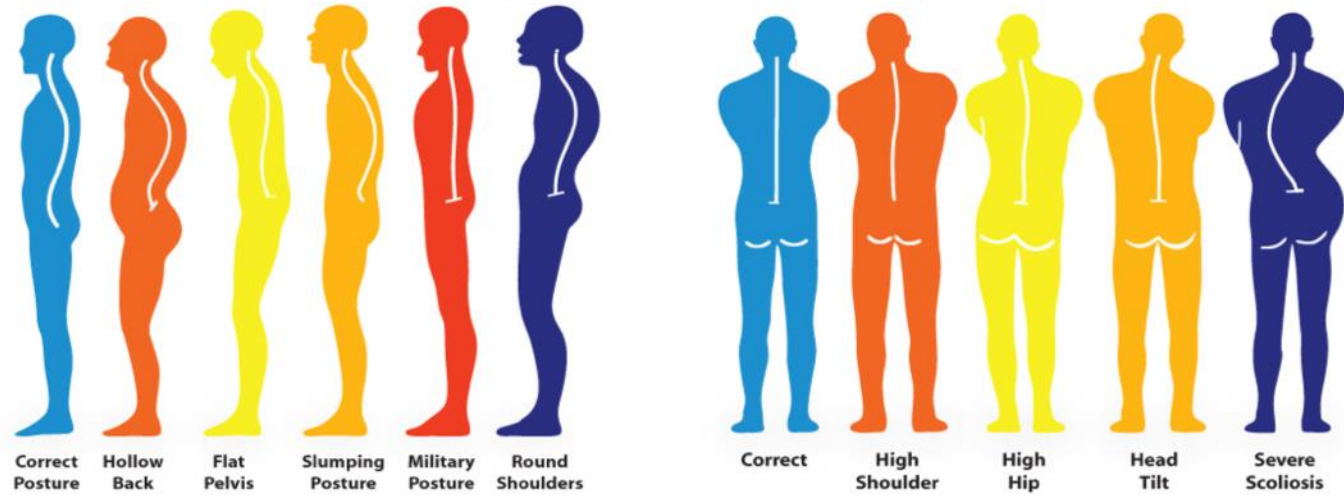
**Forceful grips**

**DAY... AFTER... DAY**



**Musculoskeletal Disorders – Focus of Physical Therapy**

## Which posture are you?





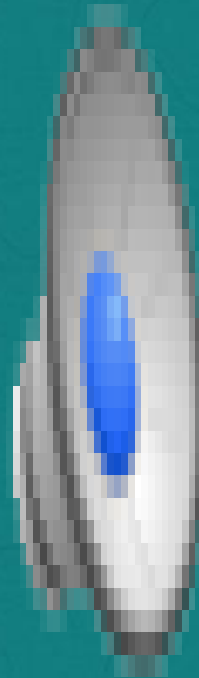
# Ergonomics: Lifting Technique



**Feet shoulder width apart**  
**Bend knees (not back)**  
**Keep load close to body**  
**Avoid twisting**  
**Make smooth gradual motions**  
**Micro breaks**  
**Lift with legs not back**  
**Use butt and gut (Abdominal Brace)**  
**Alternatives - golf pick up**



# Lifting Video





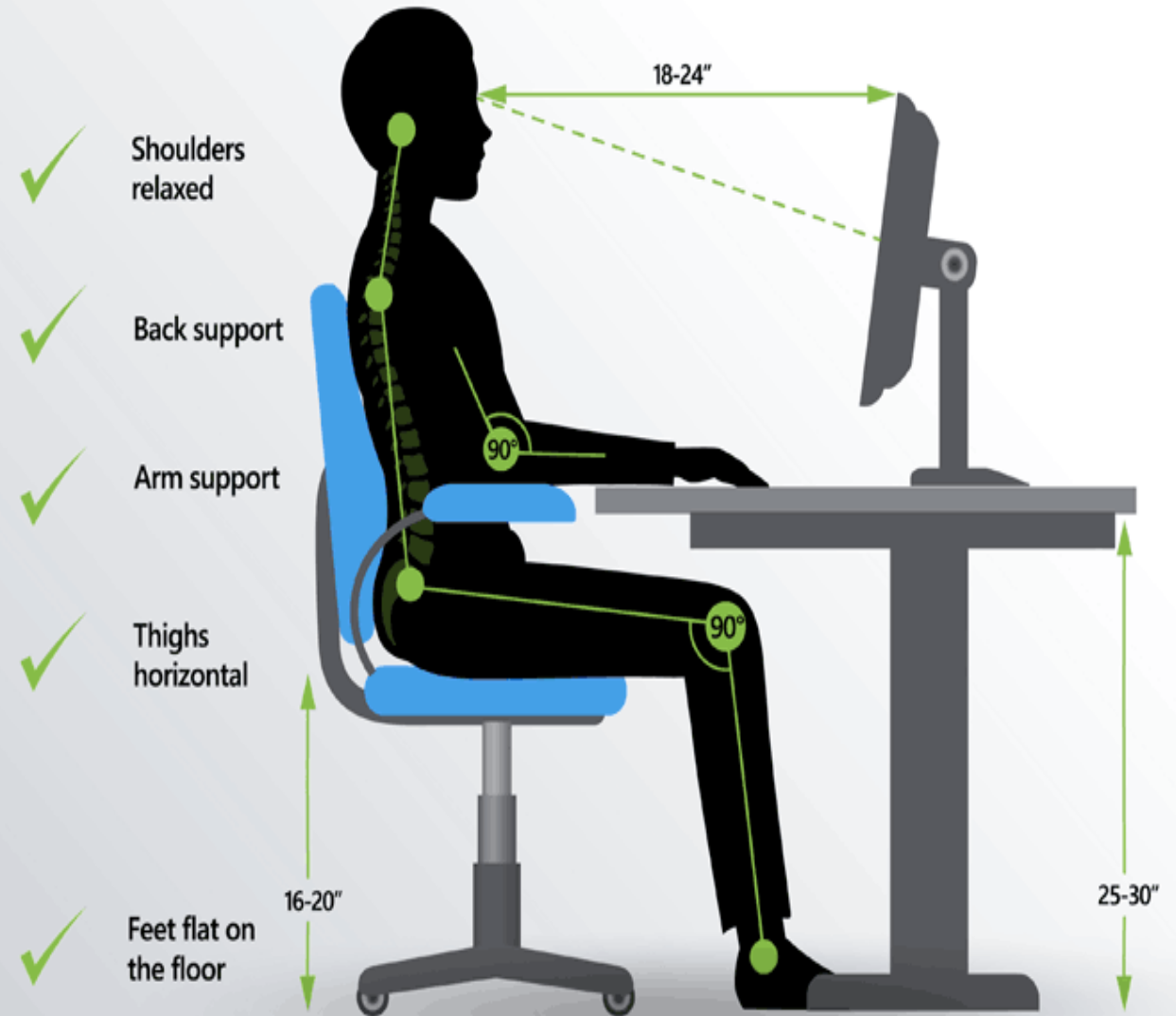


# Lifting kegs



# Ergonomics: Sitting

## Proper Sitting Posture/ Distances

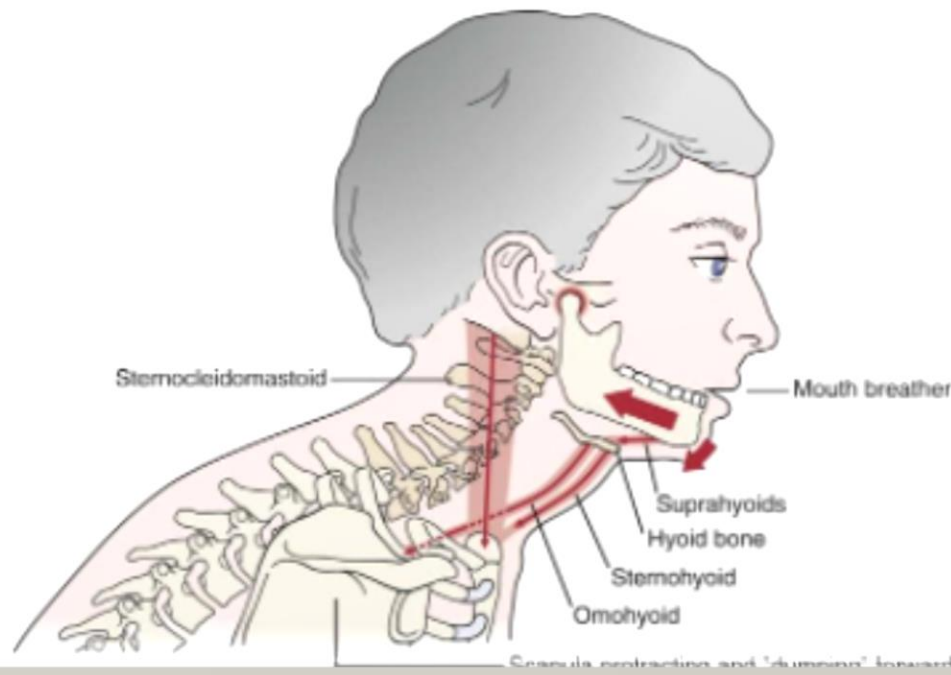








# Flexion Ergonomics: The world we live in TEXTING!



## Do you suffer from text neck?

Text neck is the term used to describe neck pain and damage caused by looking down at your mobile, tablet or other wireless devices.

### How to prevent text neck



### Signs and symptoms of text neck





# Extension Ergonomics: High Risk



# Common Brewing Injuries?

**What are the most prevalent?**

**Back**  
**Neck**  
**Shoulder**  
**Elbow**  
**Wrist**  
**Hands**





# So what are some simple things you can do at your brewery?

**Check your posture ✓**

**Lift correctly ✓**

**Stretch ✓**

**Core Strength ✓**

**Practice Relaxation/Meditation ✓**

**Specificity ✓**

**Regular exercise/Physical Activity ✓**

# **Stretching (TOP 10 Exercises)**

**WRIST/ELBOW, NECK, QUADS, HAMSTRINGS, BACK,  
PECS, SIDE STRETCH, ROTATION, LATS, SHOULDER**

**15-20 secs each = 5 mins**

# WRIST/ELBOW

**Repeated Tightening Tri  
clamps - Wrist and elbow  
extensor stretches**







# NECK

**Tension, Shoulder pain**



# QUADS

**Standing quad stretch /additional pec stretch**



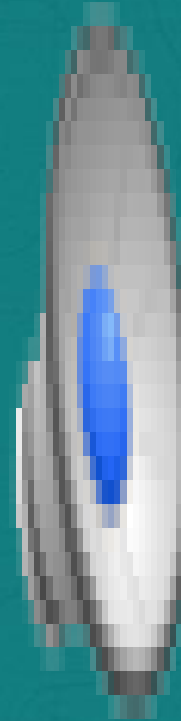




# HAMSTRINGS

**Linked to low back injuries. Can combine side stretch**

# Hamstrings Video







# **BACK EXTENSIONS Stretch back and abdominals**

**Forward flexed position hours on end  
STANDING/LAYING**







# PECS

**Arms clasped behind head/arms on brew deck**





# Lat Stretch

Side stretch/child's pose





# ROTATION STRETCH

Rotation/twisting stretch





# SHOULDER ROTATOR CUFF

#CraftBrewersCon



# ***Core Strengthening and cardio***

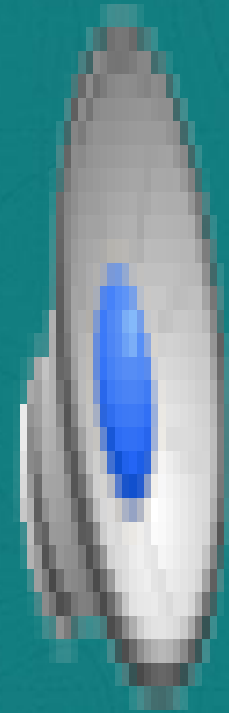
**SQUATS   PLANKS   ROWS  
SUPERMANS  
THERABAND OPTIONS**



# SQUATS

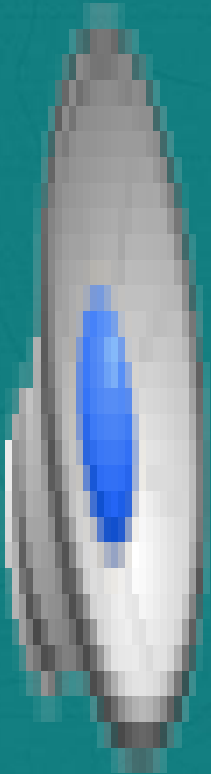


# Squats with weight





# ROWS



**Buckets/ kegs/  
with theraband**

# PLANKS



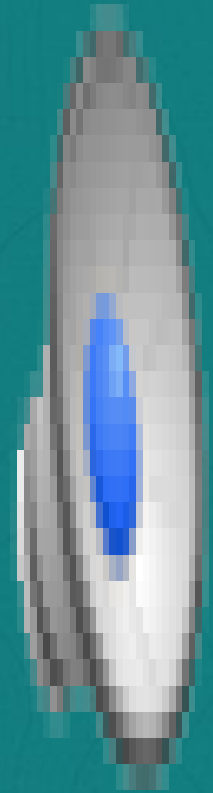
**Against brew deck steps/against barrel  
with alternate arm and leg**





# ARM RAISES

**Rotator cuff muscles  
With weight**



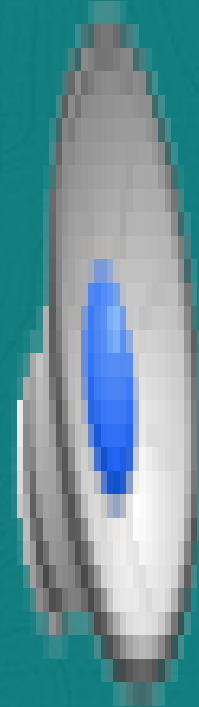
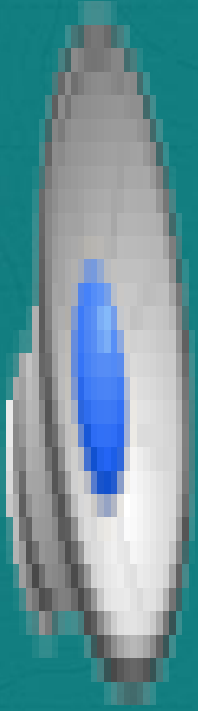


# THERABANDS





# THERABAND OPTIONS



# Simple Injury Prevention Programs – Key Components



- **Lifting Education**
- **Frequent Rest Breaks – Micro breaks**
- **Brewhouse exercises (15 mins)**
  - **Daily Stretching Exercises**
  - **Core Strengthening**
- **Adequate Hydration**
- **YOGA classes/Core Strength**
- **Breathing and Relaxation**
- **Meditation**



# Other Considerations

Prolonged standing

Insoles

Standing mats

Joint Braces

Back Braces



[J Strength Cond Res.](#) 2003 Aug;17(3):498-502.

## Weight lifting belt use patterns among a population of health club members.

[Finnie SB](#)<sup>1</sup>, [Wheeldon TJ](#), [Hensrud DD](#), [Dahm DL](#), [Smith J](#).

[+](#) Author information

### Abstract

The purpose of this study was to identify patterns of weight belt use in a population of recreational weight trainers. We hypothesized that the majority of weight belt users utilized weight belts to reduce injury risk and/or improve performance while lifting submaximal loads. Three hundred fifty-two strength training health center members (189 men, 156 women, 7 gender not indicated) aged 20-72 years (36.5 +/- 10.5 years) completed a voluntary weight belt use survey. Overall, 27% (94/352) were weight belt users and 73% (258/352) were nonusers. Ninety percent (85/94) of belt users and 63% (55/88) of former belt users utilized belts to prevent injury, whereas 22% (21/94) of belt users and 28% (25/88) of former belt users utilized belts to improve performance. Many belt users were found to utilize belts during inappropriate situations such as lifting light loads or during exercises that do not typically stress the trunk musculature. Based on these findings we suggest that specific educational interventions be developed at health and fitness facilities to help provide a foundation for more informed decision-making regarding weight belt use.



# Simple Massage and Soft tissue ideas





# YOGA



## Kettle Bells



## Cross Fit





10:30-11:30AM

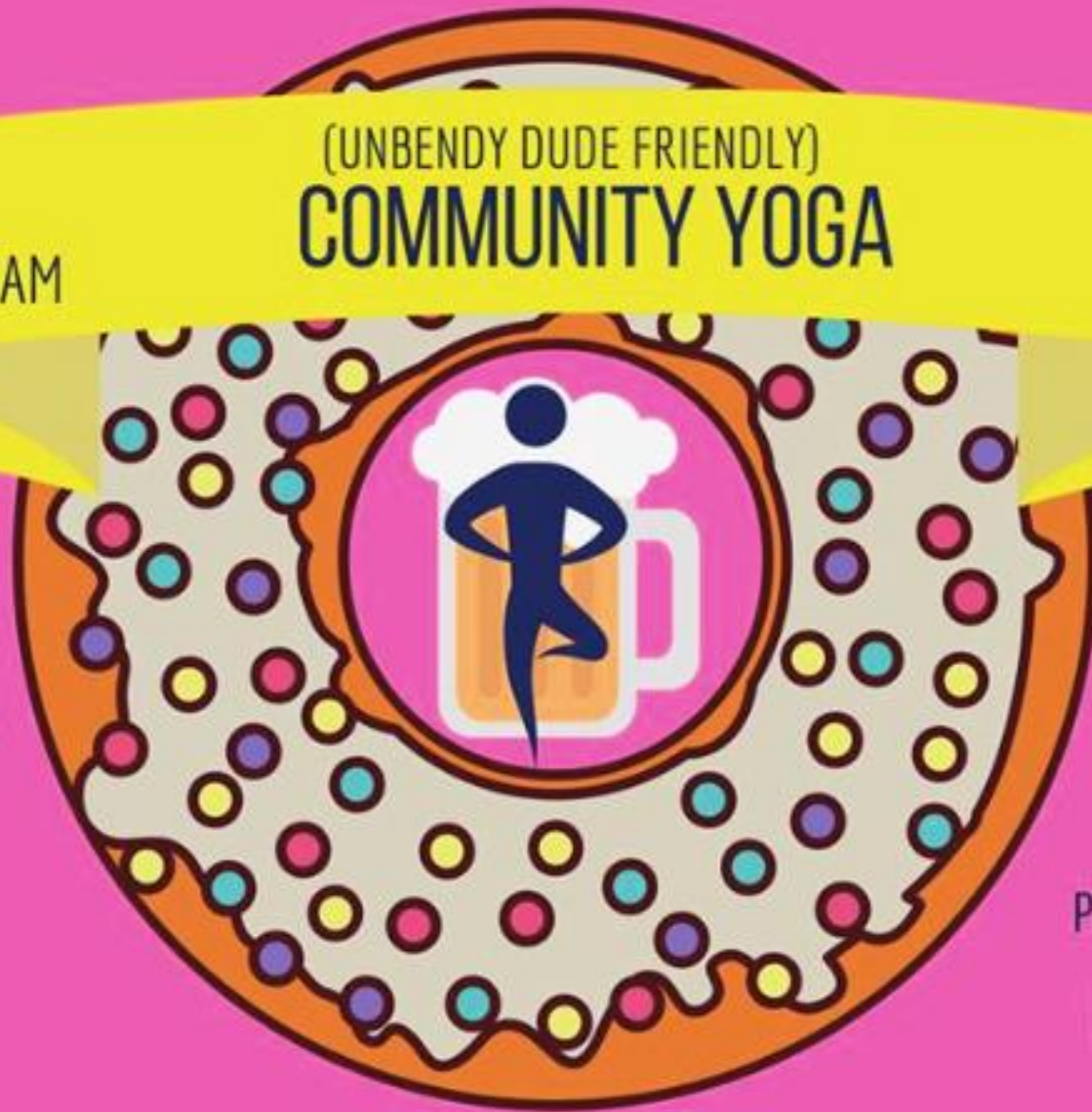
(UNBENDY DUDE FRIENDLY)  
**COMMUNITY YOGA**

\$20 YOGA +  
A BEER + A  
DONUT!

Bring your own mat  
if you have one, and a buck  
to tip the bartender!



YOGA TRIBE



PLEASE SIGN UP IN ADVANCE!

**LITTLE THISTLE**  
BREWING CO.



# When to seek help

- **Persistent pain**
- **Night pain**
- **Onset of weakness**
- **Changes in Bowel and Bladder control**
- **Sensory changes – numbness and tingling**

# Thank you!! Any Questions?



**Steve Finnie**  
**Steve@Littlethistlebeer.com**