# WELCOME!

Gaining Efficiency in Retail Stocking













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THE INDUSTRY THAT MAKES THE SUPPLY CHAIN WORK





Established 1945

Non-profit Trade Assoc.

\$150 Billion Market

19 Industry Groups

Over 800 Members

24 ANSI Standards

Two Major Trade Shows







17 Member Companies

50 Industries/technologies

**Ergonomic Resources and Tools** 

News

Case Studies

**Checklists and Technical Support** 

White Papers

Speakers and Presentation Materials

Workshops and Outreach to the user



### **MISSION**

To broadly promote the benefits of ergonomic assist systems and equipment together with the advantages derived from the use of this equipment in the workplace and to promote the safety and health of the work environments.



# Material Handling Equipment Distributors Association

www.MHEDA.org









# Gaining Efficiency

in

**Retail Stocking** 











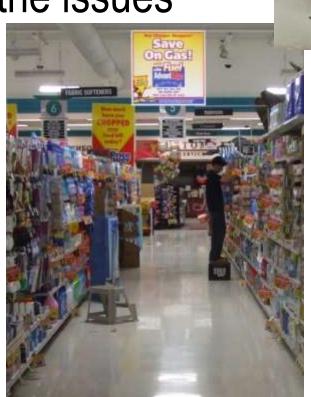


























Understanding the issues



































Manual material handling



Understanding the issues





Manual material handling







... the issues









Understanding the issues

The shelves have grown in height ....

....and they are tightly packed





DEASE

Case goods packaging has changed

...once the plastic is removed the bottom "flat" needs to be fully supported









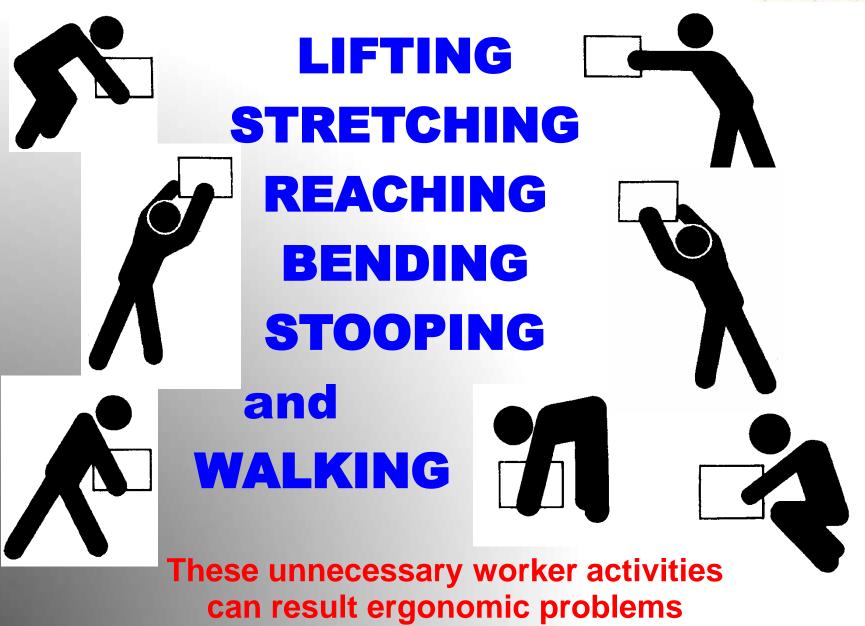
Supporting the "flat" is awkward and leads to poor ergonomic ...lack of efficiency





...and product damage.







# The two largest issues effecting Workman's Compensation costs are:



# Why Do Older Workers Work?



- ✓ Studies found many older workers plan to work past the traditional retirement age (Galinsky)
- ✓ This trend can be attributed, in part, to the reduced value of retirement portfolios/income.(Administration on Aging)
- ✓ A higher cost of living today (Administration on Aging)
- ✓ And they work because they want to, because:
  - they want to stay active
  - they are highly engaged in their work
  - satisfied with their jobs
  - committed to their organizations (Galinsky)

# The Aging Workforce



- ✓ In 1972, average age of a US worker was 28. Today it's 46.
- ✓ The number of workers aged 45+
  has doubled since 1950.
- ✓ According to the AARP, the number of people 55 years and older in the labor force was about 18.2 million in 2000 It rose to 25.2 million last year and it is projected to rise to 32 million by 2025.



<sup>1.</sup> Source Ergonomics ASSE Feb 2009 Vol 2, No2 – Dr. Ronald Porter, PT, CEAS, Director, Back School Atlanta, What Works with the Aging Workforce

<sup>2.</sup> Gaither, A., (2003). Health and Safety in the Aging Workforce, Retrieved January 20, 2006, from http://www.asse.org/gaitherpdcpaper.htm

# As We Age....

- Maximal Strength
- Muscle Mass
- Bone density
- Visual and Auditory, Acuity
- Fitness
- Aerobic Capacity
- CognitiveSpeed/Function

- Gain Weight
- Arthritis
- ✓ High BP
- Diabetes
- Depression
- Heart Disease
- Menopausal & Post Menopausal Issues







#### **Definitions of Obesity.....**

Body Mass Index (BMI) of 30 or higher.

(Mine's 31.6 - Boo!)

BMI: A measure of an adult's weight in relation to their height <u>and</u> age.

- Obese is generally defined as at least +30 lbs. overweight.
- ✓ Severely obese is considered to be +60 lbs. overweight.
- ✓ Morbidly obese is +100 lbs. overweight.



# The Costs of Obesity



• More than one-third (34.9%) of U.S. adults are obese.

 Obesity-related conditions include heart disease, stroke, diabetes and certain types of cancer.

• The annual medical cost of obesity was \$147 billion; the individual medical costs are \$1,429 higher than those of normal weight.

Source: CDC NIOSH

# The Effects of obesity



#### Obese workers....

- ...file twice as many WC claims
- ...have 13 more lost workdays.
- ...claim 6.8 times more medical claims under WC
- ...indemnity costs are 11 times higher.
- ...body parts most prone to injury are: back, lower extremities, wrist, and hands.

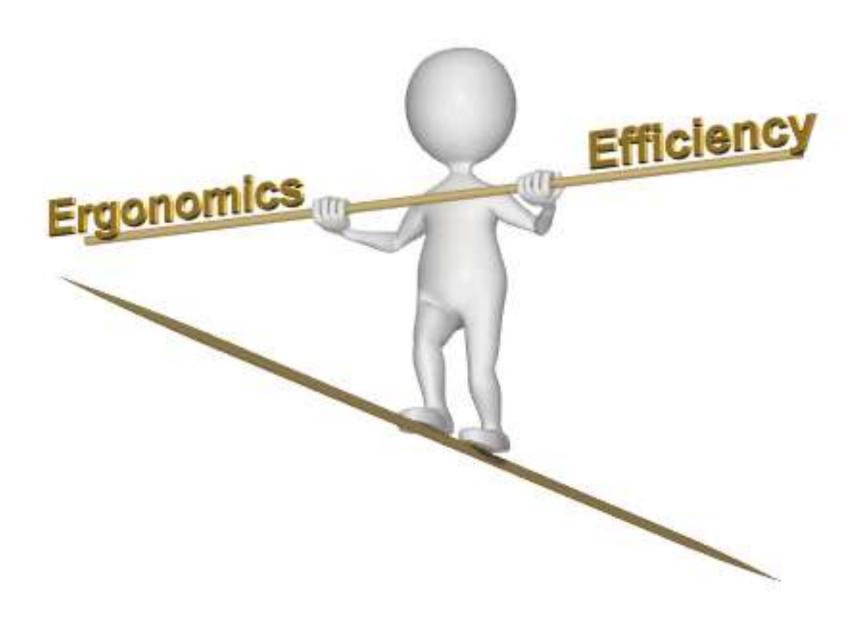
The most common causes of these injuries were lifting, lowering & slipping – a.k.a. Manual Material Handling.

The effects of manual material handling represent the biggest single contributor to:

- lost time injuries
- and the most Workman's comp claims
- highest cost of Workman's comp claims

Ergonomics initiatives can significantly reduce those incidents

# Finding balance ......



### It is NOT balance because ......





# Let's look at some solutions

....remembering there is no magic bullet

.....there is no single solution that works for all situations

....it is likely that more than one solution would be appropriate.





# Pallets







As much as 40% of the time required unloading a pallet, can be spent walking around it!





Back bending, reaching out – serious issues and for the older worker or obese, a VERY serious issue Load positioners automatically function holding the top layer of goods in the 30" to 40" window, greatly reducing the bending

The turntable eliminates having to walk around









Load positioners can be made portable

This provides for flexibility on where they can be used on cramped back rooms or congested work areas.



Some load positioners use air bags instead of springs.



....Careful, compressed air is needed to charge the air bag



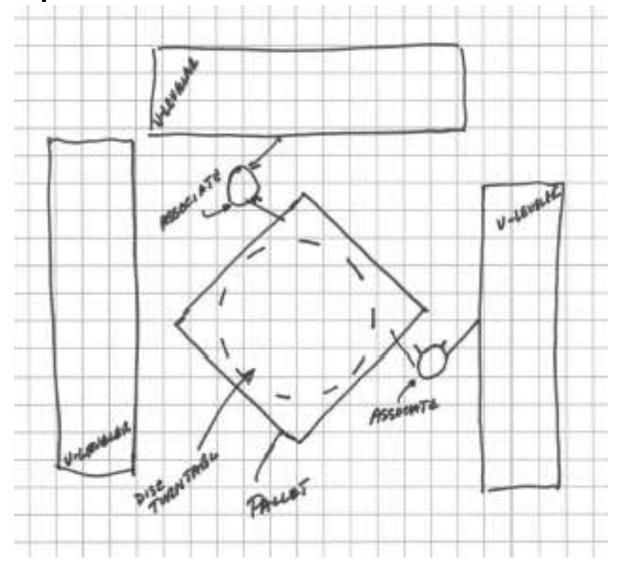
#### Manual Turntables

For the backroom

.....to transfer
merchandise from
pallets to U-boats or
to stocking carts



#### Setting up a turntables in the backroom



One person can off-load cartons to U-boats just about as fast as two people without a turntable.

#### Low profile turntables .....



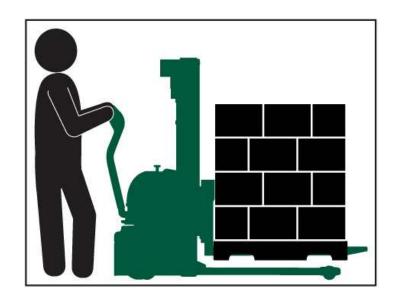
- Minimizing the need to walk around the pallet ....with a carton
- Hand pallet jack accessible
- No Installation required easy to relocate
- No maintenance and no lubrication.
- Significantly reduced fatigue .....happier employees!

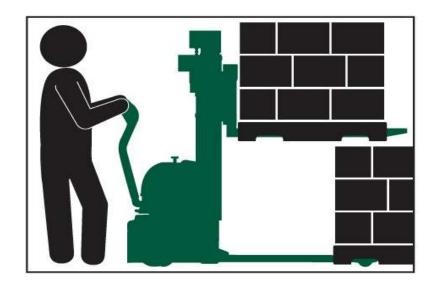


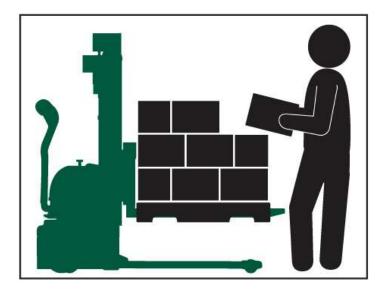


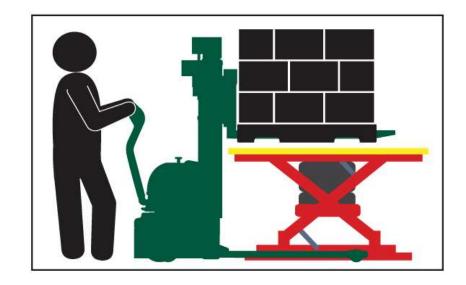


Stackers powered up/dn and Full Power Stackers









Inexpensive stackers can transport pallets, stack them to free up floor space, load positioners and double as a positioner. They are highly maneuverable in tight quarters and can eliminate the manual lifting

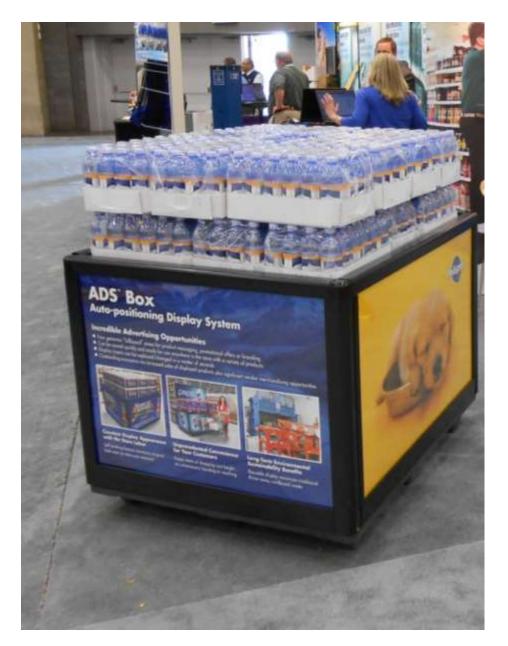




These are inexpensive choices especially when compared to fork lifts



Vacuum lifters fitted to articulated arms allows extended reach



# Auto-positioning display systems

- Can be loaded with full pallets
- True customer convenience
- Ideal promotional space
- Proven to increase sales
- Sustainable and reduces waste



They can be easily adapted and work well in a small work areas.

Vacuum lifters are highly efficient for handling cartons, bags and pails



Vacuum lifters are
efficient and very
useful in areas when
sorting cartons or
case goods require
multiple pick and
place tasks

### Containers

Manual loading and unloading of wire baskets, containers, gaylords and totes leads to incidents of upper & lower back injuries









There are spring loaded positioners elevates the goods in the container to speed picking the parts and eliminates the bending and back extension issues



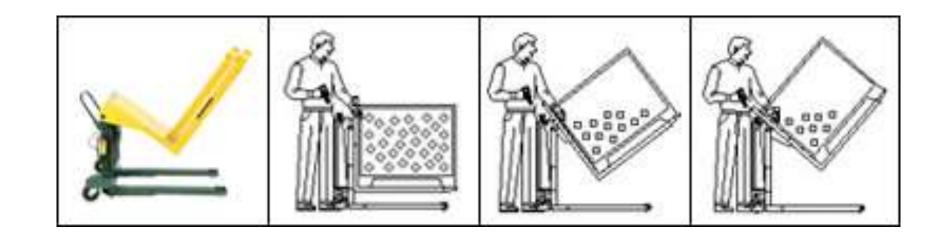
These spring loaded positioners can be adapted fitted into carts, hampers, wheeled tubs and gondolas



High hinge tilters

are ideal for
gaining access to
the bottom and
back of containers





#### Carts, Dollies, Platform Trucks and U-boats





They come in all shapes and sizes and to gain the maximum benefit should applied to the application











....they provide easy access to loads



...and increase efficiency and productivity!

These lightweight aluminum stackers are <u>highly</u> maneuverable...





# New specialty cart shows real promise in retail stocking



Adjustable height shelf

Eliminates going up & down a step stool





# Adjustable height carts with a tilt stand positions totes

This?



Speeds stocking and eliminates the stressors.

Good ergonomics!

Or This?







Self leveling carts

Calibrated spring provides linear moment and it is adjustable





#### Skid lifters





Careful, can only be used with nestable, open bottom pallets or skids



Some solutions not only solve the back problem, they can eliminate wasted motion and increase efficiency.

Battery powered scissors lift





These can be retro-fitted to existing Uboats

## Self leveling Uboats

## Calibrated spring provides linear moment







Calibrated spring provides linear moment

These are retro-fitted to existing Uboats





Self leveling floats bring the bottom half of the load...

....into the correct operating range which eliminates bending and reduces reaching



#### Some care should be used not to overload carts



The wheel choice can have a huge impact on the rolling friction of any cart, dolly or portable rack.











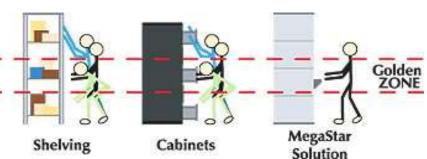




Roller conveyor can be used in rack and shelving to reduce the stress on storing or retrieving heavy cases and cartons



High density vertical storage systems speed order picking and put each item at the correct height





This expandable conveyor is driven right into the truck

The individual boxes and cartons are conveyed out

Notice how the odd sizes and shapes are handled easily by a single piece of equipment





Damaged product on the bottom of a pallet can be easily removed

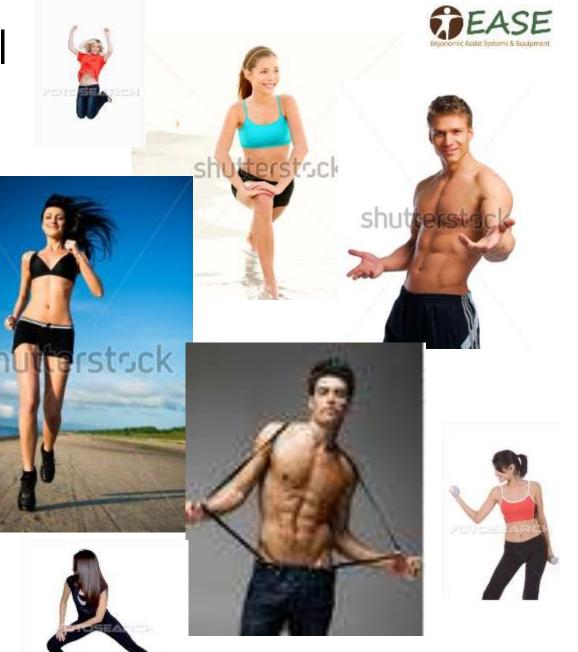


Pallet rotators make quick work exchanging pallets



# There are no manual handling issues ....

shutterstack

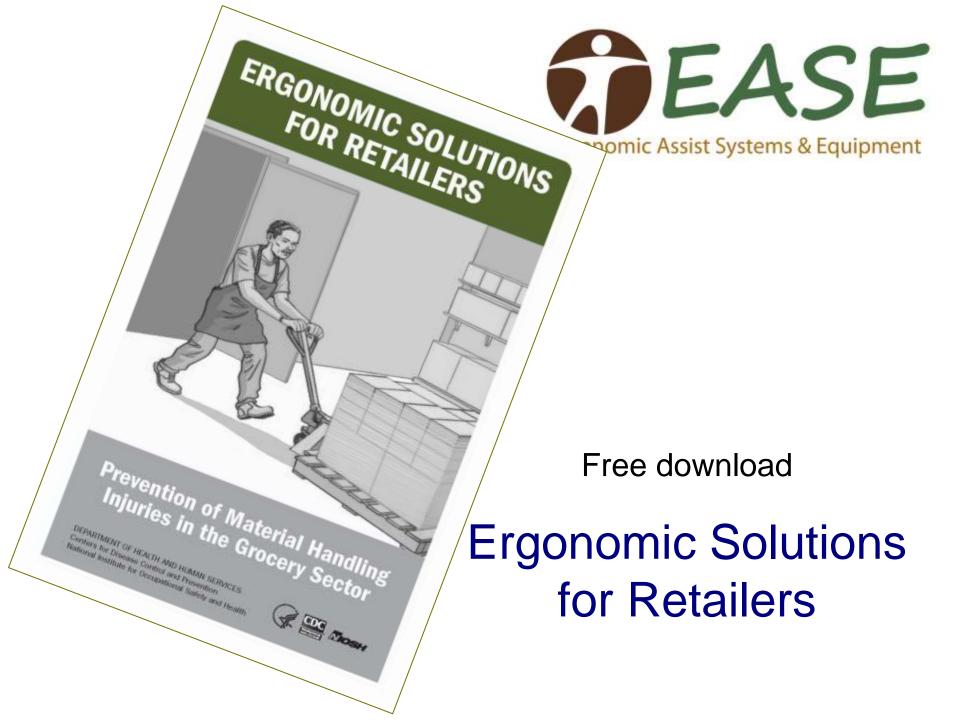






Free download

Ergonomic
Guidelines for
Manual Material
Handling





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# THANK YOU!





### James Galante

Chairman

### **EASE Council**

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