

**F**leet **R**eadiness **C**enter **E**ast  
(FRC East)

Cherry Point, North Carolina

**Welcome to:**

**Applied Ergonomics Conference 2009**  
**Elements For Funding, Implementing**  
**and Creating Ergonomics Solutions**

By Richard Borcicky FRC-East Ergonomist

# Elements For Funding

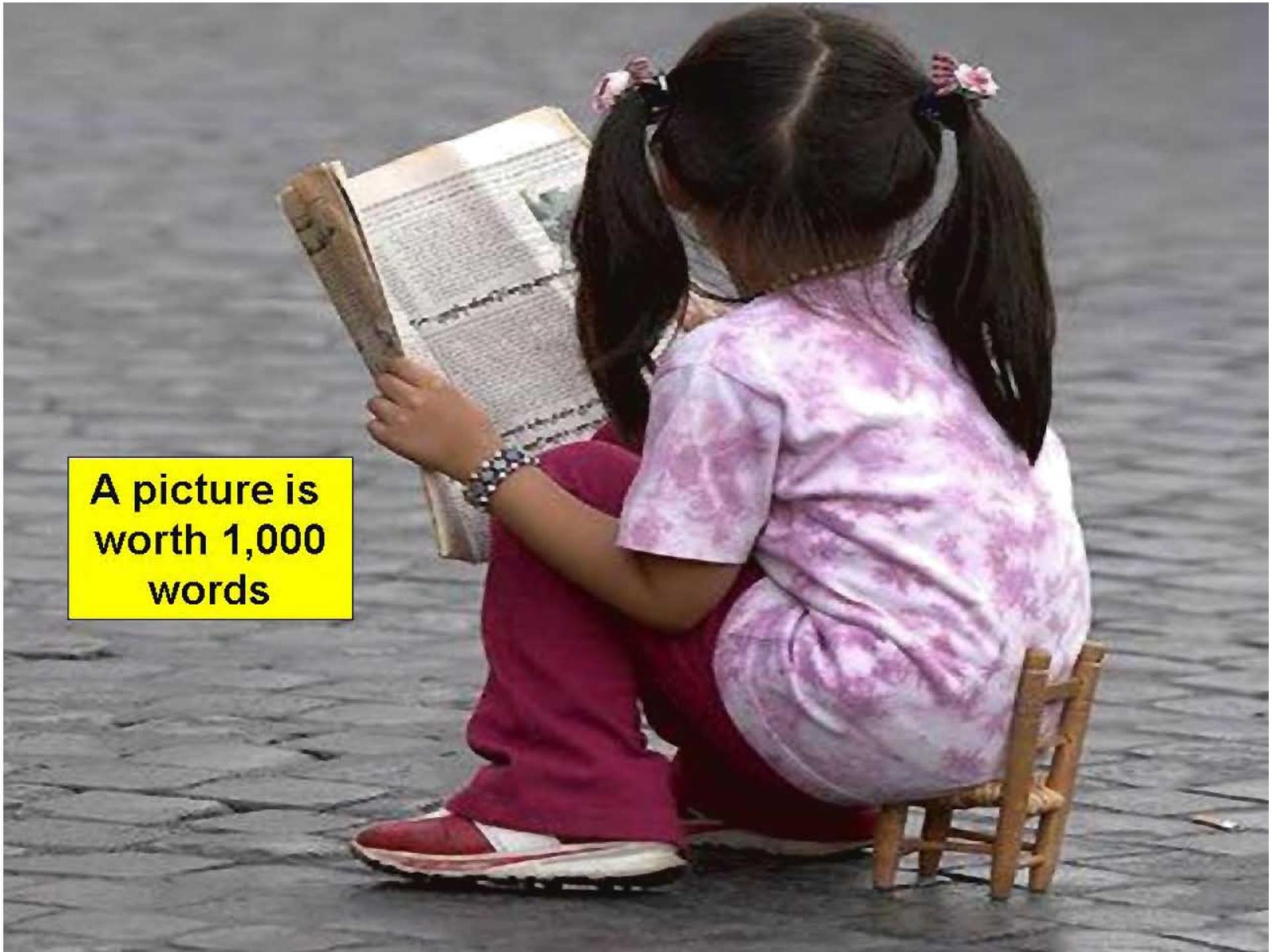
- 1.) Know your job functions. “Ergonomics”  
(Don’t guess what is wrong by having the right training.)
- 2.) Pick your target for an ergonomic survey. (You may only have one opening to demonstrate your abilities.)
- 3.) It’s best to pick a person that stands out front of the number one spot to showcase your ergonomic abilities: i. e. administration person outside the plant Managers office, CO office, etc.
- 4.) It also helps to pick someone you know, ► a person that needs your ergonomic assistance and would be willing to work with you to make improvements happen.

► ► Now how does this help me for funding my program? ◀ ◀

**Data**

Data can be also be

Pictures



**A picture is  
worth 1,000  
words**











5S

**You may have to have a 5S+1 lean event.  
What do the “S’s stand for in 5S Plus One?**

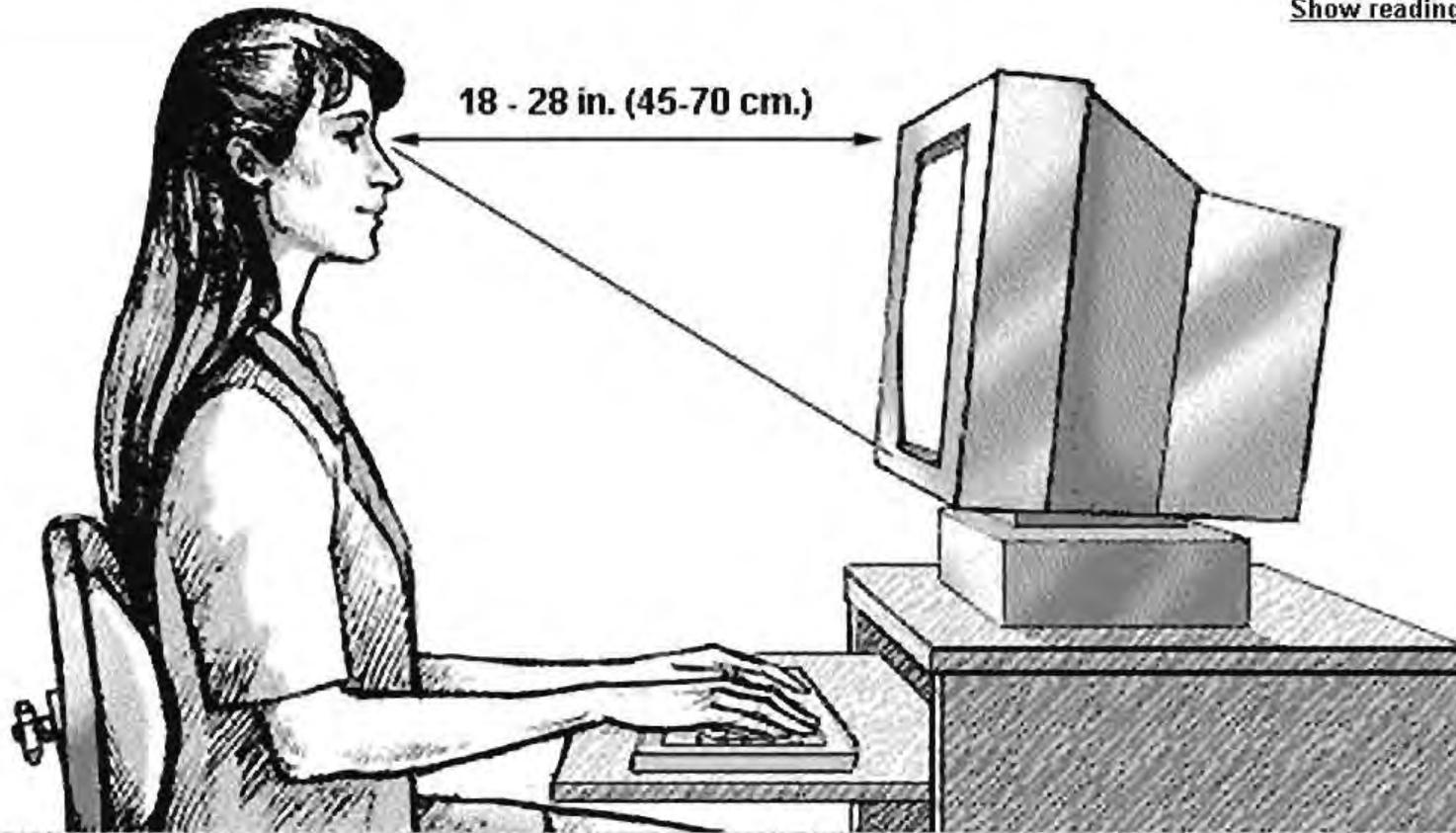
- 1) SORT**
- 2) STRAIGHTEN**
- 3) SHINE**
- 4) STANDARDIZE**
- 5) SUSTAIN**
- 6) SAFETY**





# ERGOcheck - Monitor

Show reading a paper

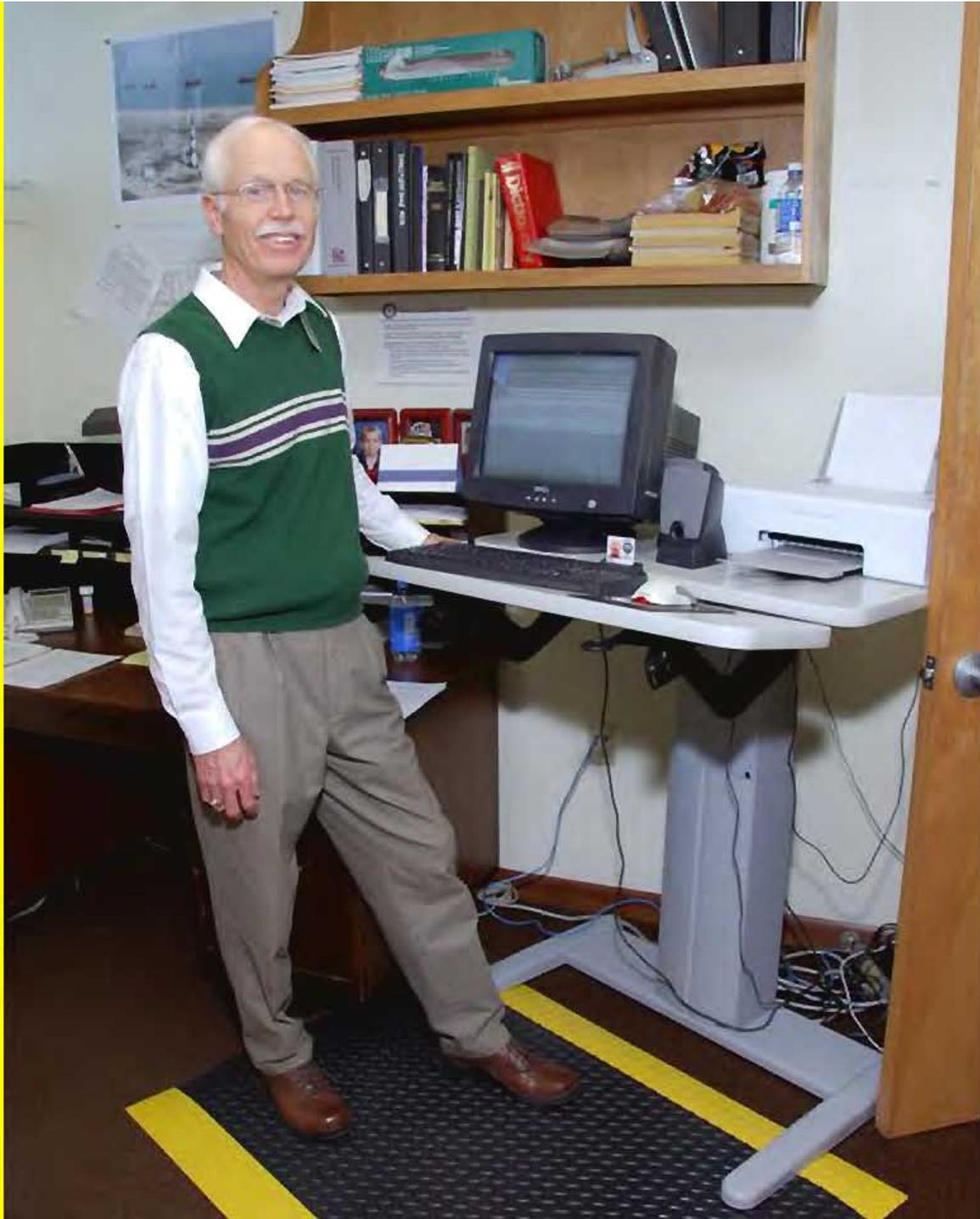


The monitor should be placed directly in front of the user at approximately arms length, and angled slightly backward.  
The top of the screen should be at eye level or just slightly lower.  
Natural light should be directed at 90° to the screen.

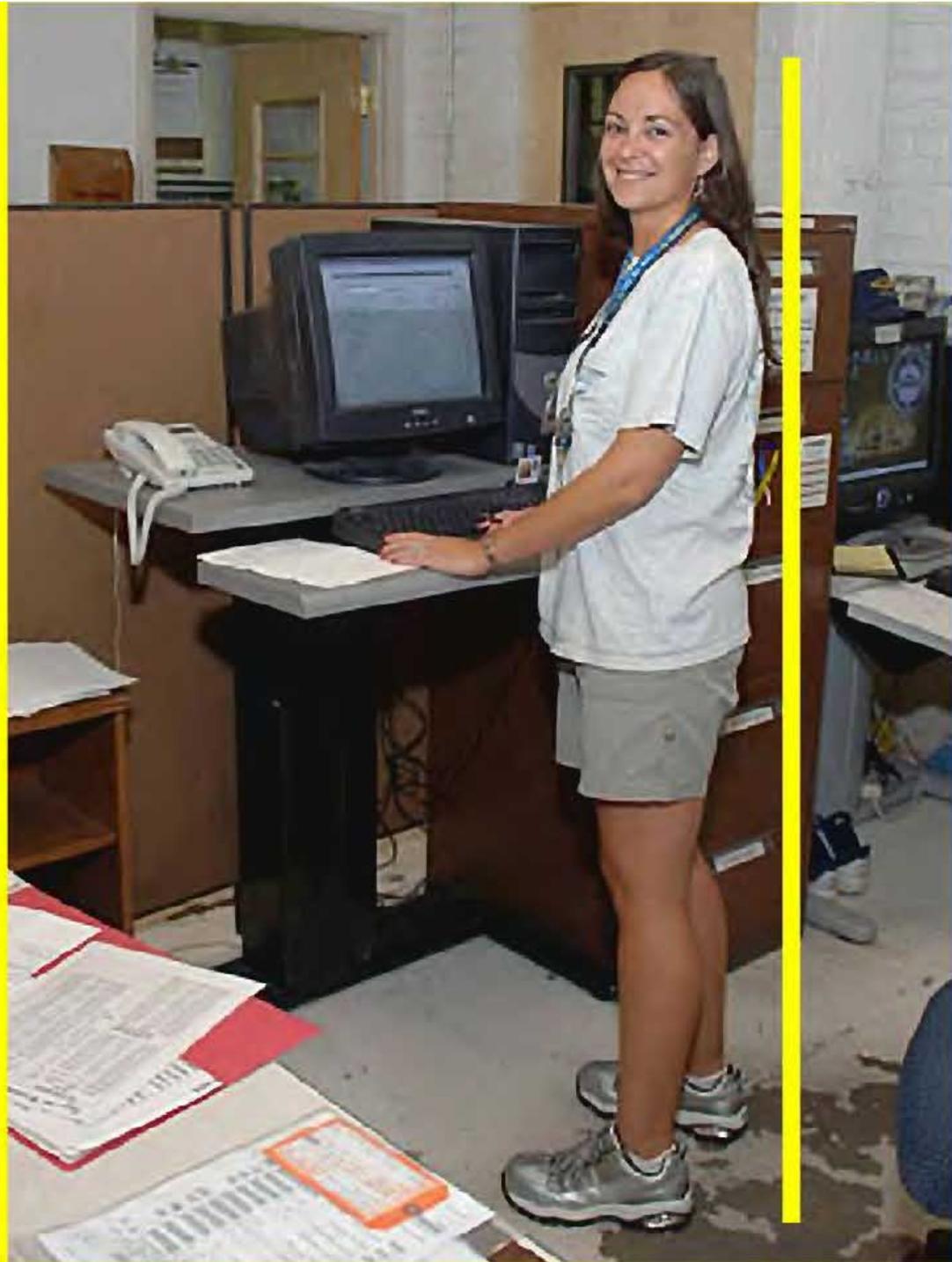








**When one has to be  
on the run, an  
adjustable  
workstation allows  
for faster and easier  
computer access.**





**Do you find yourself having headaches, stiff neck and backache due to PNFR “Phone Neck File Reach” ?**



**Before**



**After**





**It takes 11 men to move the AV8 Wing Stand**



**Sonya**

**What is it that Sonya has over 11 men?**



FRC-East Cherry Point, NC  
Richard Borcicky Ergonomist

## 80 lb Generator

Room for only one person to install the generator in the H-46.

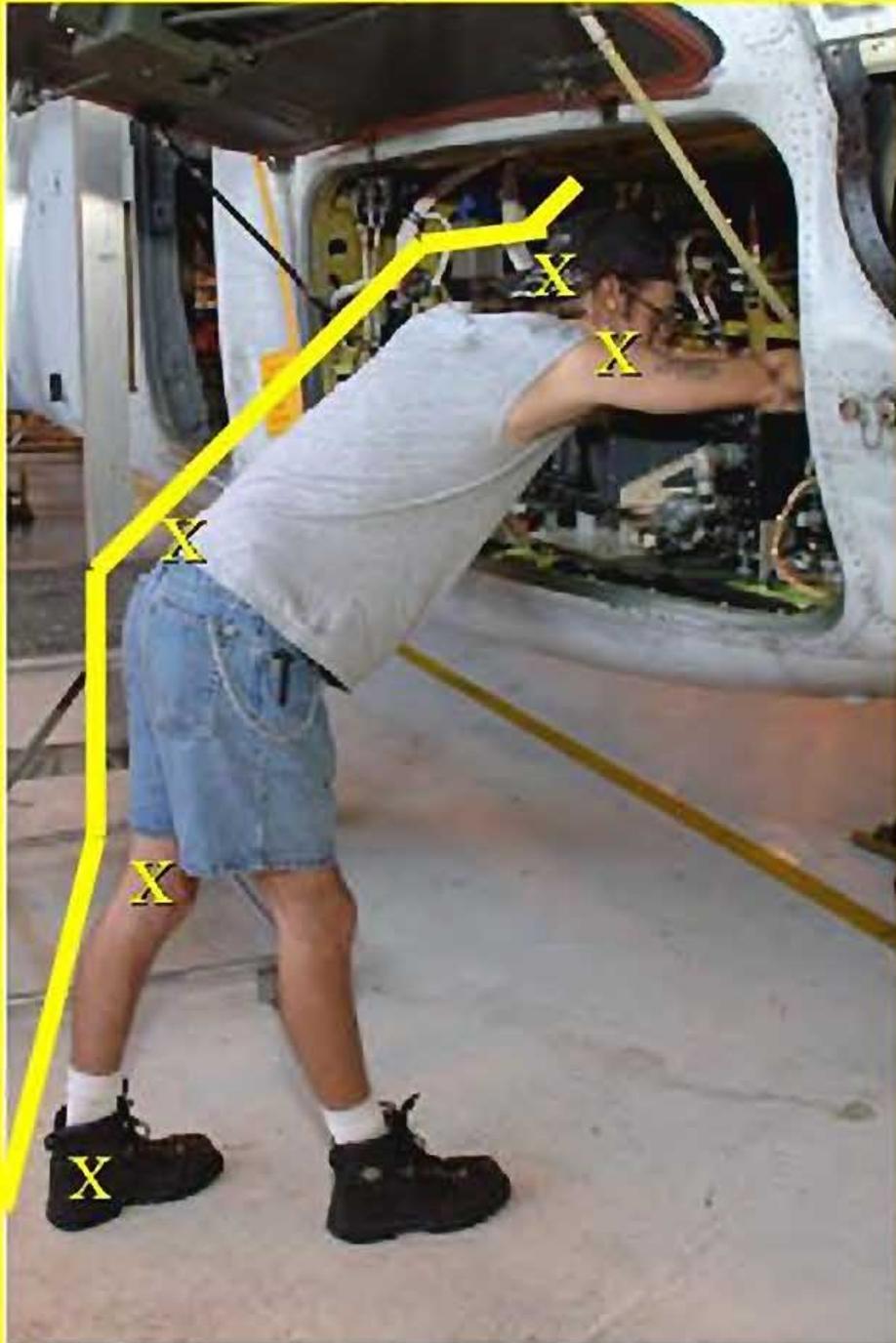
**X= Ergonomic issues**



**With a use of a lift even a man walking with the use of a cane can do it.**



**Ergonomic issues  
Posture, Compression,  
Duration**







**Laying out two rows of blades is not only back breaking but can be damaging if the parts hit one another.**

**Staging table**

Start

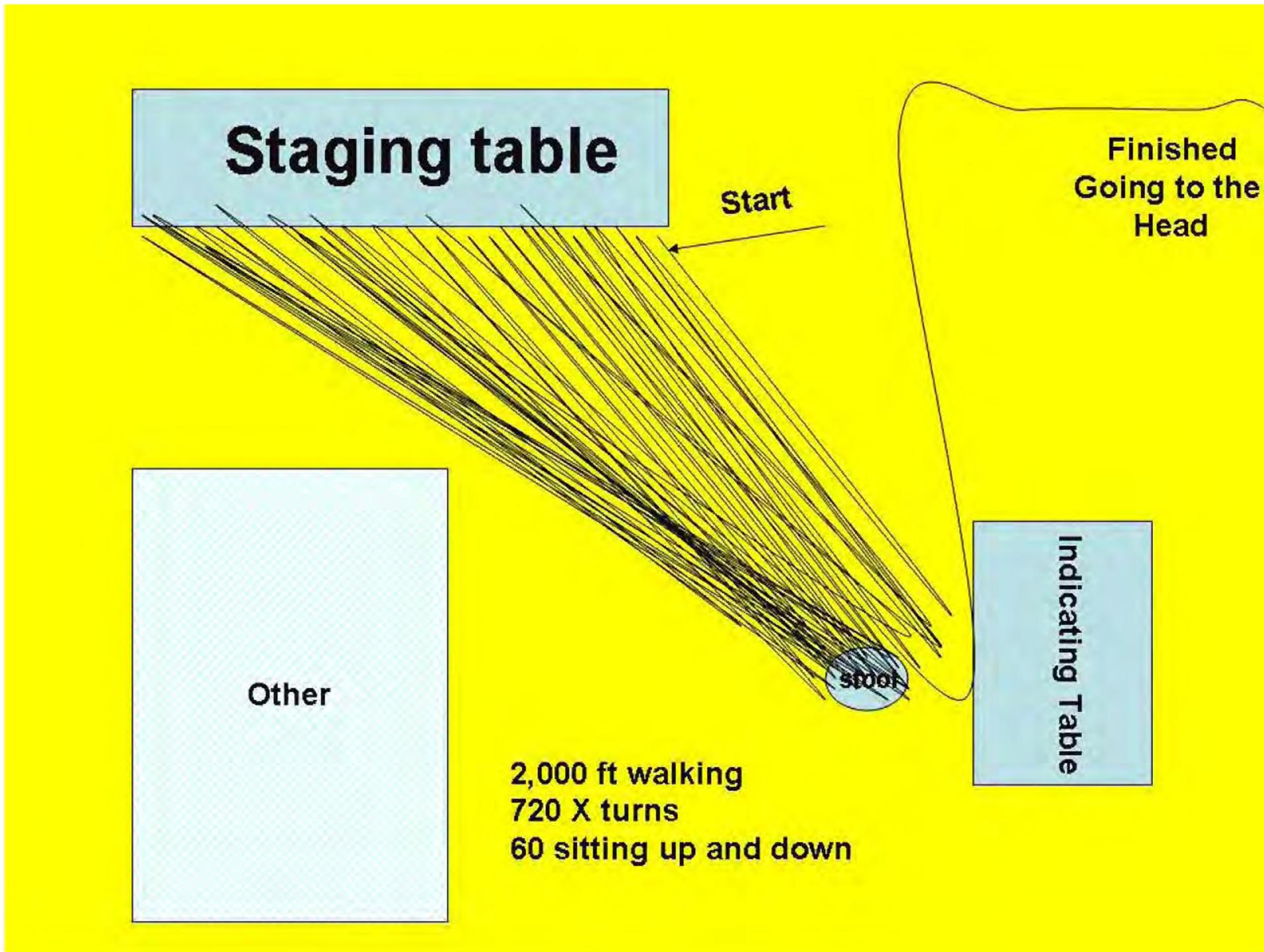
Finished  
Going to the  
Head

Other

stool

Indicating Table

2,000 ft walking  
720 X turns  
60 sitting up and down





**20" Height Adj.**

**From Design**



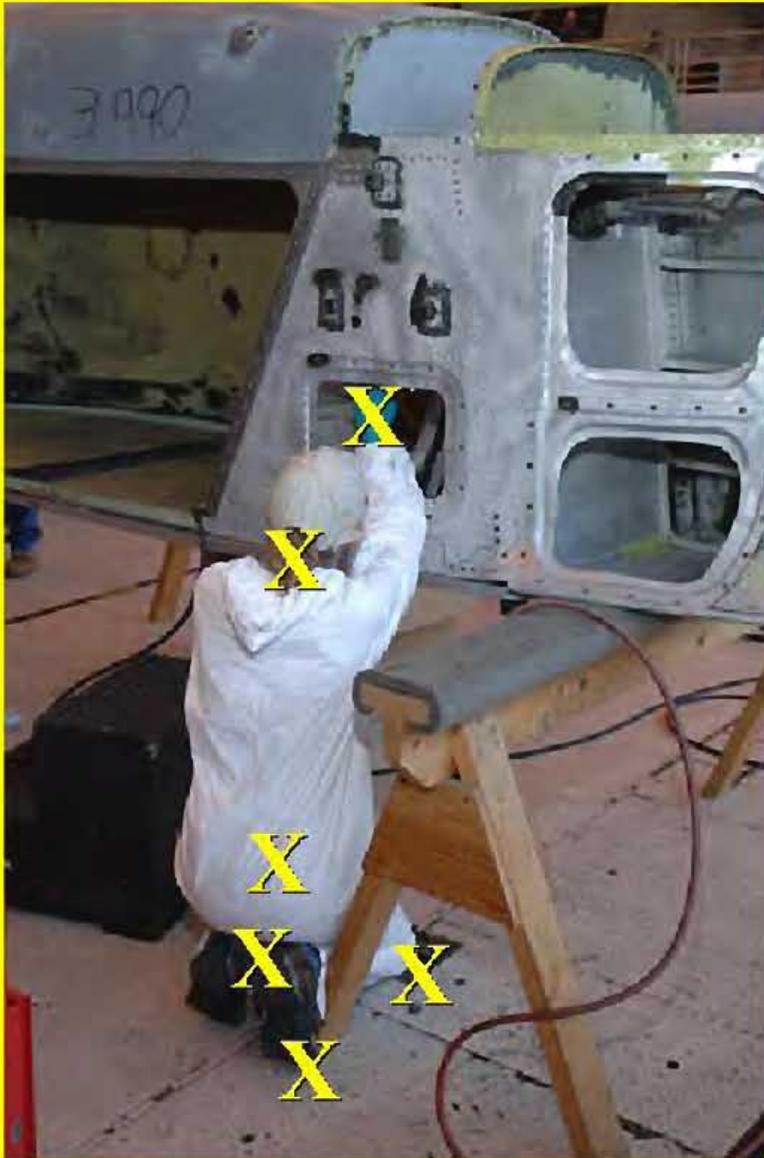
**60"**

**Table turns (lazy susan)**

**To Reality**



**0 ft walking  
0 turn around  
1 sitting up and down**



**Ergonomic issues = Posture, Repetition, Compression, Duration**



**From Design**

↑  
**to Reality** →





**The adjustment takes away the Posture and Compression. At the same time reduces Repetition and Duration**



**Makes for a much happier and productive day at work.**









**Bucking Bars  
Vibration Testing  
May 4th, 2007**

**With Grip Wrap**  
**Without Grip Wrap**



**Ergonomic issues  
Posture, Repetition,  
Compression and Duration.**





# From Design to Reality



**Note: Pneumatic manifold with 3 couplings.  
No falling over airlines.**





**Reality**



**From this**



**To this**



**In 3 seconds**



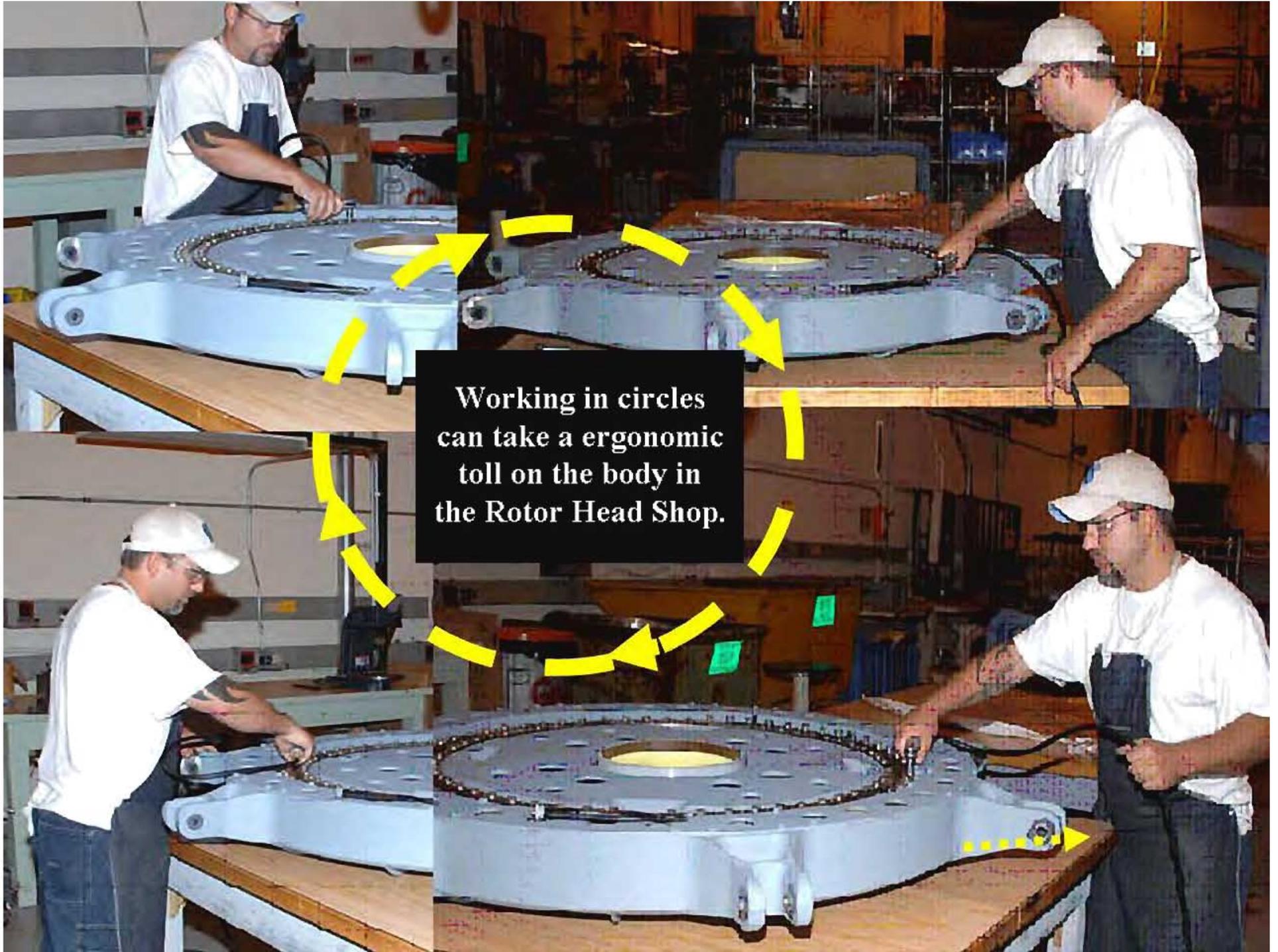


**Mobile handling scissor lift table with battery lift operation that enables the operator to place the load at a convenient working height.**



**Mobile handling scissor lift table with battery lift operation that enables the operator to place the load at a convenient working height. When completed the generator can be lifted into the paint booth using the scissor lift.**

**(Note: ergonomic stool)**



Working in circles  
can take an ergonomic  
toll on the body in  
the Rotor Head Shop.



**The new design in action,  
also note the new ergonomic stool.**



**Newly Designed**

**3-Wheel Creepers**

**“Great” addition to FRC-East**



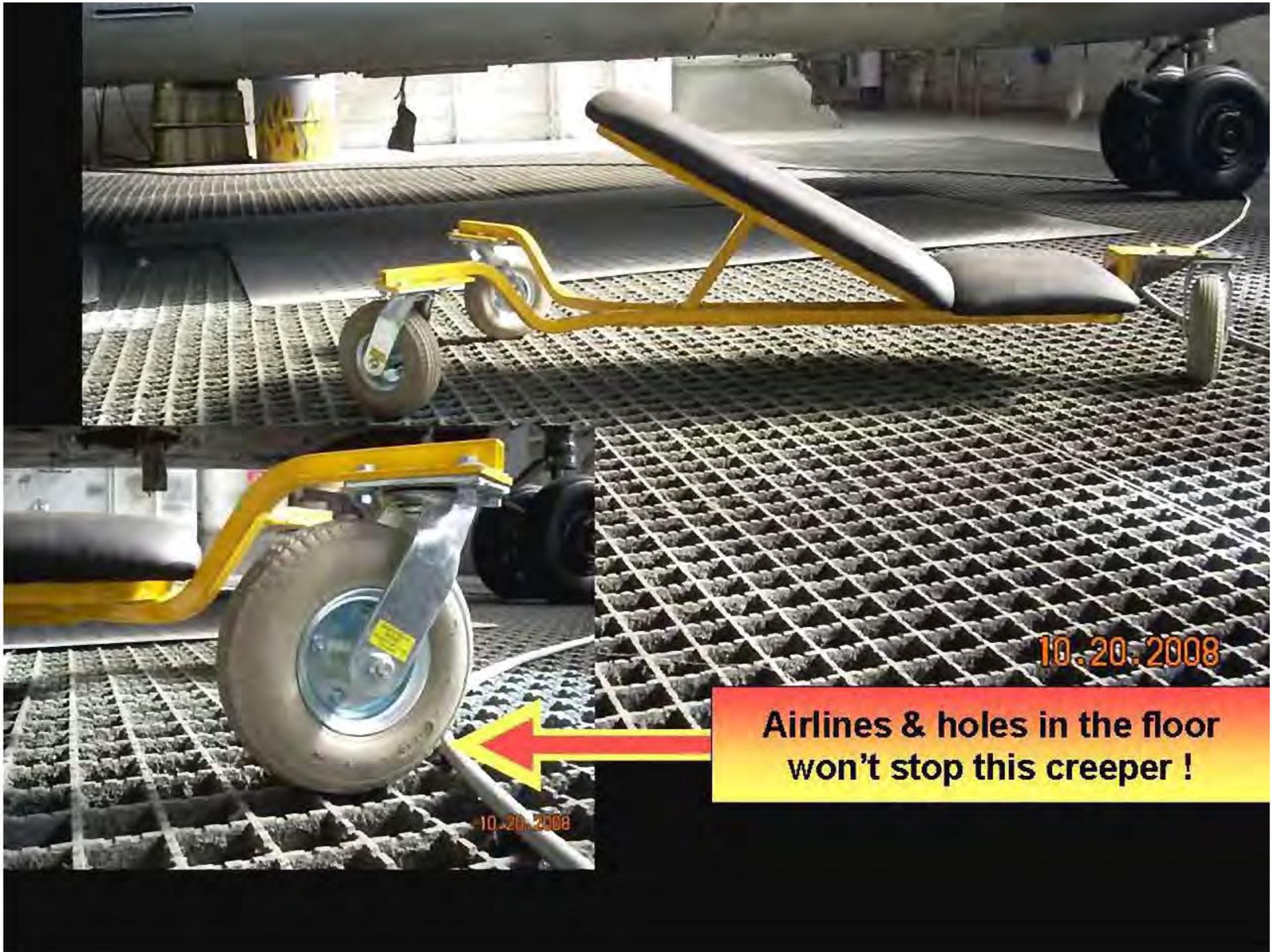
Flat



15 degrees



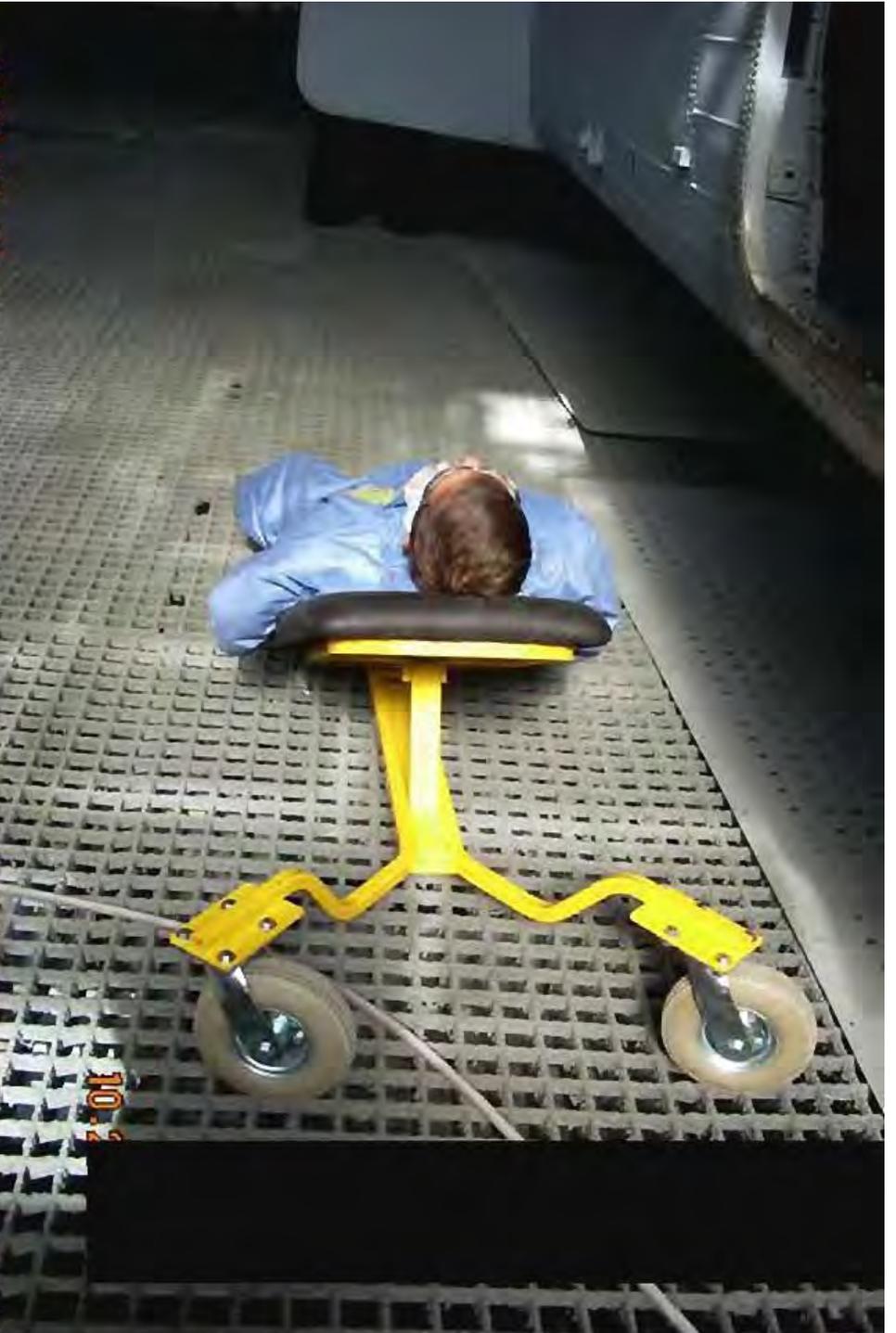
30 degrees



10.20.2008

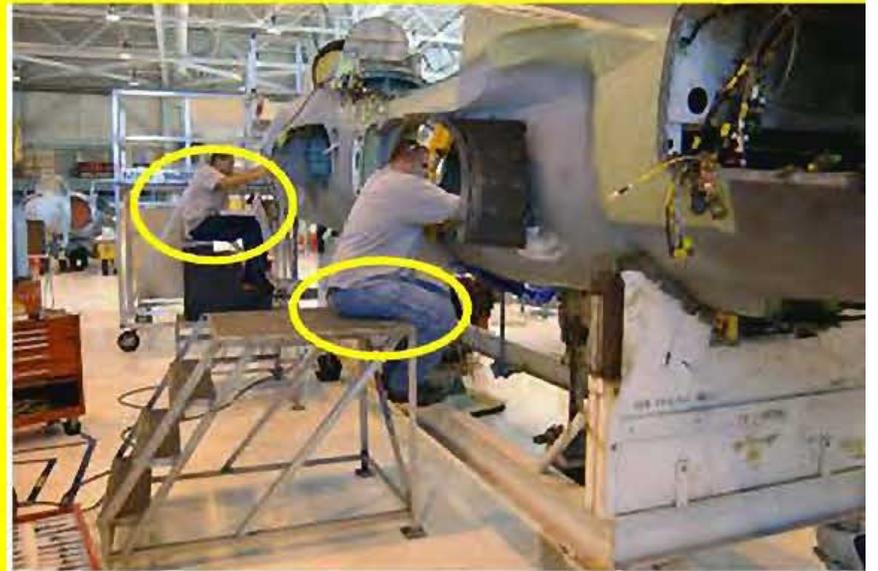
**Airlines & holes in the floor  
won't stop this creeper !**

10.20.2008

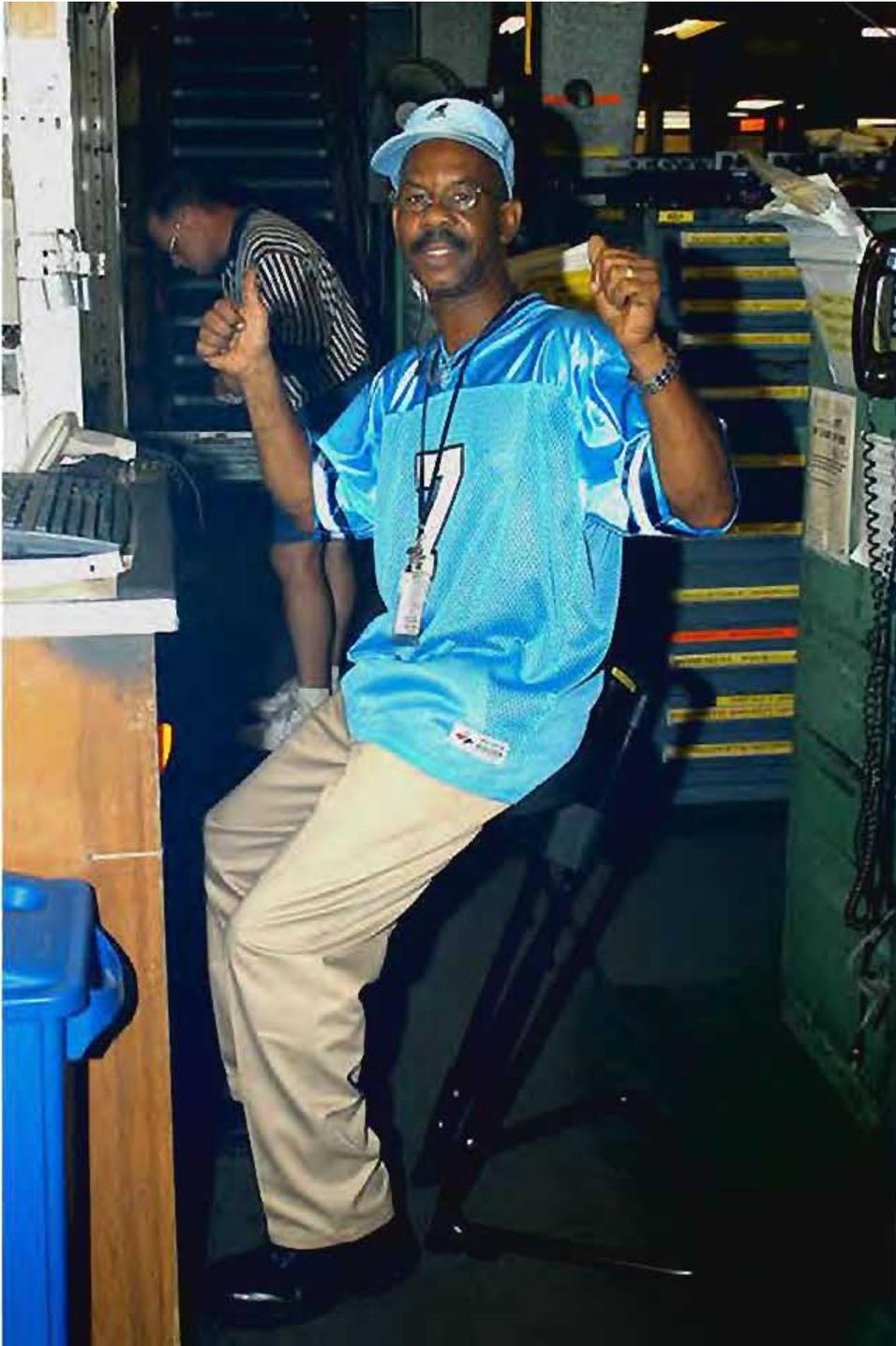




**You can see the  
Ergonomic issues.**







**We have 42 sit/stand stools  
throughout FRC East.**



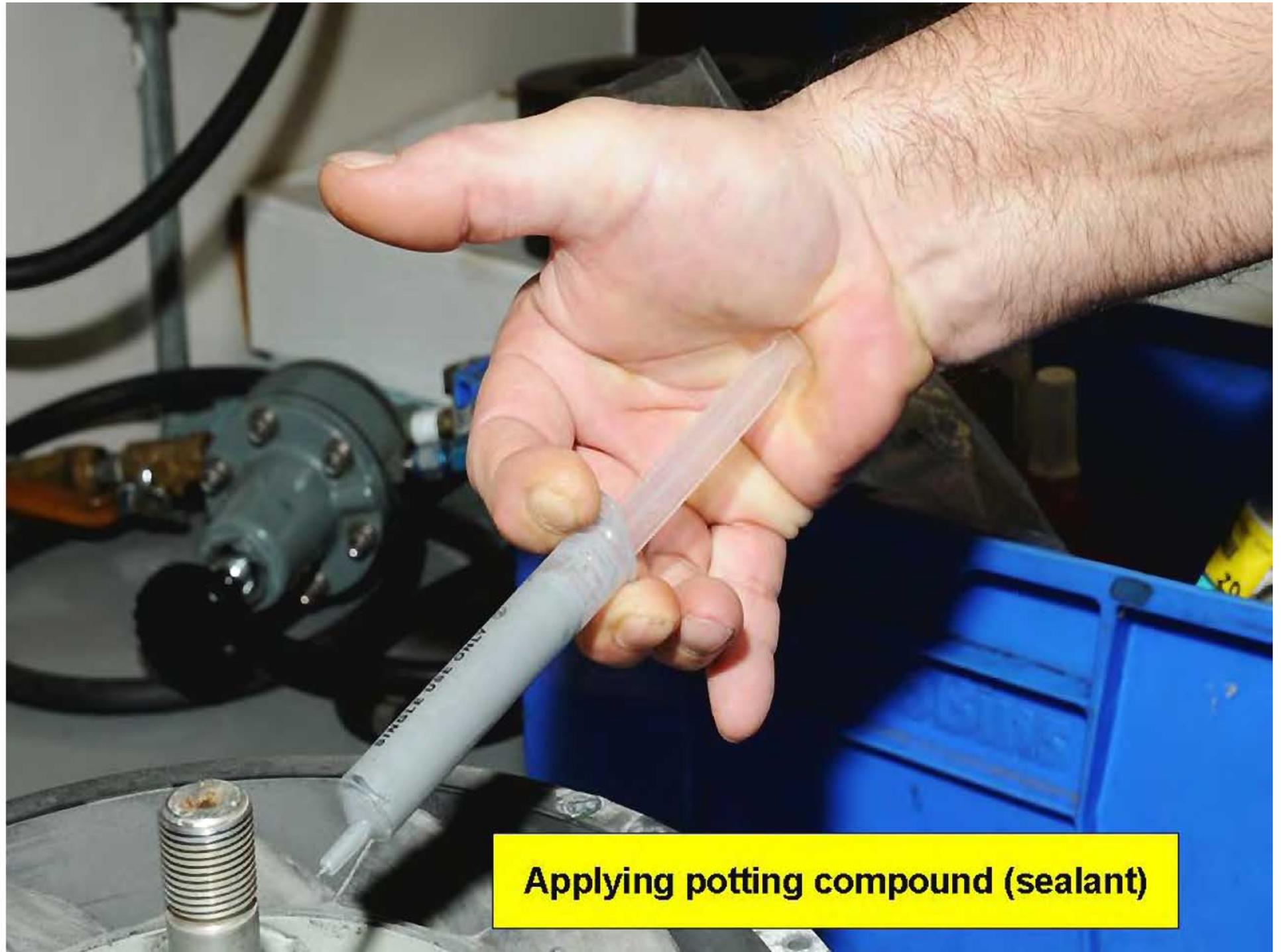
**Know how to use your resources!**



**Ergonomic Risk Factors:**  
**Force, Posture, Compression and Duration.**

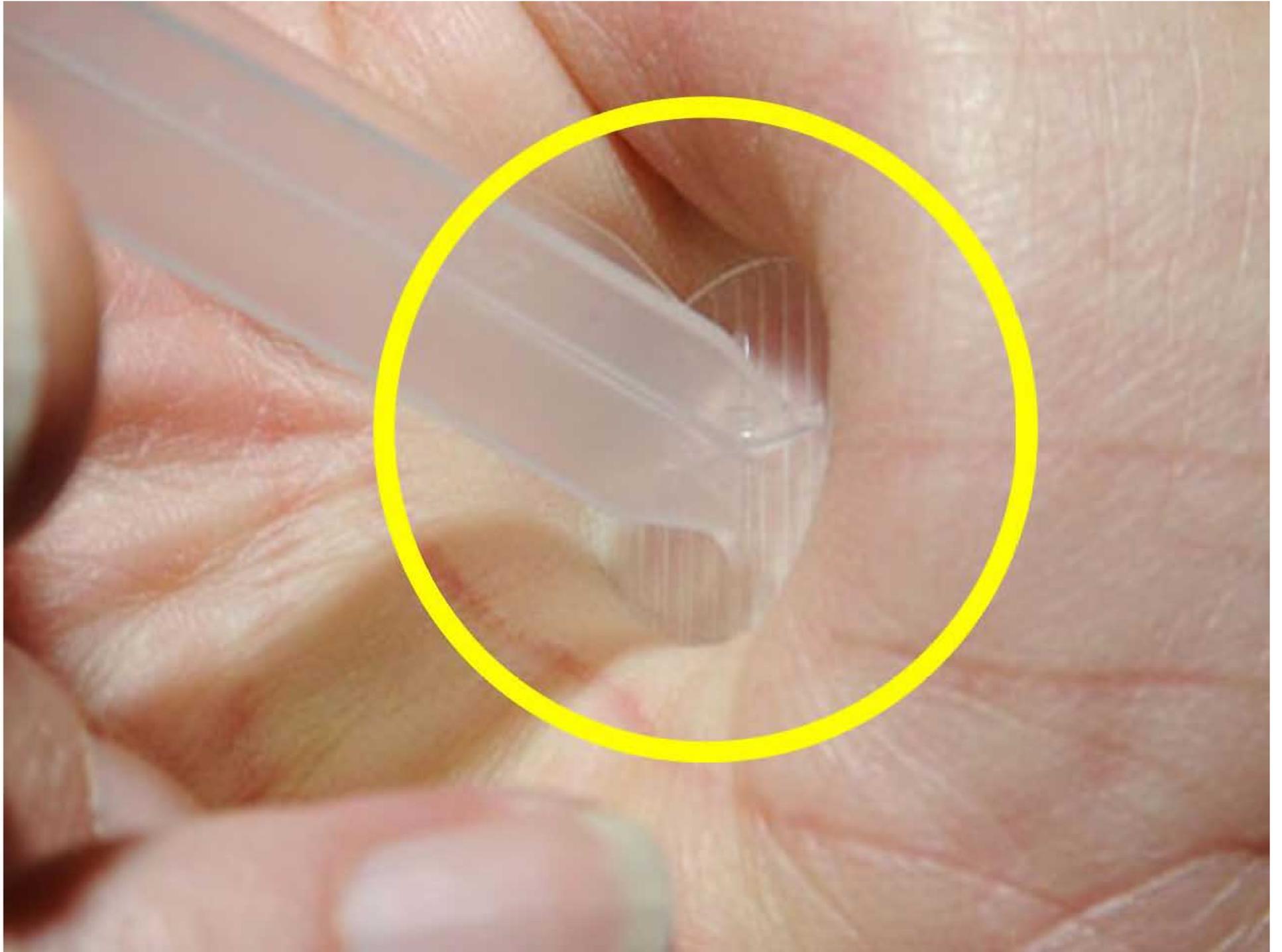


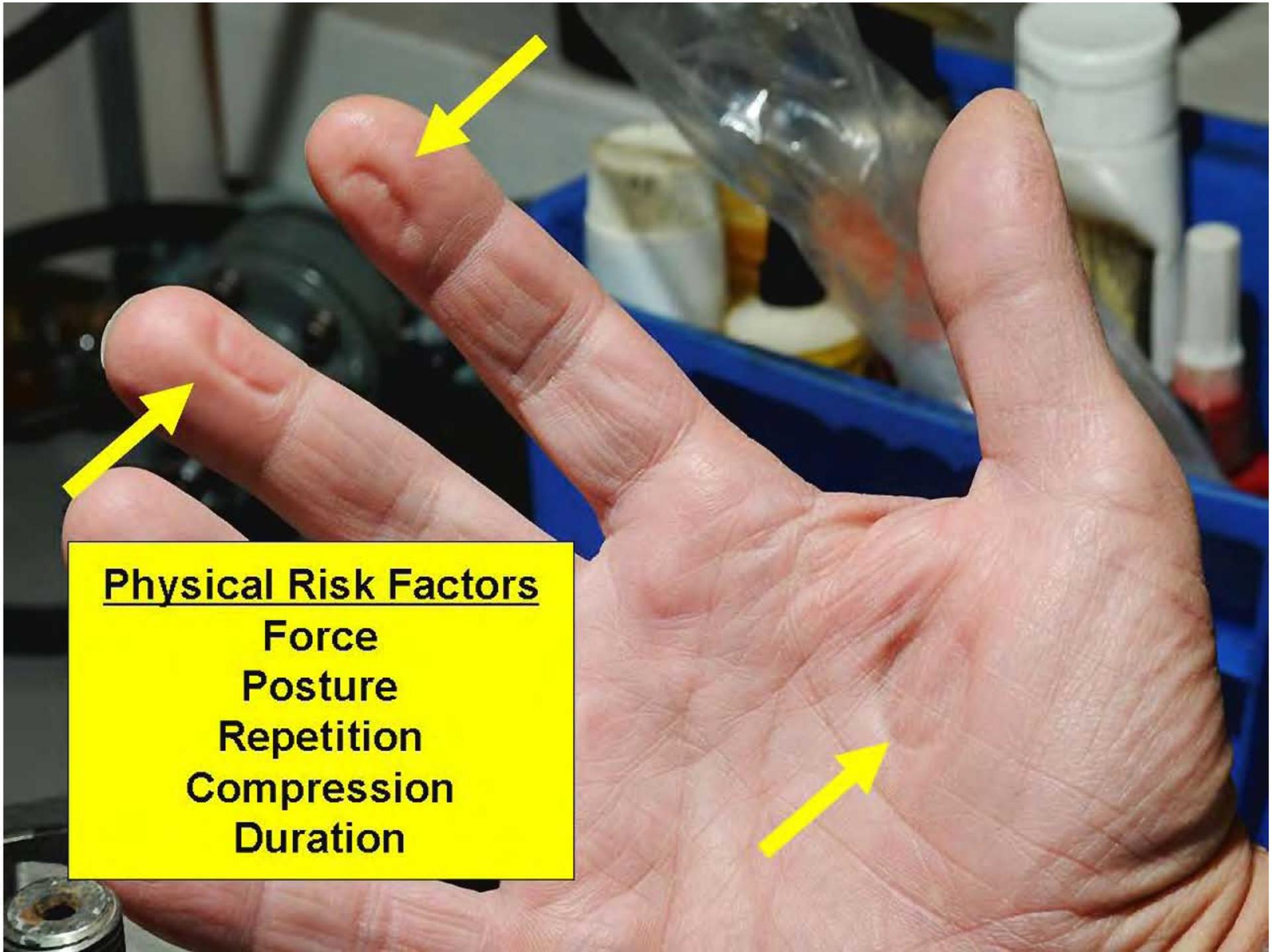




**Applying potting compound (sealant)**







**Physical Risk Factors**

**Force**  
**Posture**  
**Repetition**  
**Compression**  
**Duration**

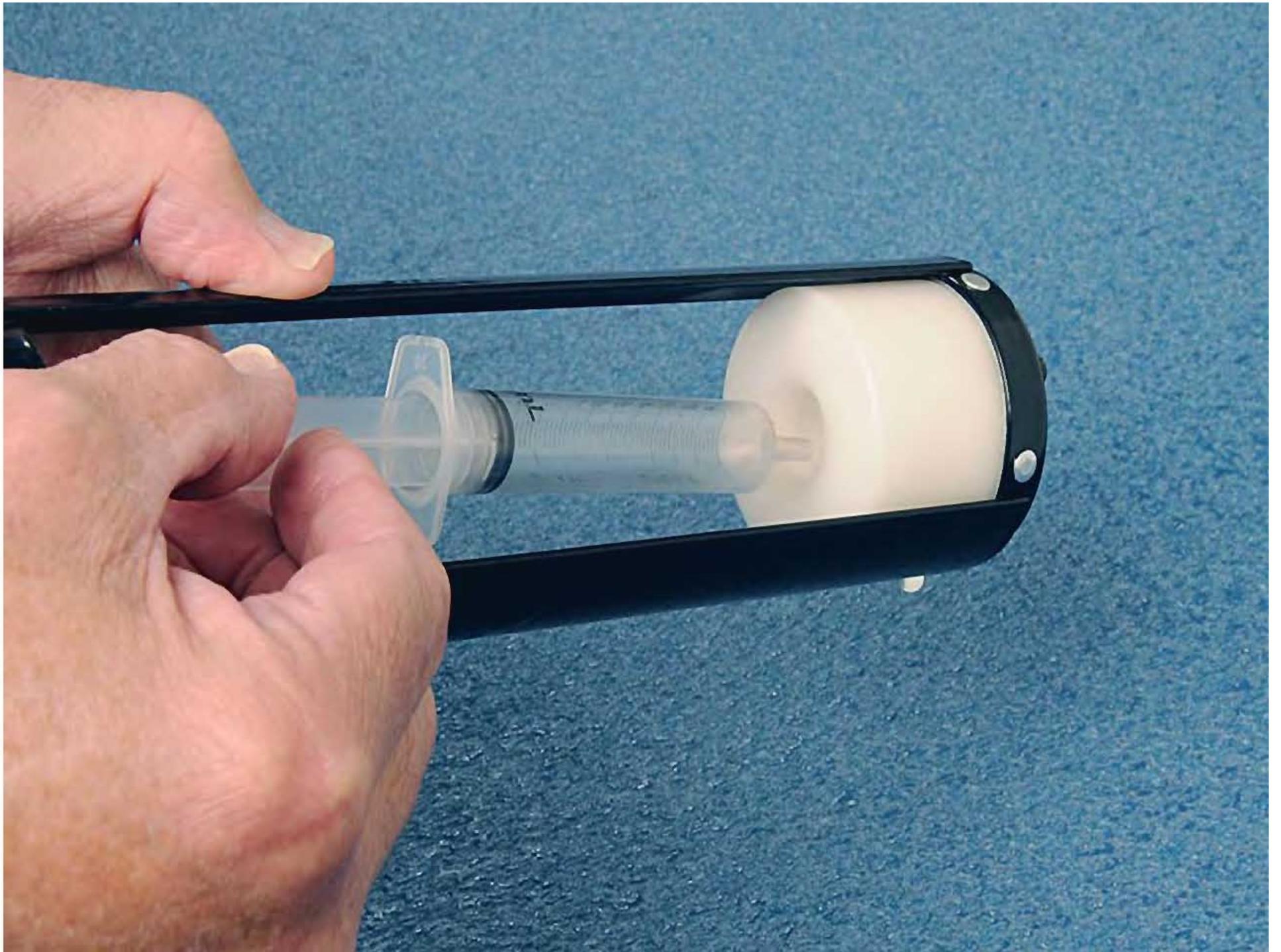




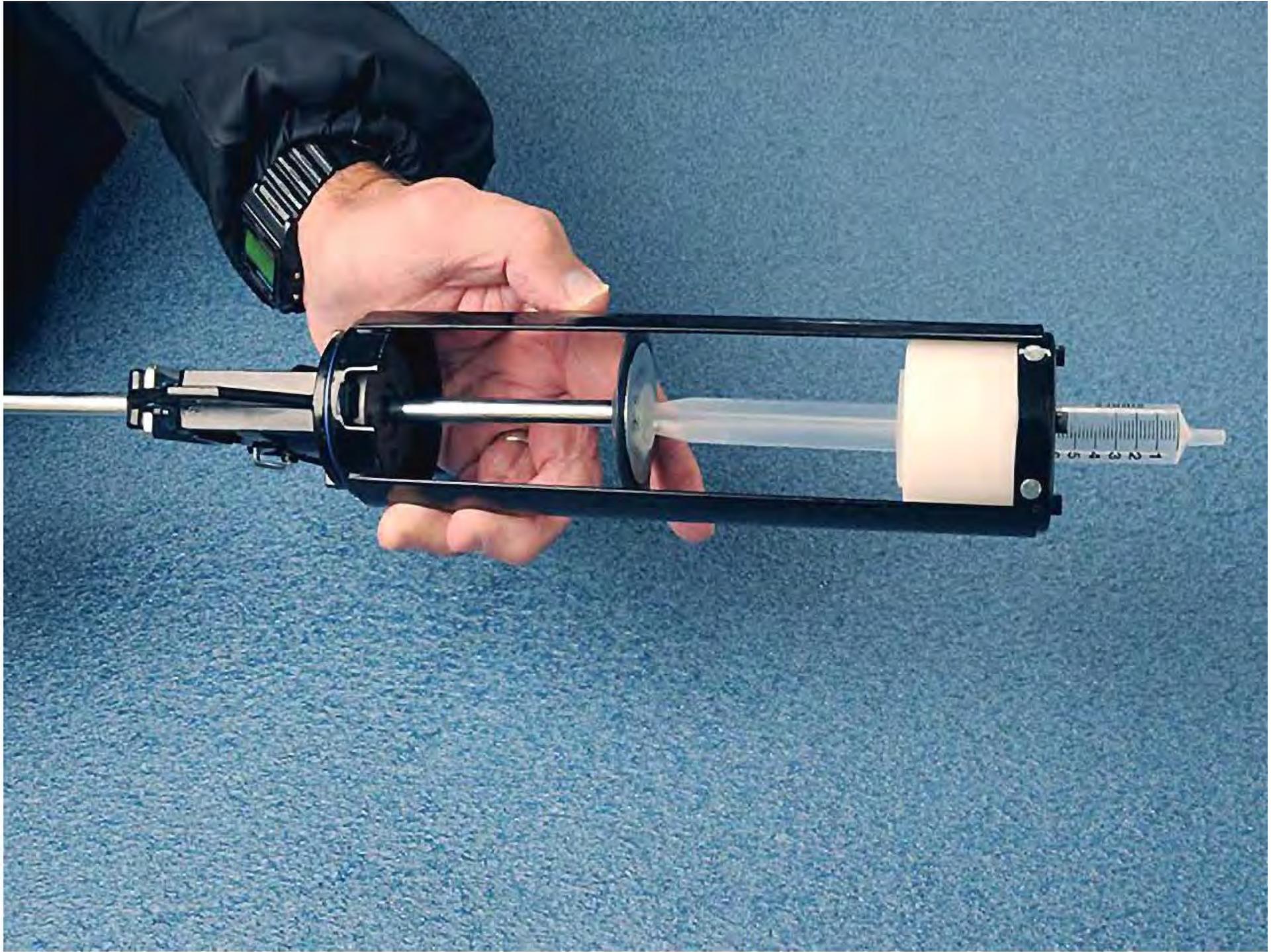


**Fix**





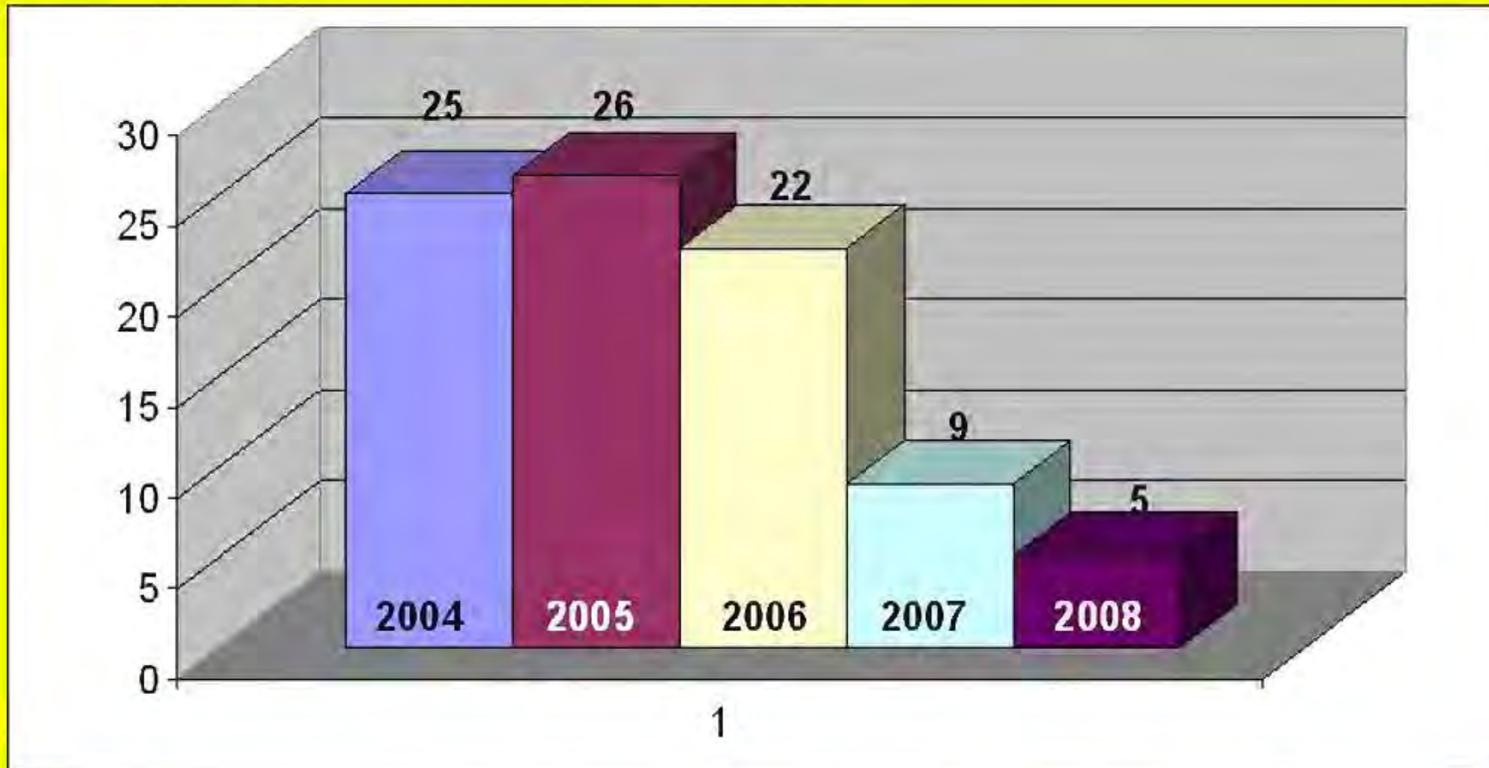






## Carpal Tunnel Syndrome Cases at FRC-East over 5 years

2004	2005	2006	2007	2008
25	26	22	9	5

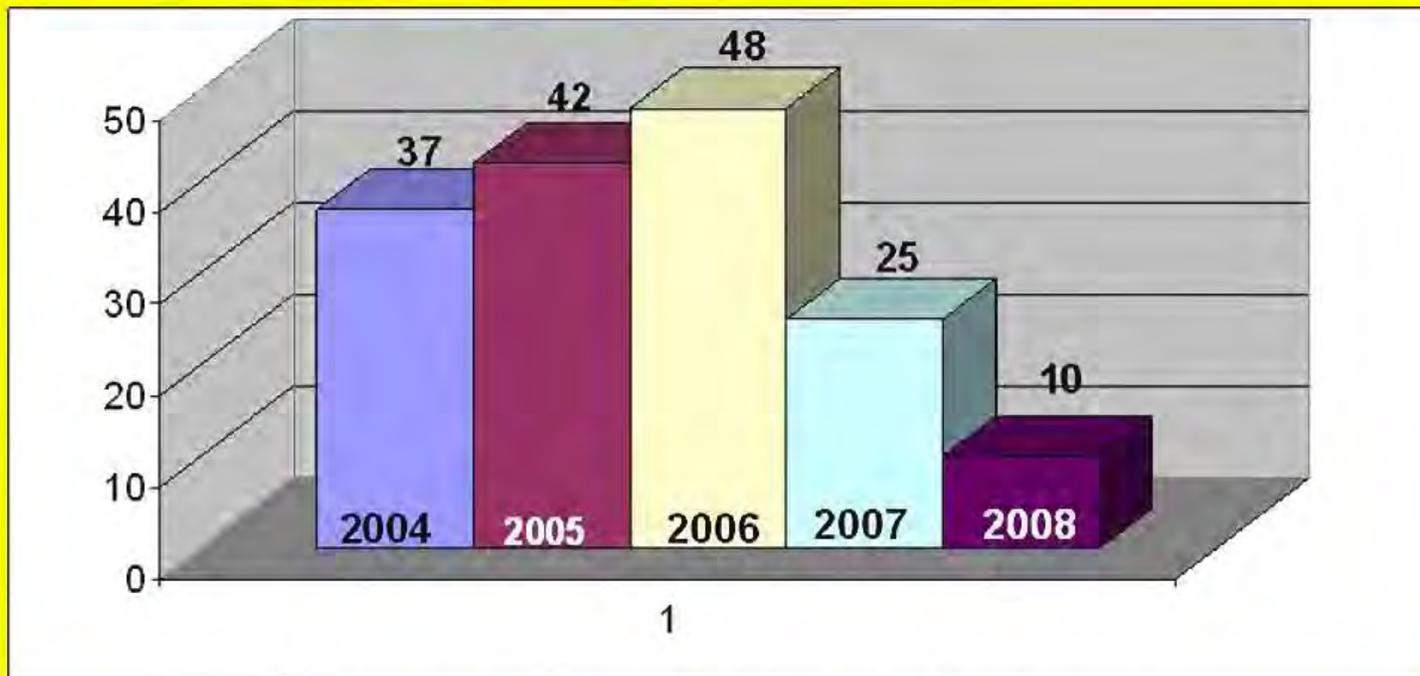


**Above information is as of 12/5/2008**

By Richard Borcicky Ergonomic/Engineer FRC-East, Cherry Point

## Back Pain / Hurt Back Cases at FRC-East over 5 years

2004	2005	2006	2007	2008
37	42	48	25	10



**Above information is as of 12/5/2008**

By Richard Borcicky Ergonomic/Engineer FRC-East, Cherry Point



**Feel free to contact me for any other information:**

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