

Ergonomic measurement & analysis system  
 INCLUDES: 4D Watbak, NIOSH, Snook Tool, PDD Checklist

Scientifically Validated

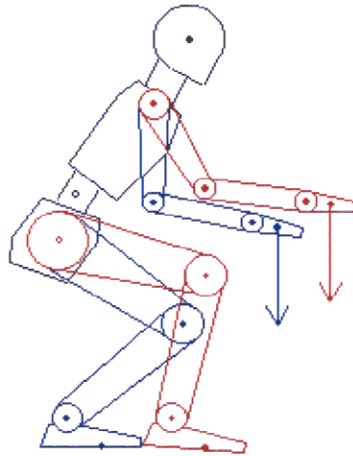
## 4D WATBAK

Biomechanical Modeling Software

Calculates Peak & Cumulative Loads!

### 4D WATBAK Evaluates:

- Lifts, lowers, pushes and pulls
- Asymmetric postures and hand forces
- Multiple actions performed over a full shift

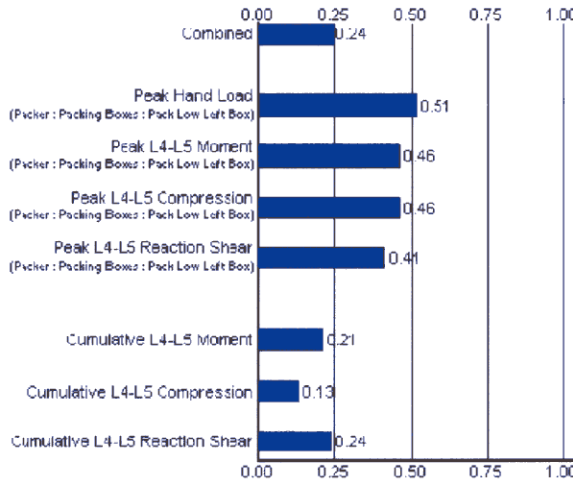


### Use 4D WATBAK to Obtain

- Spinal loading forces for each job element
- Spinal loading forces accumulated over time
- Relative risk of lower back injury for both acute and accumulated loads

### Relative Risk Output based on Epidemiological Data:

Low Back Pain Reporting Index



## NIOSH Tool

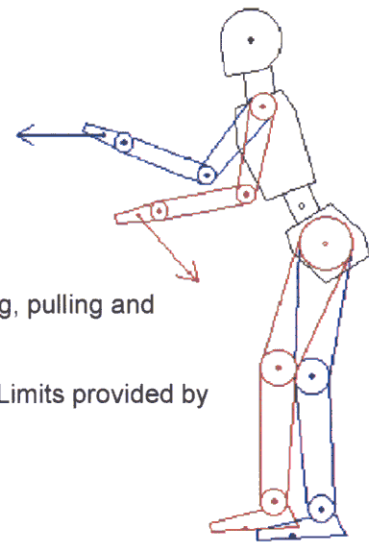
Lifting Equation Software

### Use the NIOSH tool:

- To assess lifts and lowers, including those involving twisting motions
- To calculate weight limits from the NIOSH Lifting Equations

# Snook Tool

## Weight Limit Software



Initial  kg  
 Sustained  kg

Hand Height  →

- 57 cm
- 64 cm
- 89 cm
- 95 cm
- 135 cm
- 144 cm

Distance Pulled  →

- 2.1 m
- 7.6 m
- 15.2 m
- 30.5 m
- 45.7 m
- 61.0 m

Frequency

One Pull Every:  s

- 6 s
- 12 s
- 15 s
- 22 s
- 25 s
- 35 s
- 1 min
- 2 min
- 5 min
- 30 min
- 8 h

### Use the Snook Tool:

- To assess lifting, lowering, pushing, pulling and carrying tasks
- To obtain Recommended Weight Limits provided by the Snook and Ciriello tables

Based upon the Revised Tables of Maximum Acceptable Weights and Forces (Snook & Ciriello, 1991)



# PDD Checklist

## Physical Demands Description Software

### Use the PDD Checklist to:

- Document physical demands of a job
- Return to Work Programs - Match job demands with workers' capabilities

Physical Demands	Duration					Load (kg)	Essential Duty
	0	1	2	3	4		
Lifting (Maximum)	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	15	<input type="checkbox"/>
Lifting (Usual)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	2.5	<input checked="" type="checkbox"/>

### Price

Regular Price  
 Upgrade Price (for former registered DOS version WATBAK users)  
 Educational Institutions (File Servers)

#### Single Computer

\$ 600.00  
 \$ 300.00  
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#### Site License

\$1500.00  
 \$ 750.00  
 \$ 850.00

### Further Information

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[www.ergonomics.uwaterloo.ca/riskwatch.html](http://www.ergonomics.uwaterloo.ca/riskwatch.html)

**System Requirements:** IBM PC and 100% compatibles, Window 95, Windows 98, NT 4.0

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