

Our bodies do talk to us

- we just have to listen!

You're in charge – what should you keep in mind?

Different types of lifting:

- **Diagonal lift** – the lift with the legs – not the back, hardly ever a good way to lift because it can produce up to 66% more compression on the lower back
- **Modified diagonal lift** – it is important that the first movement is with the head, followed by the straightening of the legs
- **Partial squat with, or without, support** is helpful for objects near knee height
- **Golfer's lift** – bracing your weight on something and kicking your back leg up like a crane
- **Overhead lift** – hoisting a box by shifting it to the side as you lift will protect your shoulders

Basic rules for lifting:

- **Avoid all side-to-side twisting**
- **Convert carry to push or push/pull**
 - **Avoid over 20 lbs of force** = pushing a 65 lb box across a tile floor or a shopping cart with five 40 lb dog food bags
- **Avoid reaches $\geq 15''$**
- **A container's dimensions should be no more than $L+W \leq 30''$**
- **A deep squat lift, and one knee lifts, should be avoided if knees are bad**
- **Straight leg lift is difficult with tight hamstring muscles**

Basic rules for grips:

- **Avoid the amount of pinch grip needed to hold a small binder clip open**
- **It is 4X-5X harder to pinch grip than to power grip**
- **10 lbs of grip strength is the same as crushing a soda can with one hand**
- **The two finger grip is better**

Red flags to look for:

- **Fluttering of fingers – rubbing areas back to life**
- **Shaking the hands**
- **Holding onto the sides of their wrists**
- **Deep rubbing of the arms as if to work out the pain**
- **Cradling the arm at 90°**
- **Tool adaptations – make them permanent**

Basic heat stress rules:

- **Heat Wave** is indicated when 90-95° and/or 5° above previous three days
- **Skin temperature** must be kept below the body's core temperature
- **Acclimate no more than 100 continuous minutes a day**
- **Acclimate from 50%, then 60%, then 80% and finally 100%**
- **Loss of sweating is bad**
- **5-7 oz of water every 10-15 minutes for hydration**

Basic rules for cold:

- **Whole body protection is needed below 40°, heated shelters when below 20° and special practices below 10°**
- **Danger is when the body's core temperature drops to 93°, unconsciousness happens at 86° and death occurs at 79°**
- **Shivering is the first sign of problems – it is the body attempting to get blood flowing**
- **Hot sweet drinks are what is needed – no caffeine**
- **Wear clothing that wicks moisture away from the skin**

Other risk factors:

- **Hands or elbows above the shoulder over 2 hours**
- **Kneeling/squatting over 2 hours**
- **Back, neck or wrists bent, or twisted, for over 2 hours**
- **Using the hands, or knees, as hammers more than 10X an hour for more than 2 hours**
- **Wrist deviations of 30° to 45° is the hazard zone**