

Chapter 2: Cooking & Cleaning

Creating and sharing a home cooked meal is one of the true pleasures of life. With the abundance of locally grown meats, veggies, herbs, cheeses and breads in the Bay Area, preparing a meal is that much more rewarding.



At the end of a long workday, food preparation and the attendant cleanup tasks can be an insult to your tired body.

Consider the impact of:

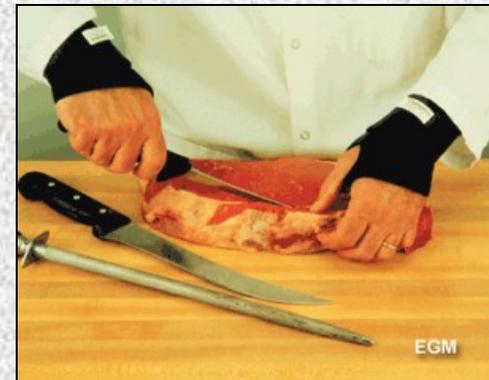
- Yanking a couple of 10 pound grocery bags out of the back seat of the car
- Slicing and dicing foods then scouring pans involves more forceful grasping, gripping and repetitive hand motions than anything you do in the office
- Even stooping to empty and load the dishwasher or bending over the sink will add to the wear and tear on your body

If the same body parts you use at work are engaged at home this could be a *recipe for disaster*... you just might need a dash of *ergonomics* in your kitchen.

Cooking & Cleaning

The *Ergonomic Risk Factors*

- Awkward hand/wrist postures and stressful grips due to the size, shape or design of the utensil
- Repetitive and forceful hand motions, particularly wrist flicking and gripping/twisting
- Forward trunk bending at sinks, counters, when cleaning floors and reaching for pots & pans under the counter
- Overhead reaching in cabinets
- Lifting, carrying and placement of heavy bags or containers



Cooking & Cleaning

Essential Tips & Techniques



- Avoid rapid, forceful or flicking motions when slicing and dicing
 - approach the task with temperance using smooth and graceful motions
- Minimize repetition by using assistive or push-button slicers, dicers, mixers and mashers
- Keep knives and tools sharp to minimize the force you need to apply
 - Hint:* Visit the cutlery man at the Thursday Farmer's Market- he can sharpen all your cutting tools!
- Use the right utensils for the job and use cutlery that...
 - fit your hands, your strength and feel balanced
 - have easy to grip handles with rubber coating (or add rubber sleeves)
 - allow you to keep your wrists straight and your hands in a neutral thumbs-up position

Cooking & Cleaning

More Tips & Techniques

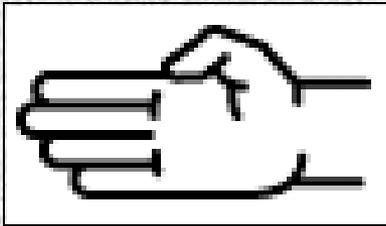
- Select pots and pans that are easy to lift and manipulate
 - try using a wok instead of a traditional pan – they are two handled and light weight
- Avoid bending over counters with your back bent at the waist
- Avoid working on your knees when cleaning floors or scrubbing the bath
- Use a carpet or rubber mat at each standing work location to reduce stress on your joints – this is what restaurant kitchens have everywhere!
- Invest in a bar stool that allows you to work at the counter sitting down
- Soak pots & pans to reduce forceful scrubbing



If it all is too much sit down and order take out!

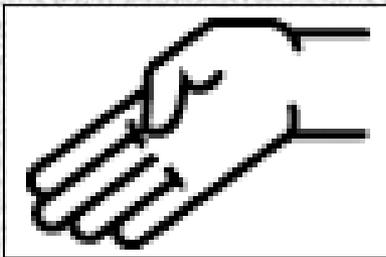
Some basic rules of thumb...*and hand* for using tools and utensils

Good



This is a neutral “thumbs up” or “hand shake” wrist position

Not Good



This is an awkward position that puts lot of stress on wrist and elbow tendons

Good



Not Good



Kitchen Tools and Assistive Devices

...gadgets are good!



Lightweight mixing bowls with grip rings – no bending your wrist to hold the bowl in place



Stir Chef Auto Stirrer - hands free battery operated stirring and mixing



Rotating Turbo Whisk - hold in handshake position and push down to set the whisk in motion to minimize forceful flicking of hands/wrists

www.lifewithase.com

The World of Kitchen Gadgets



Vertical Grip Carving Knife -
vertical handle allows you to
carve with a neutral handshake grip



Locking Can Opener -
snap-lock opener doesn't
require any hand squeezing



Vertical Grip Spatula -
vertical handle allows you
to flip food with a neutral
handshake grip

Kitchen Tools and Assistive Devices

...to minimize forceful gripping and hand motions



Jar Opener

Slides on jar lid and rotates
Doesn't require hand gripping
and handle gives you greater
leverage for turning top open
without forceful hand motion



Offset Knife

Offset design of blade and handle
allow you to cut/carve without
bending the wrist downward



Offset Scissors

All purpose scissors with offset
blade and handle
Reduces hand gripping forces
to cut materials

www.lifewithease.com

www.oxo.com

Slicers, Dicers and Graters

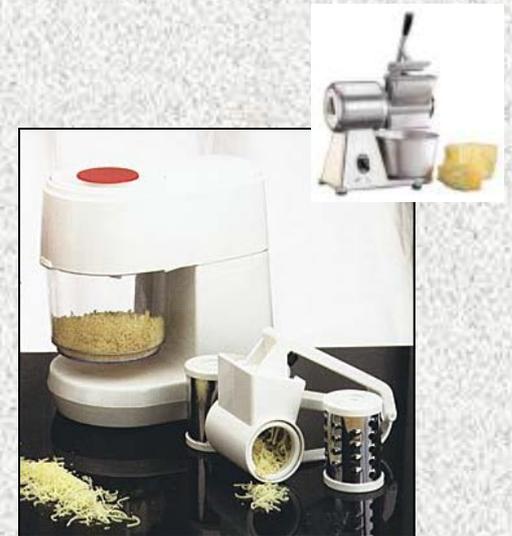
...to reduce repetitive and forceful hand motions



Vegetable and Fruit Slicers



Potato Dicer



Cheese Graters

www.chefgadget.com

Keep your knives and cutting tools sharp *...to minimize forceful hand motions*



TIP: Take your knives, scissors and pruning shears to the guy at the Farmer's Market (Thursdays). He sharpens anything with a cutting edge for a reasonable price!

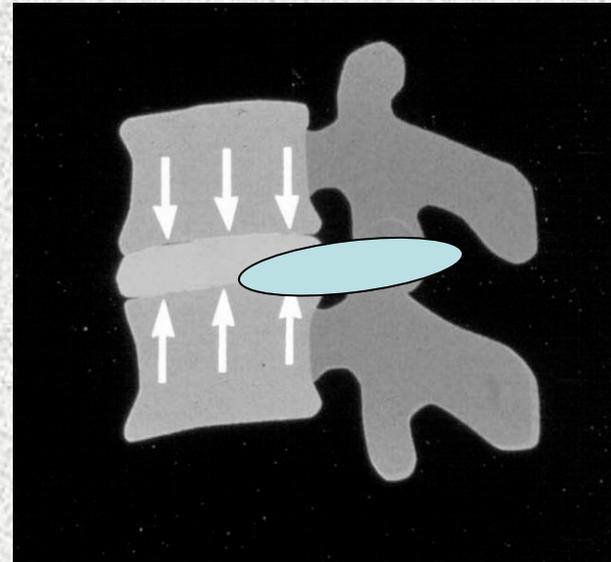


www.onesharpstore.com

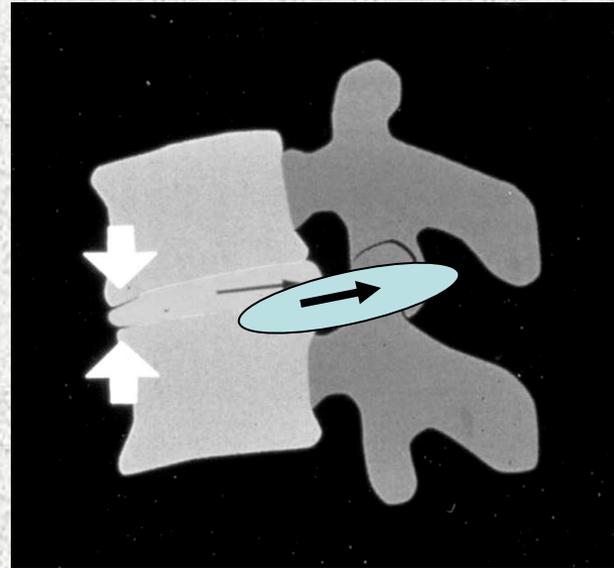
Some basic rules of spine postures



This is the neutral posture of the spine with a nice inward curve in the low back (lumbar). In this upright posture, the load on the spine is minimal. However, when we bend the spine forward or rearward we increase the load significantly and this can cause degenerative problems if done repetitively over time.



When standing erect at the sink with her back straight, pressures on the discs in her spine (lozenges filled with fluid) are fairly even and that's **GOOD!**



When bending forward at the sink with her back in a “C” shape, pressures on the discs in her spine are uneven. Significant pressures are exerted on the front of the discs causing the disc to bulge out the back...**NOT GOOD!**

Avoid Bending Forward at Counters! *...move in close*



She's bending her back slightly forward to wash dishes at a sink that's a bit far and deep for her to reach.



By opening the cabinet below and resting her left foot on the bottom she can move in closer and maintain the curve in her low back

Minimize Bending to Reach Below Counters



Take some tips from the pros...organize your kitchen so commonly used pots, pans and tools are within an easy reach that doesn't require you to bend below counters or reach way overhead.

Avoid Extended or Unsafe Reaches!



Extended Reach

You could strain your back and/or neck. And a can of beans could fall on your head!



Unsafe Reach

Teetering on an unstable chair could result in a big spill of you and the kosher salt

Use a grasping tool to assist with reaching!



Grasping tools can be handy for reaching high shelves, low shelves, those hard to reach spots or emptying the clothes dryer.



Using the right tool for the task

**Rubbermaid
Safety Stool**
rolls but locks in
place when weight is
applied



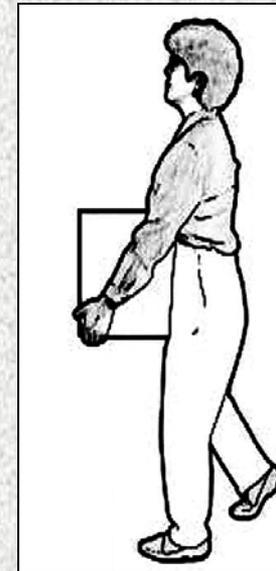
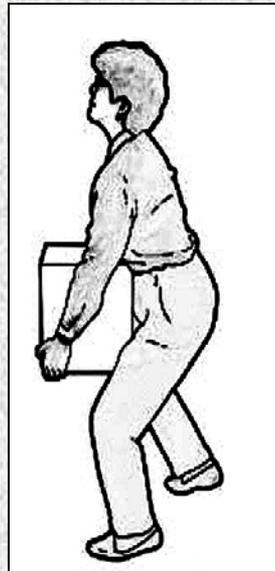
**Safety Step
with handrail
for stability**



**Little Giant Safety Ladder
with handrail for stability**

Preserve the Curve by Keeping Your Back Straight!

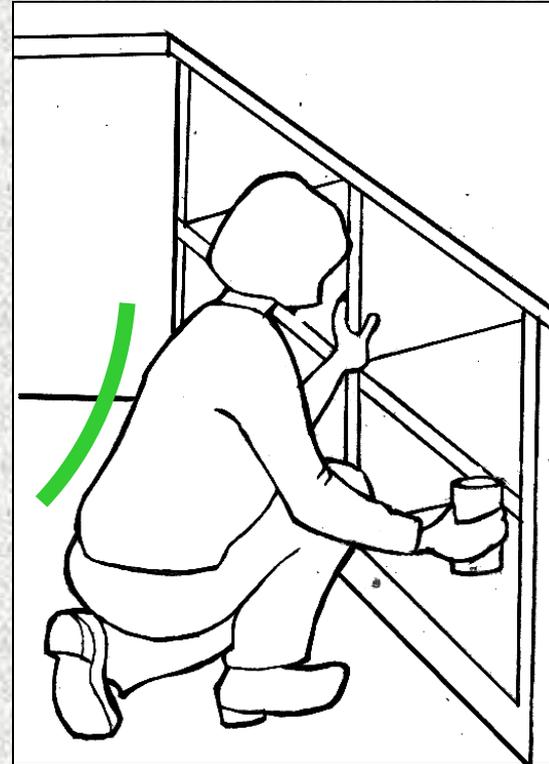
Whether you're lifting a bag of groceries, a case of soft drinks or a child from a car seat, the *Diagonal Squat* is a good technique for using your body safely and efficiently.



1. Get in close to the load
Squat down resting one knee on the floor or surface
Get a good grip using 2 hands
2. Bend at your knees and hips, keeping your back straight.
Use the large muscles of your legs to elevate the load
Use your arms to draw the load close against your body
Keep the lift smooth and gradual!
3. When moving or placing the load, move with your feet.
Avoid planting your feet when turning since this involves twisting, which puts stress on your knees, hips and back.

Preserve the Curve by Keeping Your Back Straight!

The *Diagonal Squat* can also come in handy when emptying the clothes dryer, loading/unloading the dishwasher or accessing food or pots & pans on lower cabinet shelves.



Cleaning

Essential Tips & Techniques

- Avoid extended reaching or excessive bending to clean things high or low ...move close in to the task and use long handled tools
- When cleaning floors, minimize bending your spine, kneeling or squatting by using the diagonal squat technique. If you must kneel for long periods, use a towel or padded rest to cushion your knees
- Organize your tasks and tools on shelves, carts or hangers to position them above shin and below shoulder level to minimize excessive bending or reaching
- Use the right cleaning tools for the job...
 - fits your hands, your strength and feels balanced
 - self-dispensing scrubbers or electric tools to reduce repetition



Avoid working on your knees or squatting *...when cleaning and scouring floors and tubs*

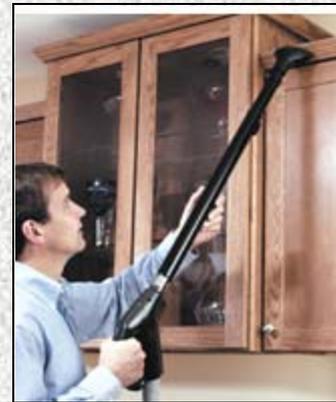
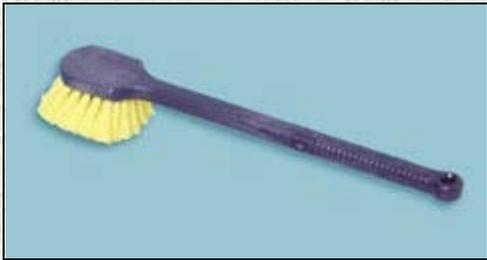
When scrubbing a tub, climbing inside can help reduce bending and reaching over the tub. However, it does involve kneeling or squatting which is hard on the knees. Consider using a long handled scrub brush. There are new products available to address this issue.

TIP: Check out the Clorox Cleaning Wand



If the job requires working on your knees, use a pad or towel to cushion your knees or better yet, use knee pads

Use long handled brushes and cleaning tools
...to minimize bending or over reaching



Look for electric or multipurpose cleaning tools

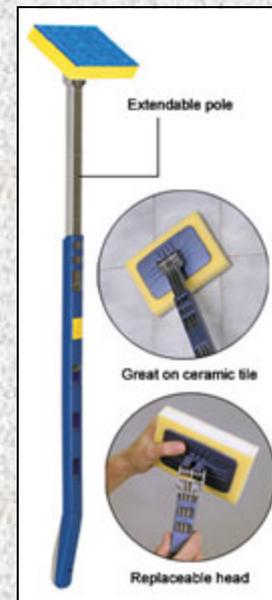
Scrub brush with self-dispensing soap



Scrub brush with self-dispensing soap and easy grip handle



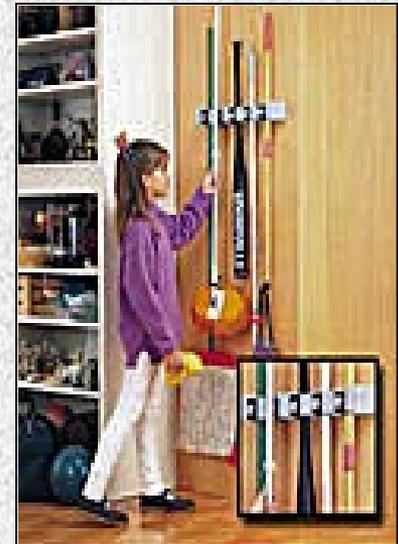
Electric floor scrubber



Adjustable handle scrubber with multiple mop heads for floors and bath tile

Use racks, carts or hangers

... to minimize bending too low or reaching too high



Position commonly used cleaning tools or materials so you don't have to reach below your shin height or above your shoulder height



If your house resembles these photos you probably already have a maid!

Where to find more information

Resources- ergonomics and universal design

www.aarp.org/universalhome - tips for home safety

www.dea.human.cornell.edu - tips for home ergonomics

www.si.edu - tips for home ergonomics

www.2.kumc.edu/coa/senior_press - articles home ergonomics

www.usernomics.com - tips home ergonomics

www.dynamic-living.com - tips for cooking and cleaning

www.working-well.org - tips for cooking and cleaning

Sources- user friendly cooking & cleaning tools

www.lifewithease.com - ergonomic tools and utensils

www.onesharpstore.com - ergonomic tools and utensils

www.mainstsupply.com - ergonomic tools and utensils

www.oxo.com - ergonomic tools and utensils

www.smithandhawken.com - ergonomic tools and utensils

www.goodgrips.com - ergonomic tools and utensils

www.easyreacher.com - easy reach device

www.chefgadget.com - ergonomic tools and utensils

www.organize-it.com - ergonomics storage devices

