



ERGONOMICS IOS APP

Ergonomics is an iOS app that offers office ergonomic equipment setup advice, a variety of workplace specific stretching exercises and programmable reminders to help office workers time their breaks.

The app won the People's Choice Award in the Worker Safety and Health App Challenge in 2013, which was sponsored by OSHA.

[Apple App Store](#)

POSTER OF THE MONTH



[NIOSH MMH Checklist](#)

Ergonomics at Home

By: Kristie Elton

When we hear the term ergonomics, we typically think of work. However, the definition itself is not that limiting. "Home Ergonomics" means having components of your home that have been designed with the body's comfort in mind, or fitting your home to you. Walk through your home, room by room, and consider how ergonomics can make your life easier and more comfortable.

The Bedroom

Because the body heals and rejuvenates itself during sleep, it is important to ensure you are well-rested. To achieve a good night's sleep, you want to ensure your sleeping position or posture provides maximum comfort and rest.

Pillows should offer support to the head and neck while promoting a neutral posture. Position your pillow(s) in a manner that keeps your head and neck aligned and avoids uncomfortable bending or twisting.

Pillows can also be used to improve your lower back comfort as well.

- **Side Sleeper:** Place a pillow between your knees. This reduces strain on your lower back during sleep.
- **Back Sleeper:** Placing a pillow under your knees can also improve comfort.

- **Stomach Sleeper (not often recommended):** Placing a pillow under your hips can improve your posture and comfort.

The Kitchen

The kitchen has become the center of family interaction in many homes. While more time is spent in the kitchen, ergonomics plays an increasingly important role here.

- Anti-fatigue mats placed by the stove, sink or food preparation area can reduce lower back and leg fatigue when standing on hard flooring for extended periods of time.
- Kitchen tools and utensils with large or cushioned handles can reduce grip force and provide better comfort for hand and forearm muscles.
- Store frequently used and/or heavy items between knee and chest height, where they can be safely handled with the least amount of effort. Store rarely used items out of the way or on top shelves.

Considering a kitchen upgrade? Before you begin construction, consider how you work in your kitchen. What do you wish you could change? Does the layout provide an efficient work flow? For additional information on designing an ergonomic kitchen, visit [Ergonomics Info](#) for helpful information.

By: BRENT COOLEY

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Many households spend a fair amount of time in the family room. This is where we watch television, read, play games or simply talk with one another. You may not realize it, but that big, comfy, over-stuffed couch may lead to some aches and pains down the road.

Problem: Sofas and chairs that are too soft cause us to “sink in”, resulting in slouched posture.

Solution: Use pillows to support your lower back which promotes better, upright posture.

Problem: Sofas and easy chairs are often too low. This not only promotes poor posture but also makes it more difficult to stand up.

Solution: Firm couches and chairs make it easier to stand up. Also, a firm couch cushion won't sink down low.

Problem: Wall-mounted televisions look nice but can be a pain in the neck!

Solution: The television should be positioned even with your line of sight when seated on your couch or chair. If you have to tilt your head up to watch your favorite shows, it is too high.

Taking care of ourselves can be a 24-hour job. Finding the time to implement small ergonomic measures at work and in your home can improve your health and well-being.



Do you have a job that involves lifting, pushing, pulling, carrying, seizing, grasping or otherwise working with your hands? If so, then you are one of many individuals that perform manual material handling (MMH) as part of your job. In some cases, MMH is a significant part of routine activities and if not properly planned and performed, individuals that perform these tasks are at increased risk of musculoskeletal disorders such as sprains and strains of the lower back, shoulders and upper limbs. So how do we address this challenge of MMH that takes place in our offices, shops, dining areas and laboratories? Research has shown that the application of effective ergonomic interventions can decrease the likelihood of musculoskeletal injuries as well as improve efficiency, productivity and overall morale.

The first step in preventing material handling problems is identifying conditions, or risk factors, which might lead to a MMH related injury. In general, these are tasks that are performed repeatedly or over a long period of time that can lead to fatigue and ultimately to an injury. Early recognition and intervention are keys, so be aware of MMH that involves:

- Repetitive motions (frequent reaching, lifting, carrying)
- Awkward postures (bending, twisting, kneeling)
- Forceful exertions (carrying or lifting heavy loads)
- Pressure points (leaning against parts or surfaces with hard or sharp edges)
- Static postures (maintaining fixed positions for a long time)

If your back is stiff, shoulders are sore, or wrists are aching at the end of a MMH task, it's time to evaluate the work processes and determine if something can be altered. Please see the ancillary resource: [NIOSH Manual Material Handling Checklist](#) from the National Institute of Occupational Safety and Health (NIOSH) to help identify potential work practices that could put individuals at risk of a MMH injury.

Once risk factors have been identified, appropriate controls need to be put in place to reduce the likelihood or severity of a MMH injury. In terms of ergonomic improvements, controls can include engineering improvements, administrative practices or some combination of both to improve the fit between the demands of the work tasks and capabilities of the workers. Examples of engineering improvements include rearranging, modifying, redesigning, providing or replacing tools, equipment, workstations, parts or processes.

Administrative practices focus more on the person performing the work and include alternating heavy and light tasks, providing variety in jobs to reduce repetition, adjusting work schedules, work pace or work practices, providing recovery time, or rotating workers through various jobs that use different muscles, body parts or postures.

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CONNECT

Know where to turn on your UC campus for the information you need to keep yourself, your workplace and your environment safe and secure. Click on the campus links below to connect to local program, educational and informational resources.

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[UC Merced](#)

[UC Santa Barbara](#)

[UC Davis](#)

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Training is also a critical component of administrative controls and along with other ergonomic improvements, can assist individuals in using new tools, equipment and work practices to safely perform MMH tasks.

Now that you understand the importance of identifying risk factors and recognize the difference between engineering improvements and administrative practices, let's look at a number of specific examples of how to apply these concepts to common MMH challenges:

Lifting items from the floor. If at all possible, avoid lifting items directly from the floor as this puts your lower back at risk for a sprain or strain. First determine the weight of the load before you attempt a lift. If you must lift from the floor, do not bend at the waist. Keep the load close to your body and push up with your legs. Be aware, this technique is typically only effective for small, lightweight loads that can easily fit between your knees. Your feet should be stable and your head should be up throughout the lift.

Lifting larger, heavier items. Certain objects are too heavy or large for one person. As a more permanent improvement is investigated, team lifting can temporarily make this type of MMH safer. If possible, find a co-worker of similar height when using a team lifting approach and beware, team lifting can increase the risk of a slip, trip or fall. Discuss your lifting plan to make certain everyone on the team is on the same page.

Raising or lowering a load and relocating it. Use scissors lifts, load lifters or pneumatic lifters to raise or lower materials so they are level with the work surface. Slide the materials onto or off of the equipment instead of lifting them.

Work within the "power zone". The power zone for MMH is above the knees, below the shoulders, and close to the body. With this in mind, adjust the height of the worker to maximize MMH in the power zone. Depending on the task, this might include a step stool, portable stairs, or platforms that can allow different height workers access to the materials and equipment they need. Remember to follow manufacturer's instructions for assembling and using stools, stairs or platforms. Use only equipment appropriate for the size, shape and weight of the material being handled.

For more information and specific examples of ergonomic improvements, please see the [Ergonomic Guidelines for Manual Material Handling](#) prepared and published by Cal-OSHA Consultation Services in collaboration with NIOSH. Always remember to communicate signs and symptoms of potential manual material handling concerns, such as a stiff back, sore wrists, aching shoulders, etc. to your supervisor immediately and work with your local EH&S Office to identify, evaluate, and implement ergonomic improvements.

ERGONOMIC LINKS

[Prevention of Musculoskeletal Disorders in the Workplace](#)

[CAP: Workplace Ergonomics Reference Guide 2nd Edition](#)

[Ergonomics of the Office and Workplace: An Overview](#)

[Ergonomics and Musculoskeletal Disorders](#)

[Office Ergonomics - Topics Overview](#)

[Workplace Ergonomics](#)

[Workplace Ergonomics 101](#)

[5 Proven Benefits of Ergonomics in the Workplace](#)

COMING SOON

Family Safety & Security

Check out our December/January 2014-15 issue to learn how to keep your family safe and secure over the holidays.

FEEDBACK, PLEASE

Send an email to safetyspotlight@ucdavis.edu to submit your comments on the October issue or to suggest content ideas for future issues. We look forward to hearing from you!