KEEPING THE RESTAURANT SAFE

IS NO ACCIDENT
This material was produced under grant SH-19478-SH9 from the Occupational Safety and Health Administration, U.S. Department of Labor. It does not necessarily reflect the views or policies of the U.S. Department of Labor, nor does mention of trade names, commercial products, or organizations imply endorsement by the U.S. Government.
Chapter 1
The Challenge: Keeping Restaurant Workers Healthy and Safe

Both restaurant employers and employees know that their work environment contains known hazards. But how serious is the problem of injuries in restaurant work?

The National Picture

The U.S. Bureau of Labor Statistics reported that 67,160 food preparation and serving workers hurt themselves on the job badly enough to lose at least a day of work in 2008. Nearly 1/5 of those workers lost 31 or more days of work. More than half of all those workers (56.7%) suffered cuts, burns, sprains or strains. About 1/3 (31.8%) suffered an injury to their hand or wrist, and 22.1% injured their back or shoulder (Bureau of Labor Statistics, 2009).

One large national restaurant chain estimates that for every dollar spent directly on an injury, four dollars are spent on indirect costs such as employee turnover, overtime, accident investigation, and worker’s compensation premium increases (City of New York, 2006, p. 34).

Most common injuries in the Food Service Industry

In an analysis of 29,872 occupational injuries in the food service industry in 1999 that led to workers' compensation claims, Liberty Mutual Research Institute for Safety researchers reported that cutting, slicing and cooking were some of the most common
work activities, behind carrying and handling (which are commonly associated with slipping and falling), most frequently undertaken just prior to an injury (Wellman, 2005)

**Not just cuts and burns** Certain types of conditions, such as carpal tunnel syndrome, tendonitis or low back pain, are not usually due to sudden injuries, rather they can develop gradually over time due to work. They are known as work-related musculoskeletal disorders or “repetitive motion” injuries. Some people call these “ergonomic” injuries because they result from poorly designed tools, equipment or work areas.

**Why look at musculoskeletal disorders?**

According the US Bureau of Labor Statistics, these musculoskeletal disorders accounted for 29% of all lost time workplace injuries and illnesses in 2008. Repetitive motion injuries lead to the highest number of lost work days; approximately 18 lost work days per injury (Bureau of Labor Statistics, 2009). According to the Liberty Mutual Workplace Safety Index, repetitive motion injuries cost all employers about $2 billion and overexertion injuries (from excessive lifting, pushing, pulling, holding, carrying or throwing) cost an additional $12.7 billion in 2007 (Liberty Mutual Research Institute for Safety, 2009).

**ERGONOMICS reduces injuries**

Ergonomics is the science of designing the workplace to fit the worker, rather than expecting a worker to fit into a job that has not been designed correctly.

**Ergonomic Hazards in restaurants:**

- Lifting heavy boxes or objects that shouldn’t be lifted by one person without the help of assist devices or helpers. Working in unnatural or awkward positions can lead to strains, sprains, muscle pain and nerve damage in the neck, upper and lower back, shoulders, elbows, forearms, wrists and fingers.
- Standing for long periods of time in one position on a hard surface can lead to muscle fatigue, back pain and soreness in legs and feet.
- Cutting with a knife that is not razor sharp can increase the force you have to use in your fingers, wrists, forearms, elbows, shoulders and upper back. Many repetitive tasks can lead to fatigue, soreness and injury.

**Other Hazards:**

- **SLIPS/TRIPS and FALLS**: Wet and slippery floors, spills and lack of housekeeping can cause slips, trips and falls.
- **BURNS**: Hot surfaces, deep fryers and hot grease can cause burns.
• **CUTS**: Slicing and baking machines that do not have guards can cause cuts. Sometimes the guards are present but are malfunctioning. Broken dishware can also cause cuts.

• **CHEMICALS**: Exposure to cleaning, disinfecting and maintenance chemicals may lead to respiratory problems, skin and eye irritation.

• **ASSAULT**: A worker who handles cash has an increased risk of workplace violence. A number of basic security measures can help prevent restaurant employees from becoming crime victims.
Chapter 2
Practical solutions to prevent worker injury and illness are available!

Good News

It is both possible and practical for employers to create a safer workplace. Reducing the risks for musculoskeletal disorders makes your restaurant safer for employees and customers.

Save Money

OSHA estimates that an effective safety and health program can save $4 to 6 for every $1 invested (OSHA, 2002). For example, after employees at the Black Angus Restaurants participated in an ergonomics-training program, strains and sprains decreased by 30%, saving the firm an estimated $100,000 annually (Atkinson 2002, as quoted in Cocci, 2005). Another study found a 35% improvement in productivity from the use of ergonomically designed worktables in a kitchen (Cocci, 2005).

Employers Speak Out

In 2007, in a research study conducted in New York City, ROC spoke to 35 employers about their health and safety efforts. Some of the employers interviewed by ROC saw a direct connection between promoting high health and safety standards through training and reducing costs for the restaurant.

During the interviews, employers said that they came out “ahead” in the long run despite the upfront costs of strong health and safety training programs. For example, one employer who did training reported the following:

“Once they (an injured employee) are out of work, you need to replace that employee; You know insurance isn’t free. It all works out in the end; I think it actually works out better… money wise.” (Burned p. 22)
Benefits all around

Several of the employers interviewed by ROC mentioned that they had carried out safety training for workers and ergonomic improvements to create a better working environment for their workers, and ultimately, a better restaurant for their customers:

“It’s not just reducing costs. It’s also making sure that they have an environment that is healthful, a good environment for them to work in.”

“We try to install proper mats so there are no slips and falls. The stairs, we pay particular attention to make sure that they are clear and we put some skid resistance surfaces on those stairs so no one slides down the stairs. You know, always thinking about how to improve the restaurant so employees can perform their jobs and not have to worry about any hazards.”

“One thing ... we’ve been doing this lately, is training about what to look for in what to do to prevent any hazardous conditions... we do periodic inspections of the restaurant and just question everything. If we do find a deficiency it’s taken care of as quickly as possible so as to prevent anything that might happen in the future.”

“We make sure that the employees know how to use the equipment and use it properly so that there are no injuries caused by that. We are very meticulous as to maintaining equipment as well as anything in the restaurant so that so that something that is not functioning properly or that is broken is not the cause of an accident. ...everything is taken care of right away.”

What Employers Care About

“What I really care about”: an employer discussed their decision to provide shoes to his/her employees:

“Slips were a huge problem here. Then we made a decision to buy shoes [for our employees, and to], replace shoes every year. The last pair of shoes I bought for these guys were from [a higher quality company] instead of the shoes for crew companies. They were double the price, and went from about $36 a pair to $72 a pair, times 18 pairs. It’s a big outlay. However...performance is good, I’ll have a shoe that will last a full year without diminishing in quality. And that’s what I really care about. These guys, when they put these shoes on, are protected day in and day out. ... I never want to file a comp case again, ever.” (Burned, p. 23)

Employers talk about the bottom line:

“...It’s not a question of just avoiding financial costs. ... it’s to keep the morale high. If the employees see that their supervisors are taking care of them they will
apply themselves more and perform better in their job. It’s beneficial to them as well as to us.” (Burned, p. 23)

Summary: Everyone benefits from Restaurant Health and Safety

- Owners can save money on compensation costs, replacement labor, overtime, and loss of experienced personnel
- Employees save their backs, work in a safer environment, which can increase productivity and morale
- Customers benefit from the safety and efficiency
- Solutions are practical and available
- Increased awareness benefits everyone
CHAPTER 3
Your Body and Physical Work

There are limits to being human.

THERE ARE TWO KINDS OF LIFTING TASKS:
ONE:
There are lifting tasks that most workers can do safely without getting hurt.
TWO:
There are lifting tasks that shouldn’t be done by PEOPLE because they carry too great of risk of getting hurt -- badly hurt. To many this is a “new” idea. Workers used to be taught that any lift can be done safely if you do it the correct way. Now it’s 2010 and the experts tell us this isn’t so.

Every part of us has limits.
The bones in our backs can only take so much force before they become damaged.
Our “ligaments” are like rubber bands that keep our back bones and other joints in place. They can only twist so much or more so fast.
Our back bones have small shock absorbers between each bone, called “discs”. They are like jelly donuts. Too much force and the jelly squeezes out.
Our tendons connect bones to muscles. They have to rest after repetitive tasks or else they swell and swell and hurt our nerves.
Our muscles, like us, need energy to keep going. They also must have rest.
Too much standing prevents the blood from moving around and helping us heal. That’s why everything hurts after a very long time standing still.

You and your employees know a lot about restaurant work. You know what is hard to do, what is easy to do, and what hurts. If something your employees do everyday makes them feel like they are straining --- or in pain --- then they should listen to that voice. This is important information that you can use to help make your workplace safer for EVERYONE.
CHAPTER 3 Your Body and Physical Work
CHAPTER 4

LET'S FIX IT: Preventing muscle, joint and nerve injuries through better workplace design and preventing accidents at the same time

Ergonomics is the science of designing the workplace to fit the worker, rather than expecting a worker to fit into job that has not been designed correctly.

A poorly designed workplace puts workers at risk of getting hurt. These physical hazards include:

- unnatural and awkward body positions
- continuously performing the same motion (repetitive motions) over and over again during a work shift
- standing for long periods of time in one spot
- manual handling (lifting, lowering, pushing, pulling, carrying, holding, filling, emptying) heavy and awkward boxes, crates, trays, equipment or garbage.

These hazards can cause injuries to develop slowly over time, like a very sore shoulder, or the injuries can happen suddenly. Most people call these sudden events “Accidents”. We know that MOST accidents can be prevented. Serious injuries can happen in the restaurant due to:

- slippery floors, poor lighting
- hot stoves, grills, oil and grease
- knives and unguarded machines

These injuries are more likely to happen if your employees are moving or carrying heavy loads, or working under a lot of time pressure or working long hours. One hazard can cause ANOTHER hazard.

Fixing the Problem: There are three ways to work safer:

ONE: Eliminate the hazards so that workers can’t go near them

TWO: Change the way the work is done by workers so there is less contact with hazards

THREE: Put protective equipment on the workers’ bodies.

ONE is most important. When we use equipment or machines to eliminate or reduce a hazard
we call this “engineering controls.” Examples include:

- Lifting devices
- Lift tables
- Work surfaces at different height to prevent reaching and bending

TWO is next in importance. Examples of “changing the work” include:

- Allowing more rest breaks to enable workers’ bodies time to recover.
- Adjusting the pace of the job so that people are not working as fast.
- Rotating workers so everybody shares the load and does less tiring tasks during the day.
- Improving your kitchen tool maintenance schedule so that knives are ALWAYS sharp.

THREE: Personal protective equipment should be the last resort when no other control method is possible. Sometimes the best solution is to use a combination of two or all of the strategies. The decision will usually be based on the task demands, equipment availability and restaurant resources.

The way tasks are organized by supervisors and owners is very important. Policies and procedures can help make work SAFER and can reduce physical hazards and other safety issues.

---

HOW CAN WORK GUIDELINES AND POLICIES MAKE WORK HEALTHIER?

Adequate rest breaks, less overtime, paid sick days and vacation days can reduce the amount of time your employees are exposed to the health hazard. They also give them more time for their bodies to heal.

Better staffing can reduce how much work your employees have to get done. This can lower the time pressure and help your employees work at a safer speed. This is very important for preventing strains and sprains.

Fair and equal opportunities for promotion help workers to move up to better jobs over time. Often higher paying jobs have less injury hazards.

Training workers to understand “ergonomics” and to fix problem job tasks can increase their awareness of all hazards and helps promote safe and healthy work.

Discuss and negotiate with your employees ways of making work safer and healthier.

Raise YOUR awareness of ergonomics and use this awareness to train your employees to identify problem tasks and identify permanent solutions.
WHY IS IT IMPORTANT TO REPORT THE FIRST SIGNS OF INJURY?

The first symptoms of injury are NOT always pain. Workers can experience fatigue, soreness, discomfort, aching, burning, weakness, numbness and tingling in their hands, arms, shoulders, backs or legs either on or off the job.

Every employer wants a clean safety record. Unfortunately, the lack of reported injuries doesn't mean that the injury process hasn't started inside the body. The best way for employees to stop and reverse the damage to muscles and joints is to report these symptoms to their supervisor and to their doctor/clinician as soon as they feel them.

The sooner they recognize and report these problems, the greater the chance of having a full medical recovery.

The sooner these symptoms are reported, the faster they can get help figuring out what part of the job task needs to be fixed with an engineering control and/or a different way of doing the task.

REAL SOLUTIONS FOR EMPLOYERS AND WORKERS

To reduce work hazards, job safety and health experts recommend two types of solutions – making sure the restaurant has the right equipment to prevent hazards ("Equipment" solutions), and carrying out the work in a way that reduces the chance of such hazards happening ("work practice" solutions). Below are eight types of hazards, and the kinds of solutions our experts recommend to address them.
HAZARD #1: UNNATURAL OR AWKWARD POSTURES

Unnatural or awkward postures can include bending, reaching, kneeling, squatting, lifting, lowering and carrying. Sometimes you need to hold a pot, pan, container, vat, case of liquid, or keg in an uncomfortable way. There are many things that restaurant owners, managers and workers can do to reduce the strain from awkward postures on their joints, muscles, tendons, ligaments and nerves all over their bodies.

IN THE KITCHEN, THE OWNERS AND MANAGERS OF A RESTAURANT SHOULD:

- Buy countertops and cutting surfaces that can be adjusted to the right height for different workers. Two additional levels of shelving can be helpful too.
- Buy dish racks and refrigerators that are easy to reach. Your “power range” is from your hips to your chest.
- Limit the depth of refrigerators to about 18 inches.
- Install dumbwaiters to transfer food products between floors.

- Install sinks that are at the height of most workers’ hips. This helps prevent strain in dishwashing tasks.
- Install machines that help with pours. (See Figures 1 and 2)
- Design aisles in the kitchen area that are at least 4 feet wide. This is very important between workstation and the grill, oven or stove.
- Buy hand trucks and conveyors to move products in and trash out.
- Install shelves for runners to pick up food from cooks that are in the “power range”.
- Buy rolling stairs with rails on both sides to reach items on high shelves.
- Buy thick rubber mats for use when kneeling.
- Make sure that all the equipment, utensils, pots and pans needed in the kitchen are within reach of the shortest worker.

Figure 1: DON'T DO. Figure 2: DO. Unnatural or awkward postures can include bending, reaching, lifting, carrying and lowering. To reduce this hazard, use equipment to assist with pours.
In the Front of the House, the Owners and Managers Should:

- Install coat racks that are at chest height.
- Install computer workstations for ordering that are adjustable with touch screens.
- Install lights with dimmers that direct light upward, towards the ceiling -- at ordering computer workstations.
- Install menu boxes at chest height.
- Install storage space for glassware, dishes and cutlery from hip height to chest height.
  a. Buy bar refrigerators that are from hip height to chest height.
  b. Limit depth of refrigerators to about 18 inches.
  c. Install hip-height bar sinks, and ice storage at bars.
- Install alcohol bottle storage that is between workers' hip and shoulder height.
- Design at the bar is important too. The distance between the bartender and customer should be less than 22" deep.

The Workers in the Restaurant Should:

- Store heavy and frequently used items on racks that are no lower than hip height and no higher than chest height.
- Limit very low and overhead storage to items not often used.
- Rather than bending, stooping or kneeling, work at levels between your hips and chest.
  (See Figures 3 and 4, and 5 and 6)
- Sit on a low bench or stool for work that needs to be done at ground level.
- Use tools with longer handles. (See Figures 3 and 4)
- Organize work to reduce reaching, bending and squatting.
- Use an elevated work platform for high work. (See Figures 7 and 8)
- Remove obstacles that get in the way of work processes and work flow.

Figure 5: DON'T DO. Figure 6: DO. Unnatural or awkward postures include reaching, twisting, kneeling, bending and lowering, and can affect your neck, shoulders, lower back, hips, knees and ankles. Do not place glassware and mugs on the bottom shelf. Place them in your power zone, between your hips and chest. Only put things on the bottom shelf that you need very infrequently.

Figure 7: DON'T DO. Figure 8: DO. Unnatural or awkward postures include reaching, twisting, carrying, lifting and lowering. These can hurt your neck, upper back, shoulders and torso. An elevated work platform for high work can be helpful. Also, organizing pots, pans and equipment in your power zone can reduce this hazard. Make sure you move boxes, equipment or furniture that gets in the way of doing your job safely.
HAZARD #2: REPEATED MOTIONS

Repetitive motions can lead to injuries when a task forces you to do the same movements over and over again. To reduce this type of hazard, workers in the back of the house should:

- Develop a daily maintenance schedule for sharpening knives.
- Spread repetitive tasks out over the day and between workers.
- Change hands to spread out repetitive movement. See if you can use your right hand half of the time and the left hand the other half of the time.
- Take frequent rest breaks from the repetitive activity.

---

HAZARD #3: STANDING IN THE SAME PLACE FOR A LONG TIME

Standing in the same place for a long time increases strain on the muscles, tendons, ligaments and nerves in the lower back, hips, legs and feet. To reduce this hazard and strain on the body in these areas,

OWNERS AND MANAGERS IN A RESTAURANT SHOULD:

- Buy and install thick rubber mats to make standing more comfortable.
- Buy stools, or low small benches to allow workers to change their position and rest one leg and foot.
- Workers should take breaks from standing still by walking around to increase blood flow.
HAZARD #4: HEAVY LOADS

Heavy loads, especially those that are unstable (for example, enclosed weight that moves, such as bottles of liquid) increase strain on the muscles, tendons, ligaments and nerves in the neck, upper back, arms, lower back and pelvis. To reduce the hazard of very heavy and/or unsteady loads, there are many things owners, managers and workers of a restaurant can do.

Equipment: In the Kitchen, Managers and Owners of Restaurants Should:
- Use dumbwaiters to transfer food products between floors.
- Buy well-designed hand or platform trucks, or carts to move food product in and trash out.
- Buy equipment to assist with pours (See Figures 1 and 2)
- Install handrails on stairs on both left and right sides.
- Install proper lighting: bright light in hallways and alleys, and on stairs.

In the Front of the House, Managers and Owner Should:
- Buy service carts with wheels and comfortable handles to serve food. (See Figures 9 and 10)

Work Practice: Workers in the Back of the House Should:
- Store heavy loads between hips and chest.
- Store much lighter loads between chest and shoulders.
- Organize work to reduce reaching, bending, pulling, pushing and squatting. (See Figures 7 and 8)
- Get help from coworkers when handling bulky or heavy loads. If the load feels too heavy for two people then find a way to break up the load.
- Clear your walking path of objects and debris when handling heavy material.
- Make sure the walking path is not slippery.
- Bring the load you are carrying as close as possible to your body.
- Keep your head up and your torso (belly) straight.
- Turn with your feet; do not twist your torso (waist).
- Free your fingers and toes from underneath a box or load before placing it down.

Work Practice: Workers in the Front of the House Should:
- Get help from co-workers when handling bulky or heavy food product and ice.
- Organize coworkers to serve ALL of the food to a table of customers at the same time. Use a group of servers to serve ALL of the appetizers at once, all of the drinks at once, and so on. Use several servers to clear the finished main course dishes from the table as well. This plan truly breaks up the load.
Figure 1: DON'T DO. Figure 2: DO. Heavy loads, especially unstable ones like liquid, can strain your neck, upper back, shoulders, arms, lower back and hips. To reduce this hazard, use equipment to assist with pours.

Figure 9: DON'T DO. Figure 10: DO. Heavy loads include lifting, lowering, and carrying. Trays can be hard to carry and can often feel uncomfortable. Heavy loads, especially unstable ones, can increase strain in your neck, upper back, shoulders, arms, elbows, wrists and lower back. Properly maintained service carts that have large, comfortable handles and larger casters can almost completely eliminate this.

Figure 7: DON'T DO. Figure 8: DO. Heavy loads can involve reaching, twisting, bending, pushing, pulling, carrying, lifting, and lowering. These can hurt your neck, upper back, shoulders, torso and lower back. Organizing pots, pans and trays in your power zone can reduce this hazard. If this is not possible, an elevated work platform for high work can be helpful. Make sure you move boxes, equipment or furniture that gets in the way of doing your job safely.
HAZARD #5: FORCEFUL USE OF YOUR HAND MUSCLES

Forceful use of your hand muscles can result in injuries in back, shoulders, arms, wrists and fingers. There are many things owners, managers, and workers can do to reduce the force needed to do everyday tasks:

ENGINEERING: MANAGERS AND OWNERS OF A RESTAURANT SHOULD:

☐ Buy or design oval or cylindrical handles on knives, spoons, ladles, and forks between about 1.25 and 2 inches in diameter. (See Figures 11, 12, 14, 15, and 16)
☐ Buy or design oval or cylindrical handles on knives, spoons, ladles, and forks, with handle lengths at least 5 inches. (See Figures 13 and 16)
☐ Buy large, rubber coated handles on knives, spoons, ladles, and forks to increase friction.
☐ Buy carts or hand trucks; buy lighter tools; buy tools that allow workers to keep their wrists straight.
☐ Buy and attach handles to heavy objects that must be lifted.

WORK PRACTICE: WORKERS SHOULD:

☐ Grip objects, tools, equipment and knives with the whole hand, not just a few fingers. Pick up smaller loads, keeping wrists straight.
☐ Keep a daily maintenance schedule and procedure for sharpening knives.
☐ Pick up items from the bottom, using the whole hand. Avoid using only a few fingers.
☐ Make the handles thicker on small tools; put tool down when not in use; attach handles to heavy objects that must be lifted. (See Figures 12, and 15, 16).

The next three hazards can cause injuries suddenly due to accidents -- and those injuries can also be more likely to happen if you are moving or carrying heavy loads, or working under a lot of time pressure or working long hours.

Figure 13. Left: DON'T DO. Right: DO. See Figure 16. Left: DON'T DO. Right: DO. Forceful use of your hand muscles can result in injuries to your shoulders, arms, wrists and fingers. Handles should be at least 5 inches long. Oval or cylindrical (round) handles are better. Plastic coated handles and thicker handles are easier to grip. Place the equipment down when not in use.
Figure 11: DON'T DO. Figure 12: DO. Figure 14: DON'T DO. Figure 15: DO. Figure 16, Left: DON'T DO. Right: Do. Forceful use of your hand muscles can result in injuries to your shoulders, arms, wrists and fingers. Pinching narrow and sharp edges with lots of weight at the end of the ladle can cause injuries. Plastic coated handles and thicker handles are easier to grip. Oval or cylindrical (round) handles are better. Place the equipment down when not in use.
HAZARD #6: SLIPS, TRIPS AND FALLS

Injuries from slipping, tripping, and falling may be due to poor traction (low friction), bad lighting, inadequate handrails, oily and slippery floors, grease spills, and poor “housekeeping”.

Equipment: Managers and owners of the restaurant should:

- Increase traction on stairways and walkways.
- Install handrails on both sides of stairways.
- Buy and install rubber mats.
- Buy slip-resistant shoes with low heels.
- Install bright lights on stairways and walkways.
- Replace worn-out, torn carpet and rugs; fix rough and uneven floor surfaces.
- Buy rolling ladders that have non skid bases.

Work practice: Workers should:

- Maintain a housekeeping schedule to keep walkways and surfaces clear.
- Mop slippery, wet floors and spills right away.
- Keep floors and stairs clean and dry.
- Move slowly and carefully near corners and when handling objects, such as pots, pans, containers, vats, and food.
- Be aware of blind spots, rips in carpet or rugs, and rough and uneven floor surfaces. Make frequent requests to get these repaired.
HAZARD #7: BURNS

To reduce burns from hot surfaces (grills, stoves), hot oil and grease, there are many things owners, managers and workers should do.

EQUIPMENT: IN THE BACK OF THE HOUSE, MANAGERS AND OWNERS OF A RESTAURANT SHOULD:

- Use splashguards around hot surfaces. (See Figure 17)
- Use material handling devices, such as rolling carts with handles for moving vats
- Maintain equipment in proper working order.
- Use dry potholders and mitts.
- Use pour assist devices. (See Figures 1 and 2)
- Have a burn fast aid kit.
- In the front of the house, managers and owners should have a burn fast aid kit.

Figure 17: DO. The device on top of the pan is called a splashguard. It is used to reduce grease burns from grills and stoves.

Figure 1: DON’T DO. Burns can be caused from hot surfaces, such as grills, ovens stoves, and hot liquid, oil and grease. To reduce this hazard, use equipment to assist with pours.
**Work practice:** Workers in the back of the house should:

- Dry food before placing in hot oil.
- Never leave hot oil unattended.
- Divide large vats of hot food into smaller batches before handling.
- Cool oil and grease before handling.
- Use lids and covers.
- Make sure that metal spoons are not left in pots and pans while cooking.
- Place food in basket, then slowly lower into hot oil; do not drop food into hot oil.
- Fill fryer baskets no more than half full.
- Gently raise and lower fryer baskets.
- Keep liquids away from fryers.
- Turn off stove when not in use.
- Keep pot and pan handles away from hot burners.
- Place food in boiling water slowly to reduce splash.
- Make sure pot handles do not stick out over the edge of a range or stove.
- Adjust burner flames to only cover the bottom of the pan.
- Use long oven gloves or mitts for deep ovens.
- Do not open cookers and steam ovens when they are under pressure.
- Open lids away from you.
- Get help when handling a heavy container of hot liquid.
HAZARD #8: CUTS AND LACERATIONS

Cuts and lacerations can be caused by knives and unguarded machines. To reduce the risk of these types of injuries, there are several things managers, owners and workers can do.

EQUIPMENT: MANAGERS AND OWNERS IN THE RESTAURANT SHOULD:

- Make sure that machine guards are installed on all meat slicers, mixers, baking machines, and similar types of equipment.
- Maintain machinery to reduce chance of malfunction and accidents.

WORK PRACTICE: THINGS NEVER TO DO IN THE KITCHEN:

- Never remove machine guards when in use.
- Never operate any machine unless you are trained in its use.
- Never cut meat in a slicer once it becomes too thin; use a knife to complete the cutting.
- Never wear jewelry or loose clothing, which can get stuck in a machine.
- ALWAYS Tell management immediately if machine guards are missing, broken, or not working properly.

Figure 18: DON'T DO. Figure 19: DO. Cuts can be caused from not using the correct knife for a chosen task. For example, when cutting a lemon or lime, it is dangerous to use a large, long, wide knife on a small object. The worker has less control. It is safer to use a small paring knife when cutting small objects because the worker has more control over the knife.
CHAPTER 4 Let's Fix It

**ALL WORKERS SHOULD:**

- Unplug machines and equipment when not in use.
- Maintain machinery to reduce chance of malfunction and accidents.

- Keep knives sharpened daily.
- Cut and slice away from the body.
- Store knives properly in knife racks, not in metal or plastic containers.
- Never touch knives with the cutting edge angled down and away from you.
- Use proper knife for the appropriate activity (See Figures 18 and 19)
- Separate broken glass from trash.
- Use an ice scoop, not glassware.
- Do not place knives near the edge of the counter or cutting board.
- Use a damp cloth under cutting board to reduce movement of the board.
HAZARD #9: CONTACT STRESS

Contact stress or "mechanical stress" is caused by hard or sharp objects or edges pressing continuously against the body. The sides of the fingers, palms, wrists and forearms are more likely to get injured because the nerves and soft tissues are very close to both the skin and nearby bones. Knees and elbows are also at risk of being hurt in the same way. Even when the skin is not broken, the pressure of hard or sharp edges can cause damage to nerves and other tissues.

An example of contact stress in the hands is holding long metal kitchen utensil handles that are sharp, unpadded, and narrow. When these utensils contain a lot of weight or fluid (like a ladle) then the utensil can be heavy and require a lot of squeezing to keep steady.

An example of contact stress in the knees is kneeling on hard surfaces on one or both knees in "back of house" (BOH) and "front of house" (FOH) workers. For example, in BOH workers, one knee kneeling may occur when reaching into a low freezer for meat, while in FOH workers, this may occur when reaching for glassware on a very low shelf.

EQUIPMENT: MANAGERS AND OWNERS IN THE RESTAURANT SHOULD:

- Provide well padded, large diameter handles without sharp edges that are between about 1.25 and 2 inches wide and between 5 and 15 inches long. The ladles at the end of the utensil should not hold excessive amount of fluid.
- Provide mats throughout the BOH that can serve as padding to reduce contact stress, leg and foot fatigue, and slipping from wet floors. Have small mats in front of FOH workstations.
- Provide a mat throughout the bar area.

Figure 5: DON'T DO. Figure 6: DO. Contact stress is caused from kneeling on hard floors. Reorganize the location of the glassware and mugs to eliminate kneeling. Do not place glassware and mugs on the bottom shelf. Place them in your "power zone," between your hips and chest. Only put things on the bottom shelf that you need very infrequently.
Work practice:

☐ If well padded, large diameter handles do not exist, the workers can wrap dish towels several times around the handles of utensils.

☐ Try to reorganize the task and location of supplies to eliminate kneeling.

☐ If mats are not found in the BOH and workers must kneel on the floor, try using a stack of towels or soft stacks of folded cardboard and kneel on these instead of the cement floor. Kneel preferably on only one knee.

☐ For FOH workers do not place cutlery, dishes, plates, or glassware on the bottom shelf. Place these objects in your "power zone," between your hips and chest. (See Figures 5 and 6)
CHAPTER 5

IF the Lift is Safe to Do, Here are Nine Important Tips to Safer Lifting

1. Stretch and warm up your shoulders, arms, wrists, knees, legs, feet, and belly (torso). This will help you lift with a straight back and flexible shoulders. Make sure that your elbows, wrists, hips, knees and ankles are warmed up too. The flexibility from stretching will help you move easier.

2. Fast stretching is bad for you. Try to stretch very slowly for about 10 minutes. Stretch by gently and slowly moving both arms in a big circle, gently twisting your torso from side to side and front and back, and moving your legs in a big circle, one at a time.

3. Plan ahead. Answer these questions for yourself:
   - Where is the load going?
   - Should I use a cart or a hand-truck to reach the destination?
   - Will help be needed with this load?
   - Any obstacles along the way that should be moved first?
   - Does any strapping material need to be removed?
   - Is the floor slippery?
   - Where is the best place to grip the load?

4. Keep the load as close to your body as possible. Remember that your “power zone” is as close to your waist as possible. If the load is heavier on one side than the other, keep the heaviest part of as close to your belly as possible.

5. Keep your body stable by keeping your legs apart and one leg slightly forward for balance. Avoid any extra bending of the back.

6. Avoid all twisting. The load should be right in front of you. It is very hard on the back when the load weight is to the right or the left of your body.

7. Keep your movements smooth. Don’t lift quickly and don’t jerk the load. Your back needs those slow movements to use all of your muscles in the best way possible.

8. Don’t lift anything that is too heavy. Your body has limits. Good posture and proper technique cannot protect you from injury when the load is too heavy. See if there is a way to remove some of the weight or lighten the load before starting.
9. Put the load DOWN if the lift isn't going well. Take a moment to figure out a better plan or to get a lifting device or a second person. It is better to move small weights more often and heavy loads less often. If the load is way too heavy then do everything possible to (1) lighten the load, (2) handle the load with equipment, and (3) ask for help to solve the problem.
Chapter 6
Keeping Restaurant Workers Healthy and Safe
SUMMARY

As an employer, you can:

- Retain your most experienced staff
- Increase morale, productivity and job satisfaction
- Decrease compensation, replacement labor and overtime costs due to injury
- Save employee backs, arms, legs and hands
- Enjoy the trickle-down impact of a safe and efficient workplace on customers and customer satisfaction.

The ROADMAP to safer restaurants includes:

Knowing the limits of the human body, use your knowledge of the job and your employees’ ideas to IDENTIFY and FIX workplace hazards.

- Find and fix Lifting Hazards by using properly designed carts, hand trucks, shelving units and work area design.
- Find and fix tasks that require excessive hand force by using well fitting tools, comfortable handles, minimizing repetition and rotating workers in highly hand-intensive tasks.
- Find and fix slip/trip/fall hazards with repairs, lighting, floor surfaces, proper shoes and workspace changes.
- When lifting is determined to be safe, make sure that that the workspace is set up properly and workers are prepared.
- Find and fix burn and cut hazards with proper mechanical barriers, good tools and other controls.

Encourage early injury reporting.

- Encourage employees to report the first signs of symptoms of injury.
- Support the employee to get proper medical attention before the injury gets worse.
- Fix the job task that led to the injury.
Training Makes a Big Difference.

Provide training for workers on the following topics:

- How to identify and report workplace hazards
- How to “fix” hazards through the use of equipment and tools
- How to “fix” hazards by improving how the work environment is designed
- How to recognize symptoms of work-related musculoskeletal disorders (WMSDs)
- Why it is important to report WMSD symptoms and injuries right away and to get proper medical care for your injury.

ROC-UNITED developed an ergonomics training program for employers and for restaurant workers. Take advantage of this valuable resource!

*Share your accomplishments. Help make restaurant work safer for everyone!*
References (reference list to go at the end of the manual)


Prewitt M. Hand injuries on the rise among kitchen workers: on-the-job cuts and burns cost industry an estimated $300m each year in medical fees, lost labor. Nation's Restaurant News, Nov 21, 2005, http://findarticles.com/p/articles/mi_m3190/is_47_39/ai_n15923107/


We thank the following organizations for permission to adapt material for this manual: the New York City Department of Health and Mental Hygiene for "Workplace health and safety in restaurants: An introduction for food workers"; the Washington State Department of Labor and Industry for: www.lni.wa.gov/WorkplaceRights/TeenWorkers/JobSafety/RestaurantProgram/Resources, and the Occupational Safety and Health Administration for its etool: Teen worker safety in restaurants: http://www.osha.gov/SLTC/youth/restaurant/strains. The following book provided the reference for correct handle dimensions: Cumulative trauma disorders: A manual for musculoskeletal diseases of the upper limbs. National Institute for Occupational Safety and Health. Cincinnati. Ed: Putz-Anderson, V. Taylor and Francis.1988. Finally, we thank the occupational health experts and researchers from the Center for Occupational and Environmental Medicine at the Mount Sinai School of Medicine, the University of Massachusetts/Lowell Department of Work Environment and the State University of New York-Downstate School of Public Health for their valuable assistance in preparing this manual.