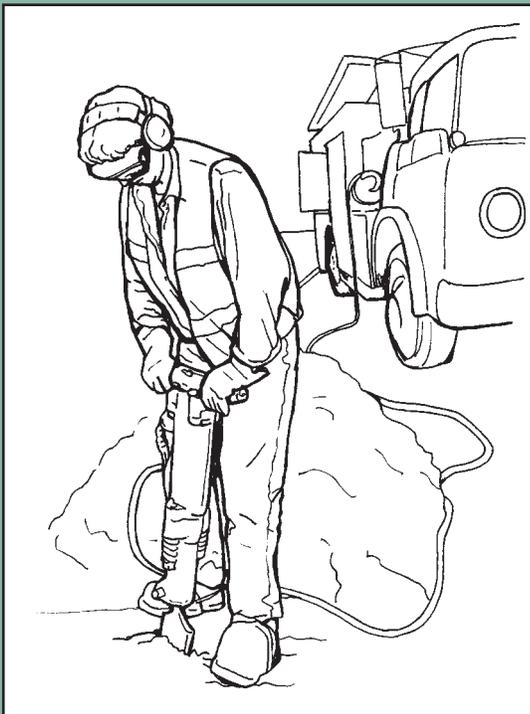


Pavement Breaker Operators



Handling a 90-pound breaker can injure your back muscles, spinal discs and hands.

Prevent Back, Joint and Muscle Injuries!

INSIDE:

- ▶ Ways to prevent injuries while using breakers
- ▶ Easy-to-reach storage ideas for pavement breakers



One way to take a load off your back is to use a vehicle-mounted breaker.

NOVEMBER 2001

California Department of Health Services • California Department of Industrial Relations

Is Your Job Causing You Pain?

- ▶ **Pain, numbness, weakness or tingling in the back, hands/wrists, elbows, or shoulders** affect many pavement breaker (Jackhammer) operators. These symptoms may be related to your job.
- ▶ **Symptoms may start gradually.** Many people try to ignore them at first. But if you do, symptoms may become worse and harder to treat. Inform your employer and get medical care right away if you have symptoms.
- ▶ **Symptoms that don't go away are not normal.** They may be signs of serious injuries that can interfere with your work and your personal life. They can even lead to permanent disabilities.

Why Do Breaker Operators Have Problems with Joints, Muscles, Nerves and Tendons?

- ▶ **The combination of awkward posture with heavy lifting puts intense stress on your body.** Lifting the breaker in and out of the vehicle can require an awkward reach. Lifting loads from the ground is always awkward. Even strong muscles can be strained (torn), and spinal discs can be damaged.
- ▶ **Forceful motions** such as pulling breakers out of pavement when they get stuck.
- ▶ **Repeated motions.** Leaning over... pulling out stuck breakers... heavy lifting... Each repetition causes a little "wear and tear" damage to body parts. These small injuries can become serious if they happen day after day.
- ▶ **Vibration from breakers and other machinery,** after years of work, can lead to finger numbness or paleness. This may be a sign of "white finger," a disease that reduces blood circulation and damages nerves. Doctors call this Hand Arm Vibration Syndrome (HAVS).
- ▶ **Whole-body vibration,** from years of driving trucks and other heavy equipment, can increase your risk of back injury.
- ▶ **Cold or wet work.** Cold hands have poor blood circulation, so they are more easily injured by vibration and forceful, repetitive work motions.

How Can Injuries Be Prevented?

By law, your employer is responsible for providing a safe and healthy workplace. Here are some things you and your employer can do to prevent injuries to joints, muscles, nerves and tendons:

- ▶ **Talk with others at work.** Do workers have symptoms? Are the causes of injury present— heavy lifting, awkward positions, vibration, repetitive motions, cold? Does the employer know about preventive actions to take?
- ▶ **Use pavement saws** on as much of the job as possible, instead of pavement breakers. Pavement saws don't vibrate as much as breakers, and the wheels carry the weight.
- ▶ **Use vehicle-mounted equipment** instead of pavement breakers. A backhoe can be used to break and remove pavement in some situations. For big jobs, consider a vehicle-mounted pavement breaker. Ideally, vehicle seats should have vibration-damping mounts.
- ▶ **Consider breakers designed to reduce vibration.** Some newer breakers are designed to cut out a lot of the vibration, yet are still effective. These have built-in handle suspension systems that flex. Less vibration goes to your hands.
- ▶ **Rotate breaker operation with co-workers.** Limit your use to two hours per shift or less.
- ▶ **Store the breaker where it's easy to reach.** Getting the breaker in and out of the truck is one of the hardest parts of the job. See Storage Ideas for Breakers, p.5.
- ▶ **Use two people to lift and carry breakers.** Experts advise 50 to 75 pounds maximum lift, to protect the back. So for a 90-pound breaker, getting a helper makes sense.
- ▶ **Never yank the breaker out if it gets stuck in pavement.** This can severely strain your back and shoulders! If it does get stuck, release the gad (tip) from the breaker. Put another gad on, then use it to free the stuck one. Try using a tapered or wedge shaped gad to prevent sticking.
- ▶ **Take care of your hands.** Keep your hands warm and dry; cold hands have poor circulation. Change gloves if they get wet. Use as loose a grip as you can on the breakers. The tighter the grip, the more vibration you get. Use whatever gloves you find comfortable. Vibration-absorbing gloves or tool wraps don't work for breakers (but they do cut vibration from smaller hand-held power tools).
- ▶ **Get medical care for symptoms.**

Taking Action to Prevent Injuries

- ▶ **Form a safety committee.** It can be a big help in keeping your workplace safe. Get key people from both labor and management to participate. A successful committee is one that has strong employer support. An experienced ergonomic consultant can provide technical assistance. Here's what a safety committee can do:
 - Talk to workers and inspect jobs to find conditions that can cause injuries.
 - Encourage workers to report work-related injuries and symptoms to their supervisor.
 - Identify the jobs that have caused injuries.
 - Figure out how particular jobs may be causing injuries.
 - Develop practical solutions and recommend that management try them out on a few individuals.
 - Check to see if the changes are effective before recommending them for all affected jobs.
 - Monitor employees using new equipment and/or making other job changes.

What Does the Law Say?

- ▶ **Your employer may have to follow a California rule about repetitive work. Find out:**
 - Were two or more workers injured within the last 12 months? The injured workers must have done the same type of work.
 - Did a doctor report that each injury is mainly caused by the job? Each worker can have a different diagnosis, as long as it's related to the same kind of repetitive work.
- ▶ **If the answer to both questions is "Yes," the employer must change the work or equipment to prevent injuries.** Worker training also is required.

This rule is called Repetitive Motion Injuries (General Industry Safety Order 5110). It is enforced by Cal/OSHA.

What is Cal/OSHA? It is California's Division of Occupational Safety and Health. This government agency investigates workers' complaints and answers questions about workplace safety rules. Complaints are confidential. Find the phone number in the blue Government Pages near the front of the phone book. Look under: State of California, Industrial Relations, Division of Occupational Safety and Health, Compliance or Enforcement.

For employers, California has the Consultation Service (**1-800-963-9424**). This agency explains workplace health and safety regulations, and helps employers comply with them. They do not cite or impose fines.

Storage ideas for breakers

Some utility trucks have built-in storage for breakers.

This helps prevent back and shoulder injuries by making it less awkward to reach the breaker.

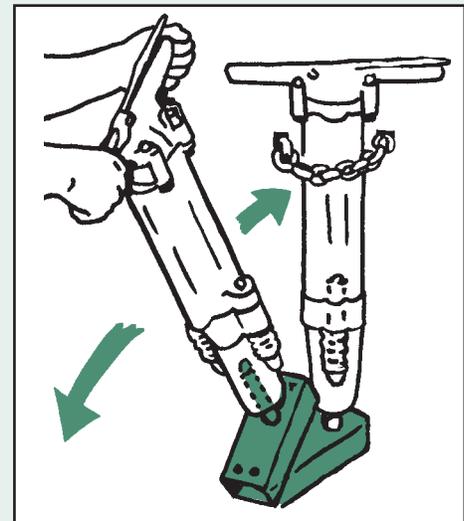
- ▶ **External cabinet for truck or trailer.** Store the breaker upright in a storage cabinet. Install the cabinet floor low, so the breaker handles end up near the worker's waist height. The cabinet door should hinge on one side, so it will be out of the way.
- ▶ **Hinge-mounted rod.** Make loading and unloading a breaker easier:
 - Weld a short rod onto a heavy-duty hinge, as shown in the illustrations.
 - Mount the hinge on the floor of a truck cabinet, or outside the truck or trailer.
 - Remove the tip (gad) of the breaker so that the breaker will fit over the rod.
 - Load the breaker at an angle for easier handling.
 - Use a chain to secure the breaker in the upright position.



Loading a breaker onto a hinge-mounted rod takes less bending, reaching and twisting.

Make lifting safer

- Get help with heavy loads like breakers and cement. Tell your helper when to lift and where you're going.
- Plan your path ahead of time. Remove slip and trip hazards.
- Stand with feet apart (shoulder-width).
- Hold the load as close to the body as possible.
- Try to set up loads so they start and end near waist height. Avoid lifting from ground level. Use carts, wheelbarrows, or stands to hold loads when possible.
- Avoid twisting your back while lifting and carrying. Twisting can hurt spinal discs. Use your feet to turn your body.
- Purchase cement in smaller size bags.



Tilt the breaker to load and unload.

Other safety tips for using breakers

- Use safety-toe footwear and metatarsal guards to prevent foot injuries.
- Use safety goggles to protect your eyes.
- Use noise reduction earmuffs or earplugs to prevent hearing loss.
- Inspect breakers and other tools before use.

For More Information

- ▶ **HESIS (Hazard Evaluation System and Information Service).** www.cdph.ca.gov/hesis
Answers questions about workplace hazards and has many free publications available.

For information on workplace hazards: (510) 622-4317. Please leave a message and your call will be returned.

For HESIS Publications: (510) 622-4328

- *Guide to Getting Medical Care for Job-Related Pain That Won't Go Away.* Helps workers recognize symptoms that need treatment; choose a doctor; and work with health care providers, employers, and the workers' compensation system.
 - *Physician's Guide to the California Ergonomics Standard.* Helps health care providers identify, document and treat work-related musculoskeletal disorders.
 - *HESIS Publications List.* Pamphlets and fact sheets on workplace hazards including chemicals, repetitive motion, and infectious diseases. Visit our website, call or write for the list.
- ▶ **Workers' Compensation.** If you are injured on the job, or work makes an existing injury worse, you may have a right to receive benefits such as medical care, wage replacement and retraining (if a job change is needed). Benefits are available to all workers, including immigrants, part-time and temporary workers. Call **1-800-736-7401** for more information and for free factsheets, in English and Spanish.
 - ▶ **Cal/OSHA Consultation Service.** Helps employers to improve safety and health conditions without triggering enforcement inspections. Call **1-800-963-9424** for assistance or to ask for the booklet, *Easy Ergonomics* and other materials.
 - ▶ **Other publications about ergonomics and safety in the construction industry.**
 - **The Center to Protect Workers Rights** provides numerous publications on all aspects of construction safety and health. www.cpwr.com Call or write: 111 Massachusetts Avenue, NW, Washington, DC 20001, **(202) 962-8490**.
 - *Cal/OSHA Pocket Guide for the Construction Industry*, a free summary of California construction safety regulations. **1-800-963-9424**
 - *Applications Manual for the Revised NIOSH Lifting Equation*, a technical guide to lifting. Ask for PB94-176930LJM, \$16.00, **(703) 487-4650**. Or download from www.cdc.gov/niosh/94-110.htm.

ABOUT THIS FACT SHEET This publication was produced by HESIS, the Hazard Evaluation System and Information Service, Department of Health Services and Department of Industrial Relations, State of California. We gratefully acknowledge assistance from the Northern California Laborers Training Center, San Ramon, and from PG&E. This publication does not necessarily reflect the views of these organizations.

The recommendations in this fact sheet were developed by HESIS based on our evaluation of research studies and published information, and on general ergonomic principles. They may not be appropriate for every job or individual worker. Images showing brand-name equipment designs do not constitute endorsement.

This publication may be copied in its entirety for educational use.



HESIS

**HAZARD EVALUATION SYSTEM
& INFORMATION SERVICE**
California Department of Health Services
Occupational Health Branch
1515 Clay Street, Suite 1901, Oakland, CA 94612
510-622-4300 • www.cdph.ca.gov/ohb

Gray Davis, Governor
State of California
Grantland Johnson, Secretary
Health and Human Services Agency
Diana M. Bontá, R.N., Dr.P.H.
Director, Department of Health Services
Steve Smith, Director
Department of Industrial Relations

