

## DRIVING ERGONOMICS

According to a March 2016 study released by the United States Bone and Joint Initiative, it is estimated that half of all Americans have a musculoskeletal condition, including arthritis and back pain. The use of mobile computers in vehicles is becoming increasingly widespread as more and more professionals use their vehicles as a mobile office—but a vehicle is not designed to be an office space, nor is it conducive to proper ergonomic practices. Nonetheless, by implementing wise strategies, office ergonomic principles can be adapted to this new environment.



### USING YOUR VEHICLE AS A MOBILE OFFICE



The extensive availability of wireless technology has allowed many types of workers to become mobile. As work demands increase, professionals need to maximize their productivity, both in the office and on the road. Many workers now leverage several mobile technologies, including, but not limited to, cell phones, GPS, tablets, and laptops. Mobile devices such as laptops, are not used as frequently as mobile phones by typical drivers, but they are commonly

used in police cars, ambulances, and fire trucks. Mobile computers should never be used while driving a vehicle, the cognitive demands are even greater than those required by cell phone usage.

**ShakeOut. Don't FreakOut.**

October 17, 2019 Register Now at [www.ShakeOut.org](http://www.ShakeOut.org)

Shake  
Out  
See Pg. 5

### IDEAL POSTURES FOR USING A COMPUTER IN A VEHICLE



Since laptops and other mobile devices are used in vehicles, can the principles of office ergonomics apply to vehicles? Yes. However, a vehicle adds some extra variables and challenges.

**Back:** Position the computer directly in front of the user (or as close as possible). The user should be sitting erect or against the back rest, requiring minimal torso twisting or forward/lateral bending.

**Shoulder:** Position the computer at approximately forearm length away from the user. The user's elbows should be near his/her sides. Positioning the computer too close to the user should also be avoided (elbows behind body and wrists bent toward the little finger).

**Wrists/Hands:** Position the keyboard at elbow height and forearm length away from the body. The user should have neutral or minimally bent wrists. (If the computer tasks are mostly visual with little keyboard input, focus on neck posture before wrist posture).

**Neck:** Position the top of the computer screen at roughly eye level in front of the user. The user should be looking forward with minimal forward/lateral bending. (If the computer is a laptop—keyboard and screen connected—and the tasks require mostly keyboard input or mix of keyboard input and visual tasks, focus on wrist posture first. The neck has larger muscle groups that can handle poor postures better.)

**Legs:** Position the computer in front of the user. The user should support his/her body weight evenly on both legs.

Other considerations should include lighting. Many computer screens are hard to read in daylight or cab lights due to screen glare. Consider a light for the keyboard if the mobile computer will be used after dark.

### ADJUSTING THE DRIVER'S SEAT IN STANDARD COUNTY FLEET VEHICLES TO AVOID REPETITIVE MOTION INJURIES FROM DRIVING



Repetitive Motion Injury from driving is a condition that is caused by a poor driving posture. It can lead to serious long term muscle, joint and spinal injuries. Repetitive driving injury may include foot cramps, lumbar pain, stiff neck, side ache, and headache as well as eye strain.

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### ADJUSTING THE DRIVER'S SEAT IN STANDARD COUNTY FLEET VEHICLES TO AVOID REPETITIVE MOTION INJURIES FROM DRIVING

Read the vehicle's manual and understand all the adjustments that you can do (e.g., seat position, backrest angle, headrest position, steering wheel height and tilt, seat belt, mirrors). Common adjustments include:

**1. Seat Height** - raise the seat as high as you can but still be comfortable. This height will optimize your vision through the windows. You should be able to see at least 3 inches over the top of the steering wheel. Ensure that you have sufficient room between the roof and the top of your head. Adjust the mirrors after you have finished setting the other features.

**2. Seat Cushion Length**- if possible - adjust the seat length so that the back of your knees is about 1-1/4 to 2-3/8 inches from the front on the seat.

**3. Seat Forward/Back Position** - move the seat forward until you can easily push the pedals through their full range with your whole foot, not just your toes. You may have to readjust the seat height to get better control of the pedals.

**4. Seat Cushion Angle** - tilt the seat cushion until your thighs are supported along the full length of the cushion without there being pressure at the back of your knees.

**5. Seat Back Rest** - adjust the back rest until it supports the full length of your back when you are sitting upright. If you are leaning too far back, you may end up bending your head and neck forward, which may cause muscle fatigue, neck or shoulder pain, tingling in the fingers, etc.

**6. Lumbar Support** - adjust the lumbar support up-and-down and in-and-out until you feel an even pressure along your back from the hips to shoulder height. As this point, the seat back should feel comfortable and there should be no gaps or pressure points in the back support area.

**7. Steering Wheel** - adjust the steering wheel for height or tilt and pull it back for easy reach. The center of the steering wheel should be about 10 - 12 inches from the driver's breast bone. The closer you are to the air bag, the higher the possibility of injury if the air bag deploys, even if you are wearing a seat belt.

If your steering wheel can be tilted up-and-down, tilt it so the air bag behind the center of the steering wheel is pointing to your chest, not your head and neck or your stomach. In addition, your arms should be in a comfortable position (not too high or too low).

**8. Head Rest** - while sitting, raise the head restraint until the top of it is level with top of your head. If the head restraint can be tilted, adjust the angle of the head restraint until is practically touching the back of your head when you are in your sitting posture.

**9. Fine Tuning** - you may have to go through steps 1 - 8 again if you need to optimize the way that vehicle cab fits you. You should be able to reach and operate all of the controls, pedals, the steering wheel, etc., and have good visibility through the windows and mirrors.

For more information go to: <http://www.usbji.org/> & [http://www.aon.com/attachments/risk-services/Roadside\\_Office\\_Ergonomics.pdf](http://www.aon.com/attachments/risk-services/Roadside_Office_Ergonomics.pdf) & <https://www.ccohs.ca/oshanswers/ergonomics/driving.html>



# MANAGING FATIGUE

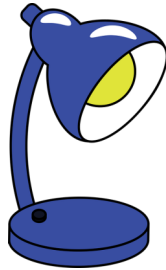
DEVELOPING AN EFFECTIVE RISK MANAGEMENT SYSTEM

A 5 PART SERIES FROM THE NATIONAL SAFETY COUNCIL ON MANAGING FATIGUE

PART 4 OF 5



## FATIGUE MITIGATION



A workplace with positive environmental controls promotes better overall working conditions, and should be less physically stressful in ways that contribute to fatigue on the job. Factors such as high temperatures, noise and vibration have been found to be leading drivers of occupational fatigue.

### Environmental factors can play a role in employees' accumulation of fatigue

PROMOTES ALERTNESS	INCREASES FATIGUE
Moderate Temperature	Extreme Temperature
Bright Lighting	Dim Lighting
Clean Air	Polluted Air
Quiet Environment	Loud Environment

### Designated Break Areas-

Designated break areas sufficiently separated from the worksite can be an important tool in managing fatigue. Bright lighting can have an energizing effect. Break time in moderate temperatures and adequate ventilation can provide an opportunity to reset for those working in physically stressful settings. **Nap Breaks** Allowing employees to take breaks as needed can reduce time-on-task fatigue and promote subsequent alertness. Opportunities for short naps during breaks can be a powerful option for managing fatigue, especially for employees working long hours or overnight shifts. Even a 10–20 minute nap in a quiet, dark setting with the ability to recline can produce benefits, leading to increased alertness and improved performance when returning to the job.



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# PREPARING FOR THE GREAT SHAKEOUT

## Safety Newsletter

**October is coming , are you ready for.....**

**10/17/2019 @ 10:17 AM**

**The Great**



Every October, the County of Riverside participates in The Great Shake Out.

Everyone, everywhere, should know how to protect themselves during earthquakes, whether they live, work, or travel to an area where earthquakes are common. Great ShakeOut Earthquake Drills are annual opportunities to learn and practice earthquake safety with millions of people worldwide!

Each year, ShakeOut participants in schools, businesses, non-profits, government agencies, neighborhoods, organizations, and households all across the world practice "Drop, Cover and Hold On" and other aspects of their emergency plans. The goal of ShakeOut is to encourage people and organizations to be prepared to survive and to recover quickly when the next big earthquake happens.

ShakeOut began in Southern California in 2008. Since then, ShakeOut has grown to include participation across the United States and several other countries. More than 62.5 million people worldwide participated in 2018.

The **2019 International ShakeOut Day is October 17th**, with most people participating at **10:17 am local time** (10:17 on 10/17). Participation is free and may take only a few minutes, depending on drill plans. Learn more and register to participate at [ShakeOut.org](http://ShakeOut.org).

**The Great California Shake Out**

### EARTHQUAKE MYTHS AND LEGENDS

Disaster movies are known for over-the-top destruction and larger-than-life heroism, and San Andreas has both! Fortunately the real earthquakes in California's future won't be anything as extreme as those in the movie.

**TRUE OR FALSE ?**  
People are more likely to be injured when running or trying to exit buildings during an earthquake.

**TRUE OR FALSE ?**  
The San Andreas fault is neither long and deep enough to have a magnitude 9 or larger earthquake as depicted in the movie.

**TRUE OR FALSE ?**  
Calling is more effective than texting after an earthquake.

**TRUE OR FALSE ?**  
Earthquake prediction is possible through magnetic and electric signals.

**TRUE OR FALSE ?**  
People are more likely to die from fires that follow from an earthquake than the actual earthquake itself.

**TRUE OR FALSE ?**  
The official Tsunami warning radio broadcasts and the use of sirens demonstrates how scientific information can save lives.

**In case of an earthquake, remember to:**

- DROP!**
- COVER!**
- HOLD ON!**

**After an earthquake, you need to:**

- WATCH OUT** for aftershocks
- CONNECT** with others
- HELP** others

# PREPARING FOR THE GREAT SHAKE OUT

## Safety Newsletter



**ShakeOut Drill Manual**  
For Government Agencies and Facilities

### Are You Ready to ShakeOut?

Major earthquakes can cause unprecedented catastrophes. With earthquakes as an inevitable part of our future, people should make plans and take actions to ensure that disasters do not become catastrophes. What we do now, will determine what our lives will be like afterwards. With this in mind, the Earthquake Country Alliance ([www.EarthquakeCountry.org](http://www.EarthquakeCountry.org)) created the Great California ShakeOut, an earthquake drill and preparedness activity in which everyone can participate, which has now been replicated in many other states and regions. To register as a participant for a ShakeOut drill in your area visit [www.ShakeOut.org](http://www.ShakeOut.org). Government entities of all sizes can also use the drill to get their citizens, employees, and other stakeholders involved and prepared for a big earthquake.

Government-level emergency management offices have frequent exercises that go beyond these guidelines, however, to ensure the continuity of vital civic functions, all public employees must be prepared and coordinated to survive a major earthquake. So it can be a good idea for non-emergency government entities to hold (simpler) drills to practice their response. Furthermore, the level of your staff's own personal and family preparedness will be key to their availability to support your agency's response and recovery efforts after a disaster.

Although they were created for ShakeOut drill events across the nation, the instructions on the following pages can be used or adapted for earthquake drills anywhere and anytime. They have been designed for non-emergency government agencies and personnel. To be flexible, three levels of drills (simple, basic, intermediate) are provided below, each with steps to be taken before, during, and after the drill. Each drill uses the general earthquake response of Drop, Cover, and Hold On ([www.EarthquakeCountry.org/step5](http://www.EarthquakeCountry.org/step5)) as its foundation.

### Drills for Government Agencies and Facilities

#### Level 1 – Simple: Drop, Cover, and Hold On Drill ..... 2

This drill uses simple steps to inform all employees how to perform Drop, Cover, and Hold On – a quake-safe action designed to protect people from falling furniture and flying objects during ground shaking.

#### Level 2 – Basic: Life Safety Drill ..... 3

This life safety drill is designed to engage employees to think through their emergency response actions during an earthquake, then afterwards to review and discuss what worked or what did not, in order to make improvements for the next drill or actual earthquake.

#### Level 3 – Intermediate: Life Safety and Continuity Planning Drill ..... 5

This life safety drill is designed to engage employees to think through their emergency response actions during and after an earthquake, then afterwards to review and discuss what worked or what did not, in order to make improvements for the next drill or actual earthquake.



## WANT TO PARTICIPATE IN THE GREAT SHAKE OUT BUT DON'T KNOW HOW?

**CLICK [HERE](#) OR GO TO:**

**[https://www.shakeout.org/california/downloads/ShakeOutDrillManualGovernment\\_v2.pdf](https://www.shakeout.org/california/downloads/ShakeOutDrillManualGovernment_v2.pdf)**



**(PRINTABLE POSTER ON PAGE 7)**

## USEFUL LINKS TO HELP PROMOTE AND PLAN YOUR GREAT SHAKE OUT

### The Great Shake Out Website:

<https://www.shakeout.org/california/index.html>

### Earthquake Safety Video:

<https://www.youtube.com/watch?v=GSDmqLQmMN0&list=PLs1gMujRSBY2t7JB4VS-AymFwN-6Lvq20>

### RIVERSIDE COUNTY EMERGENCY MANAGEMENT DEPARTMENT:

<https://www.rivcoemd.org>

### RIVCO READY:

<https://rivcoready.org>

### ALERT RIVCO:

<http://www.rivcoready.org/AlertRivCo>

### AMERICAN RED CROSS EMERGENCY PREPAREDNESS:

<https://www.redcross.org/store/preparedness>

### RIVERSIDE COUNTY FIRE SAFETY & PREPAREDNESS:

<http://www.rvcfire.org/onLineServices/Safety/Pages/default.aspx>

### RIVERSIDE COUNTY SHERIFF EMERGENCY RESPONSE TEAM:

<http://www.riversidesheriff.org/bureaus/sert.asp>



The Community Emergency Response Team (CERT) program educates people about disaster preparedness for hazards that may impact their area and trains them in basic disaster response skills, such as fire safety, light search and rescue, team organization, and disaster medical operations. Using the training learned in the classroom and during exercises, CERT members can assist others in their neighborhood or workplace during a disaster or emergency



when professional responders are not immediately available to help. CERT members also are encouraged to support emergency response agencies by taking a more active role in emergency preparedness projects in their community.



**REGISTER TODAY!**

<https://www.rivcocert.org/registration.htm>

# Get Ready to Shake Out.



**October 17, 10:17 a.m.**

**Shake  
Out™**

**SAFETY FIRST**



**RIVCO HR**

**Register at [www.ShakeOut.org](http://www.ShakeOut.org)**