

1. Understanding Ergonomic Risks



A New Twist On Ergo Risks

You've probably heard about injuries that can occur if you're not practicing good **ergonomics** on the job and you're exposing yourself to ergonomic risks...

- *Cumulative Trauma Disorders (CTDs)*
- *Repetitive Stress Injuries (RSIs)*
- *Repetitive Motion Disorders (RMDs)*

Well, they've given them a new name and it's a bit of a tongue twister.

Work-related Musculoskeletal Disorders (WMSDs)



WMSDs are...

Aggravation or injuries of the muscles, tendons, ligaments, nerves or joints of the body due to intense, repeated or sustained work activities with insufficient periods of rest and recovery



Oil = Rest

WMSD Signs and Symptoms

Typical signs and symptoms include..

- *pain*
- *tingling*
- *numbness*
- *swelling*
- *heat or cold in affected area*
- *weakness or loss of function*



Even using the remote can hurt

Symptoms tend to be prevalent at work and at rest.

Symptoms can affect different body regions, i.e., hands, wrists, forearms, neck or back.

WMSDs differ from soreness, stiffness or sudden strains that you might experience after a weekend of heavy yard work or taking a hard fall because...

- *they can take months / years of exposure before symptoms appear*
- *symptoms can persist even after several weeks of rest*
- *recovery can take months or in extreme cases may take years*

But Be Aware!

Non-work or everyday living activities can aggravate, or contribute to the development of WMSDs if they're done repeatedly and involve awkward or forceful motions; to name a few...



- *Sports*
- *Travel*
- *Commuting*
- *Yard Work*
- *Arts, Crafts & Games*
- *Household Chores*
- *Food Preparation*
- *Home Improvement*



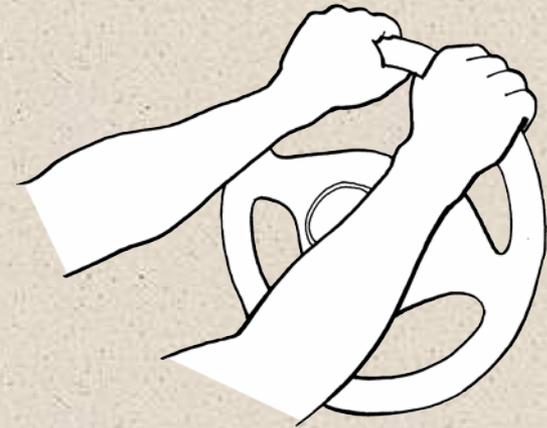
Everyday living activities can be a real problem if they put wear & tear on the same body parts that you use at work, for example...



Keying & Mousing

- *Wrists bent up/bent to the side*
- *Hands held tensed*
- *Arms extended forward*

*A
Real
Stressful
Combo !*



Driving / Commuting

- *Wrists bent up/bent to the side*
- *Hands held tensed*
- *Arms extended forward*

The impact of non-work activities is so important that we have dedicated an entire program called Living Well @ Marin County. This learning guide will be online soon for you to take advantage of.

Early detection and treatment of WMSDs can...

- *reduce the severity of the pain and the injury*
- *shorten the recovery time*
- *minimize or avoid permanent disability*



Good job!

Good life!

Avoiding these injuries can improve the quality of your life, at work and at home.

Despite the new terminology, there's nothing new about WMSDs

- *In the 1700s, Scribes got “writer’s cramp” losing function in their hands due to continuous writing*
- *In the late 1800s, Accountants got “humped backs ” due to continuous forward bending of the spine*
- *In the early 1900s, Phone Operators got “telephone elbow” from holding the handset to the ear*

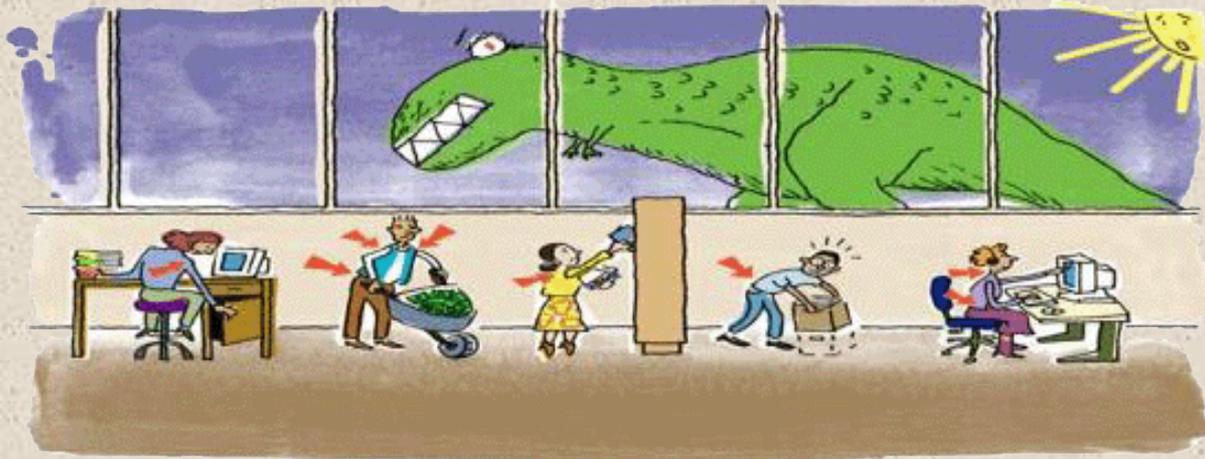


Accountant

As long as there's been work, there have been work-related injuries of this kind.

Work Activities and the Effects on Our Bodies

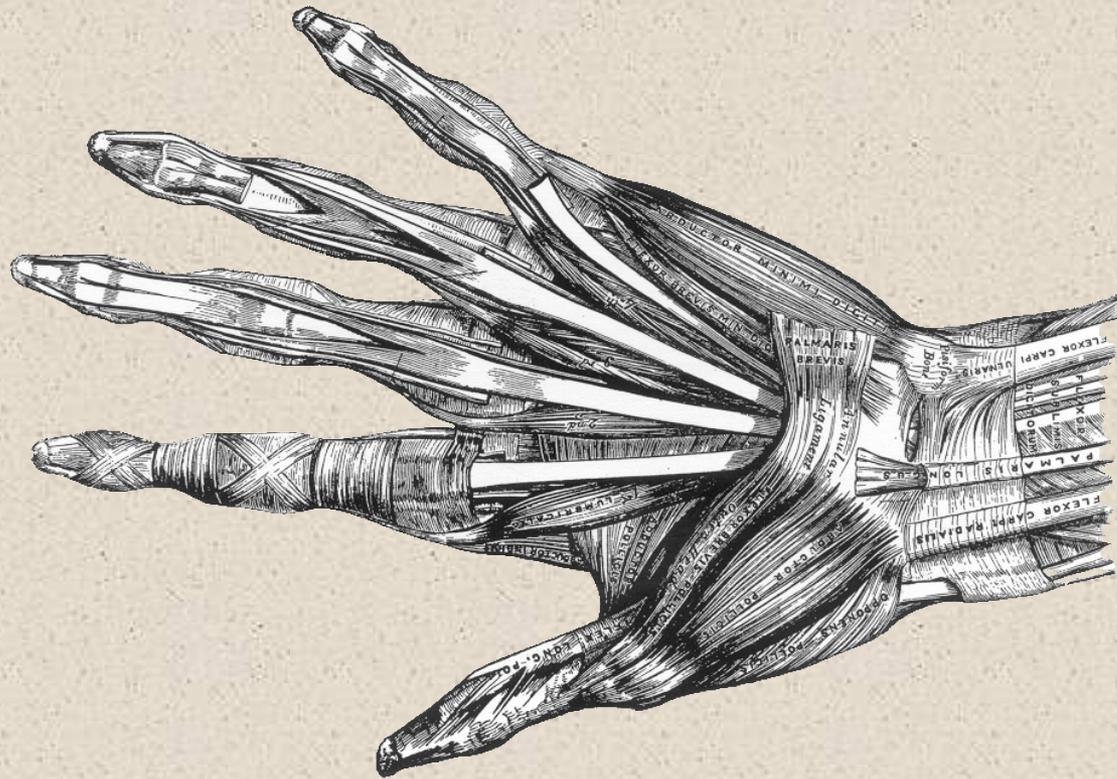
At Marin County we observe similar patterns of work-related injuries. That is, WMSDs often result from job activities that lead us to work in awkward postures or carry out stressful motions that put wear and tear on specific body parts.



Is Musculo-sore-us in your workplace?

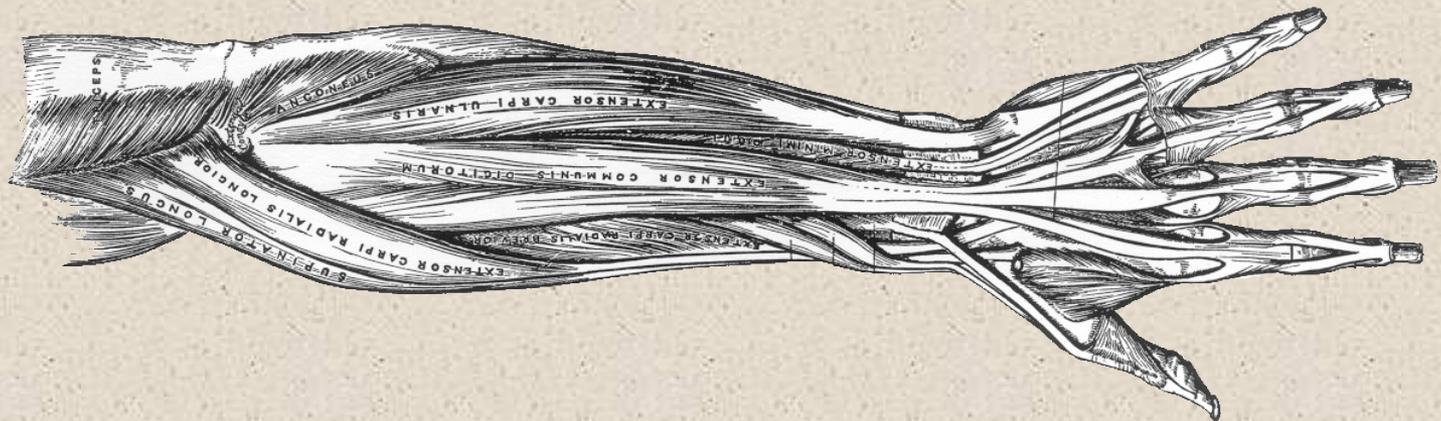
Let's take a look at the areas of the body where WMSDs commonly occur and examine how your job, work habits or tools might play a role.

WMSDs can affect the hands, wrists and forearms



Hands, Wrists and Forearms

Repetitive hand activities performed for long periods without sufficient breaks can damage the muscles/tendons of the hands and forearms by outpacing your body's ability to nourish and repair itself.

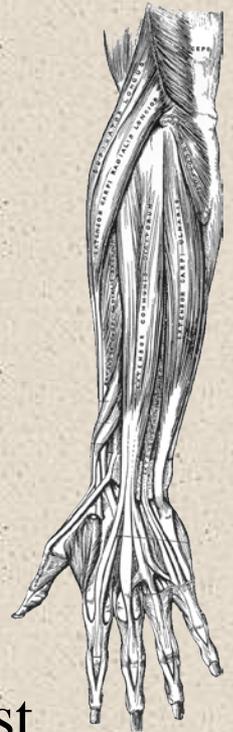


Hands, Wrists and Forearms

Watch for work that involves long periods or frequent episodes of repetitive....

- *Keying, mousing, using a ten key or writing*
- *Stamping, stapling or letter opening*
- *Pinch gripping files, books or handling paperwork*
- *Sorting or assembling mail, books or handouts*

Keep in mind, awkward postures such as bending the wrist up, down or twisting it to the side can amplify the stress on the muscles/tendons.



Some examples...



Keying on the surface with wrists bent up and palms planted on hard edge



Keying on a tray with wrists bent up and palms planted on the wrist rest



Using the adding machine with the wrist bent up and palm planted

If these keying activities are being carried out for long periods over the day, it is essential that these wrist postures be corrected.

Some examples...



Repetitive grasping of books or files



Frequent forceful motions like opening video jackets



Forceful hand impact with a hole punch and a hand stamp

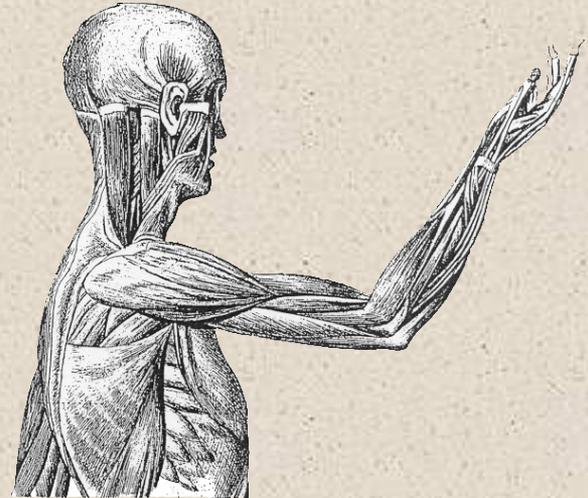


If these hand activities are performed repeatedly over the day, it is essential that these conditions be improved.

Arms, Elbows and Shoulders

Frequent awkward or forceful motions of the arms such as extending the arm too high, too low or out to the side of your body to reach things can aggravate or strain the muscle/tendons of the arms and shoulders.

Forceful hand and arm motions that involve twisting the wrist and forearm can also put a lot of stress on the elbows and shoulders.



Arms, Elbows and Shoulders

Watch for work that involves long periods or frequent episodes of repetitive....

- *Reaching for tools or files that are beyond your reach*
- *Reaching, lifting and / or grasping heavy objects*
- *Sorting papers, opening mail or handling books*
- *Opening heavy drawers or doors*
- *Working for long episode at the computer with your arms elevated*



Keep in mind, that leaning the forearms or elbows on hard surfaces or sharp edges amplifies the stress on the muscles/tendons and can put pressure on sensitive nerves.

Some examples...



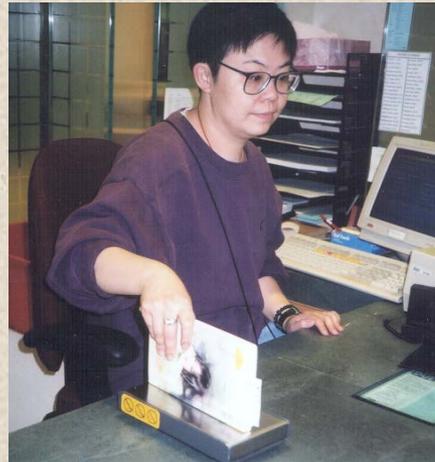
Lifting heavy objects that are too high



Extending the arms to grasp files that are too far



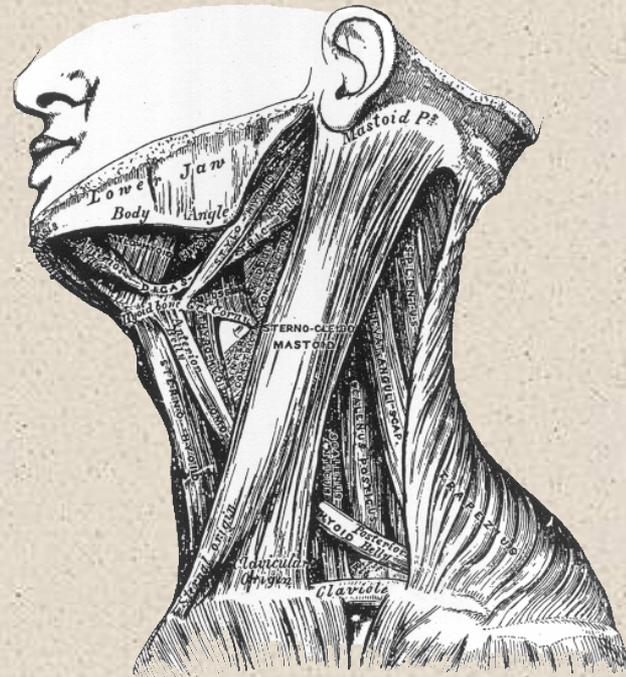
Elevating the arms and shoulders to grasp files that are too high



Elevating the arm and shoulder to checkout items at a library

If these activities are carried out repeatedly over the day, it is essential that these conditions be improved and these postures be minimized.

WMSDs can affect your head and neck



Head and Neck

Long periods of bending the head/neck upward, downward or twisting it to one side can put significant stress on the muscles/tendons of the neck and can cause long-term wear and tear on the discs in the neck.



Head and Neck

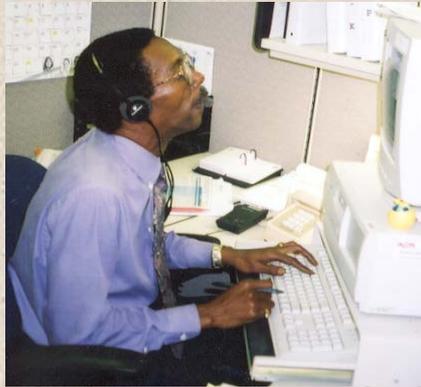


Watch for work that involves long periods or frequent episodes of

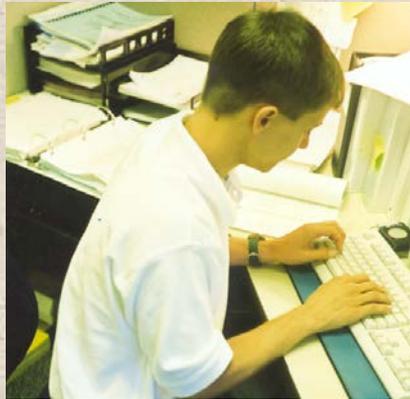
- *Cradling the phone between the head and shoulder*
- *Viewing a monitor that's poorly positioned*
- *Reading hardcopy that's flat on the worktop*
- *Viewing the keyboard if you're not a touch-typist*
- *Viewing anything with incorrect eyewear*

Keep in mind, your eyes lead your body. The things you have to view the most over the day will likely determine your head/neck posture.

Some examples...



Neck bent back
- screen too high



Neck bent forward
- looks at keys to type



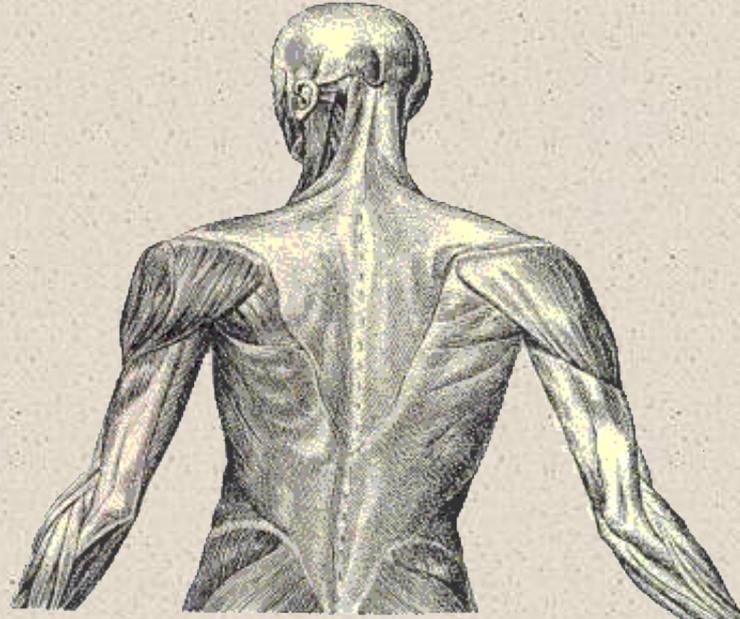
Neck bent forward
- screen too low

If these postures are held for long periods over the day, it is essential that they be corrected.



Neck bent forward
- read and write with
hardcopy on desktop

WMSDs can affect your low back



Low Back

Frequent forceful motions of the body when lifting, carrying or pushing heavy objects can cause strains or sprains to muscles, tendons or joints of the back.

In many cases, these injuries are insults to already damaged discs and joints as a result of long term wear and tear that have not yet presented symptoms.

Be aware that highly sedentary work conditions can also lead to back problems. That is, sitting or standing for too long a period on the job can slowly deplete fluids in the discs causing long-term wear and tear on the spine.



Low Back



Watch for work that involves long periods or frequent episodes of

- *Lifting or reaching heavy cartons, files, mail bags or other objects in awkward postures*
- *Pushing/pulling over-loaded carts or book trucks*
- *Opening heavy drawers or doors*
- *Sitting or standing on the job in poor postures or without a periodic change of posture*

Some examples...



Pushing heavy cart



Reaching for files that are too high



Bending and extended reaching for books that are too far / too low

If these activities are being carried out repeatedly over the day, it is essential that these conditions be improved.

WMSD Avoidance @ Work... things you can do

- *Be aware of routine work activities and the affects on your body*
- *Recognize warning signs, report symptoms and get treatment early*
- *Make changes to your work setting if you're uncomfortable*
- *Modify your work habits and take frequent short rest breaks*

Be sure to check out icons #2 through #12 of this learning guide to get specific tips on how to modify your work habits and make changes to your work setting to avoid ergonomic problems associated with your work.



*Be aware of your body's
signs & symptoms*

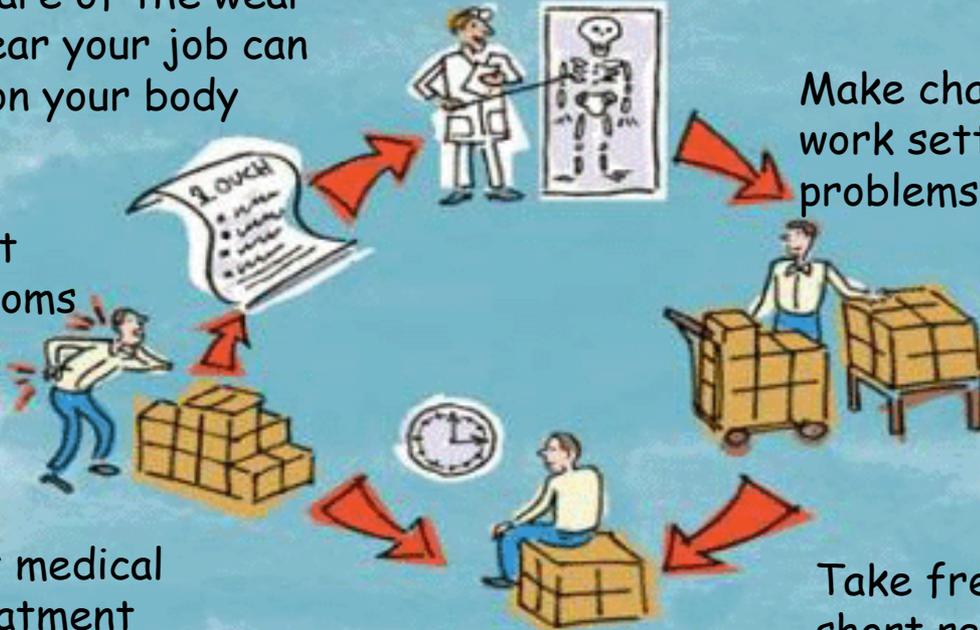
Working Well is our concern but your responsibility

How to Avoid WMSDs

★ Be aware of the wear and tear your job can have on your body

★ Report symptoms early

★ Get medical treatment



★ Make changes to your work setting or report problems to your supervisor

★ Modify poor postures / habits

★ Take frequent, short rest breaks

Now here's a guy who took ergonomics problem solving seriously



When Ben got tired of twisting his torso and crossing his legs to find an effective position to perform his work, he invented the first chair with a built in writing tablet

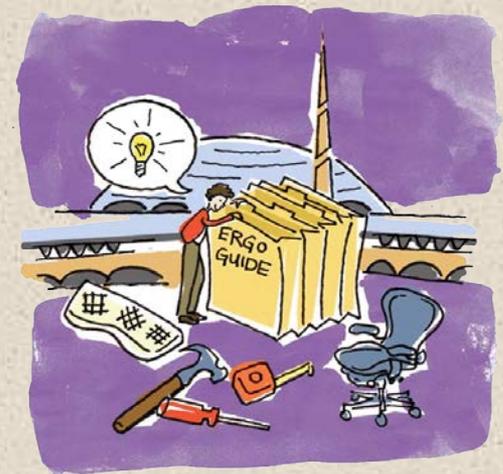
Ergonomics Resources at Marin County

Fortunately, you don't have to invent new solutions for your ergonomic problems.

We present to the employees of Marin County a variety of tools, information and resources to empower you to manage your ergonomic safety and well being.

Visit the Risk Management web site on the Mine at:
<http://mineprod/mine/AD/main/riskmgmt/index.cfm>

Take ergonomics and safety seriously and take advantage of these resources!



Thanks for Taking the Time

Thanks for taking the time to learn about WMSDs and what you can do to avoid them.

Think of it as an investment in your health and the quality of your work and home life.

