



Safe Lifting

- self-paced learning module -

Name: M ☐ F ☐ Age

Organisation: Division

Work address for return of workbook:

Email address to receive occasional newsletter:

INTRODUCTION



The Safe Lifting Seminar is, for all intents and purposes a physical fitness - strength and to a slightly lesser degree flexibility program, coupled with information about how to lift safely.

As well as having good lifting technique it's wise to have a skeleton that's in good alignment and strong muscles to support it.

Our crane on the front cover has an extremely strong 'skeleton' strong enough to lift engines into ships. It has a rock solid 'foundation'. Your legs and trunk are your 'foundation' for lifting. They have to be strong.

It's essential that you know how strong and flexible you are which is why this seminar is part of a general musculo-skeletal health program.

It's also important for your employer to know how strong and flexible you are because they're paying your workers compensation premiums. They need to know the risk and manage the risk.

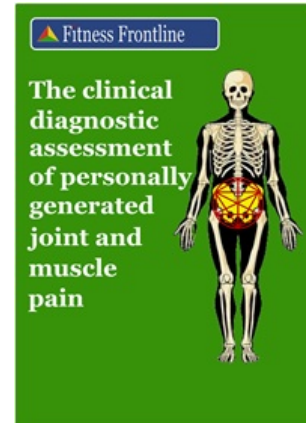
By doing the exercises outlined in **Musculo-skeletal Health Seminar** workbook you can expect a dramatic improvement in the status of your musculo-skeletal health.

For 80% of people there's an 80% chance they can get themselves back to 80% of good musculo-skeletal health in 80 days if they're diligent.

There's also more information in the **Clinical Diagnostic Assessment** book.

In the meantime stay tuned, highly tuned and remember, it's a big ask expecting to get better by having someone do something to you: sooner or later you have to do something to yourself.

John Miller



Safe Lifting

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It's a big ask expecting to stay healthy without keeping yourself fit.

SAFE LIFTING PRINCIPLES

There are two reasons why organisations need to have a manual handling policy. Firstly as a duty of care and concern. No employer wants people to injure themselves lifting or put up with joint and muscles pain as if it's just another aspect of getting older. (Getting older is no excuse: you've had longer to train!)

Secondly it behoves all staff to know how to lift safely, keep their skeletons in good alignment and their bodies strong so that they don't injure themselves while lifting.

MANUAL HANDLING

1. Bring the load close into your body.

If you're lifting something off a bench, slide it towards you, get your hands underneath it, bend your legs and then lift it.

2. Step and Swivel

You've lifted the object, now you have to put it somewhere.

Once again, use the big muscles of your body to do the work – ie your legs.

Rather than swivelling at the hips, turn the whole of your body starting with your feet.



3. Lifting technique

You'll see a lot of poor examples of 'safe lifting' on office corridor notice boards and on the internet, showing someone lifting a box off the floor with their heels off the ground, trying to lift it using one leg, with their centre of gravity in such a position that as soon as they lift the object they're going to fall over.

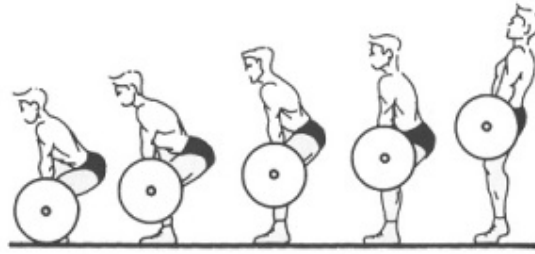
The first three shaded illustrations are highly unstable platforms from which to lift a heavy object. They're not safe. You won't be able to lift heavy weights because you can't properly engage the leg extensor muscles, the body's strongest muscles, quadriceps and buttock. You could fall over. No-one ever successfully carried out a heavy lift using these techniques. You can't perform a safe lift standing on your toes and with legs bent less than around 90 degrees at the knee joint. See figures 1, 2 and 3 below.

The flaw in illustration #4 is obvious: The load is being borne by the back muscles, not the large leg muscles.

Poor lifting position				Good lifting position
1. 	2. 	3. 	4. 	5. 
Unstable , left foot not anchored to support lift. You're not in a position to engage the leg extension muscles.	There's no strength in this lift . Left foot not anchored and body unstable and about to topple backwards.	You can't lift safely balancing on your toes . It's not a stable lifting platform. You can't engage the leg extension muscles.	Leg extension muscles already extended . All that's left to support the lift are the back and abdominal muscles.	Feet flat, stable foundation, leg extension muscles, primed to do the heavy lifting.

#5 illustrates the position where the big muscles of your legs are ready to do the heavy lifting. Spread your legs so they are shoulder width apart. Make sure your feet are flat. In this position it's only after the legs are extended and the load having an upward momentum that the back and abdominals muscles are engaged to complete the lift. Before you start the lift, prop something under the box so you can get your hands underneath it. If you can't do that safely, get someone to help you.

Here's an example of good lifting form.



If you're going to take a lead on how to lift, take it from the weight lifting experts. Legs bent, legs doing the initial heavy lifting and back not coming into play until the weight is well past the knees and the lift already has momentum.

And don't forget that it's not all about lifting up! There's a lot of lifting down as well. The same techniques apply. Use the big muscles of the legs to do the heavy work.

4. Stay strong

Never under-estimate the need for strong muscles right throughout your body. To protect yourself from lifting incidents you need to keep your musculature strong. Not many people can do that without having a regular and systematic strength training program.

The fact is, it's a lack of strength that has the most significant bearing on manual handling incidents. Some people aren't strong enough to pick up a leaf off the ground or clean their desk without herniating a disc!

You can get serious and train at the gym three times a week or you can make sure you can do 30 situps, 30 squats and 30 pressups.

You can get serious and train at the gym three times a week or you can make sure you can do 30 situps, 30 squats and 30 pressups – and keep on doing it throughout your working life.

And never under-estimate the need for strong abdominal muscles. They take more of the load than the back muscles.

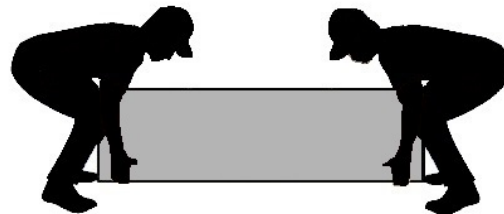


The standard weight for airline luggage is 23 Kg. Qantas don't have a claim form! You should be able to lift up to 20Kg at work without doing yourself an injury.

5. Don't attempt to lift something you think is too heavy.

Get help.

And then when you do the lifting, make sure feet are flat and legs bent at about 90 degrees.



6. Use a machine.



THE IRONY

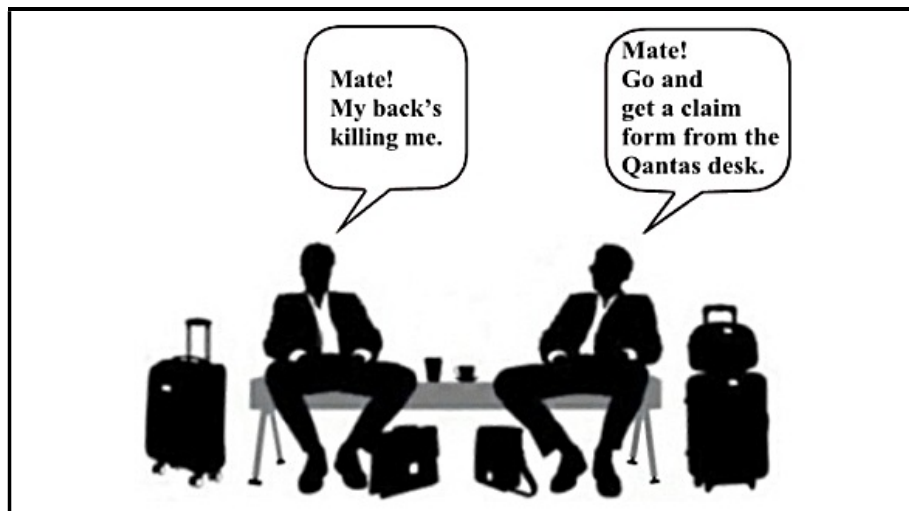
At a time when workers compensation claims for lifting light weights are still being accepted, Tia-Clair Toomey, weighing in at 58 Kg, lifts 114Kg above her head and wins a gold medal at the 2018 Commonwealth Games.



It's ironic that Qantas doesn't have a claim form for people who injure their back or shoulder lifting a bag with a domestic flight allowance of 23Kg and an international flight allowance of 32Kg.

These are bags that are lifted off the bed, dragged to the car, lifted into the boot, taken out of the boot at the airport, wheeled into the terminal and lifted onto the scales. The lifting process is completed many times through the course of a holiday.

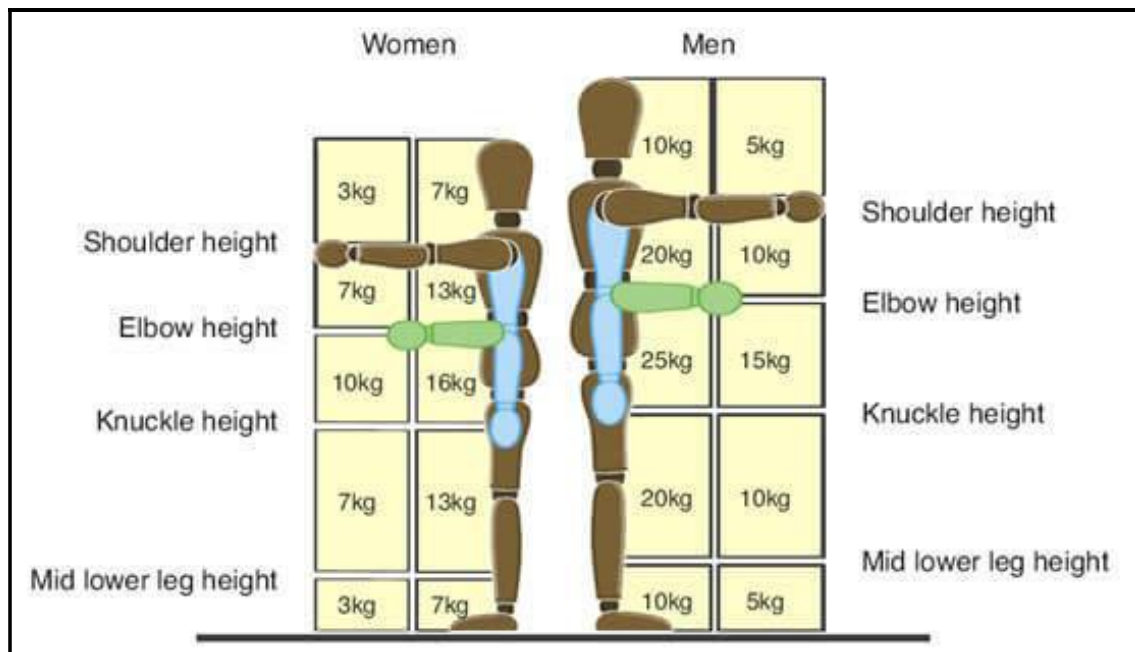
So how come so many claims for lifting injuries are being made in workplaces?



It's an insult to trades people, motor mechanics, hardware store staff, farmers, gardeners, horticulturalists, baggage handlers, posties, delivery drivers ..., to give office-based workers a free retirement benefit for lifting a box that weighs the same as a bag of groceries.

BRITISH LIFTING AND MANUAL HANDLING STANDARDS

This image makes eminent good sense. The strongest position for lifting is at waist height and close to the body.



Sometimes you don't realize your own strength until you come face to face with your greatest weakness.
Susan Gale

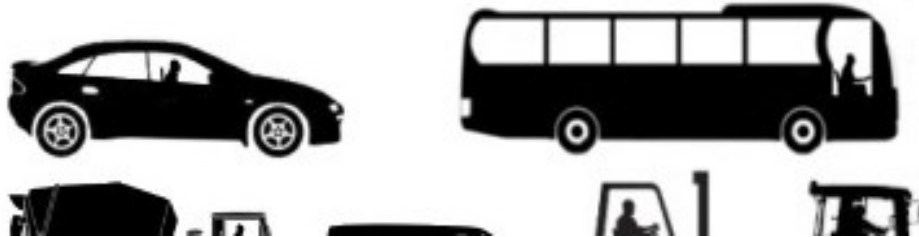
I CAN DO THAT!

Here are some of the things that fit and healthy people are designed to lift and do without causing joint and muscle pain.

Sitting down

The activities below are the ordinary, everyday activities people expect to be able to do at home, in their leisure time or at work without ending up in pain.

Think about it: how can you injure yourself sitting down at a desk or behind a steering wheel – except by your own hand?



Standing up and working while bending down



Bending over



Lifting a bag



Carrying a suitcase



Cleaning a desk



Carrying a ream of paper



Lifting and swivelling



Putting books on a shelf



Changing a tyre



Laying bricks



Shearing sheep



Pushing a wheelbarrow



Shovelling



Vacuuming



Polishing



Scrubbing



Mopping



Cleaning windows and walls



Whipper snipping



Pushing a hand trolley



Getting down out of a truck

No claim form at home ...



...or at the supermarket.



You can injure yourself playing sport, but you take your chances. Not many people sue their sports club for a twinge. A lot of sports people take out their own accident insurance policy.



AND THERE'S MORE

It makes a mockery of anyone who ever went to a gym and embarked on a strength training program that someone should receive even as much compensation as a brass razoo if they get a twinge while lifting a ream of paper off the desk at work.



STRENGTH EXERCISES

You need to do a range of strength exercises on a regular basis.

CORE STRENGTH EXERCISES

My definition of core muscles is those muscles that are connected to the pelvis.

No chair yet devised will protect you from joint and muscle pain if you're not strong enough to hold your body upright while you work.

Sit ups



Press ups



Squats

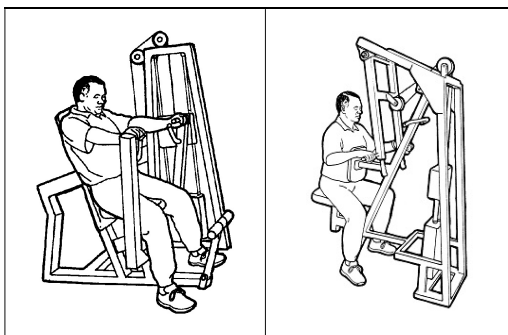


Superman



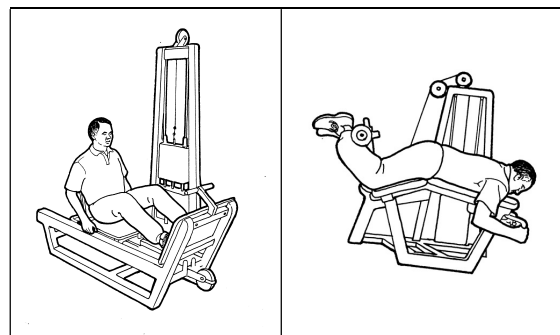
Build up slowly. You'll know you're in good shape when you can do 30 squats, 30 pressups and 30 situps on the trot and do a minute's worth of superman and hang for a minute.

STRENGTH EXERCISES IN THE GYM



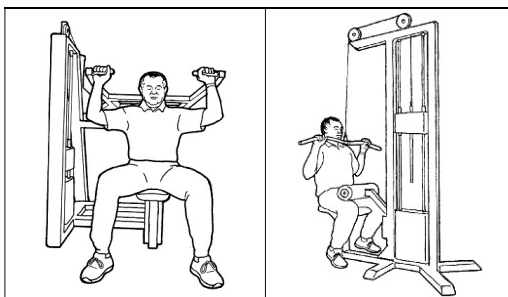
Push out

Pull back



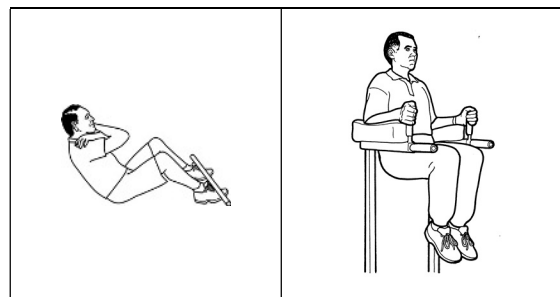
Leg extension

Leg curl



Push up

Pull down



Front of body

Hip flexors

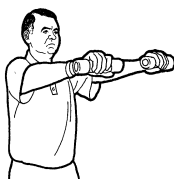
You can't climb the ladder of success with your hands in your pockets.
Arnold Schwarzenegger

STRENGTHEN YOUR SHOULDERS

One minute arm and shoulder exercise – plus hanging for as long as you can

Select a weight that you can comfortably use. For women start with .5kg in each hand. For men, start with, say 2Kg in each hand and aim to increase the weight to 4 Kg in each hand. The aim is to build the exercise up to 4 sets of 4 repetitions to the front, 4 to the side and 8 up above your head. It should take about 1 minute to do all 64 repetitions. Gradually build up the amount of weight you use.

Arms to the front



4 repetitions

Arms to the side



4 repetitions

Arms above the head



8 repetitions

Hang



For as long as you can

Dumbbell overs and unders – back over your head, and down (under) to thighs.

Do three sets, each of 10 repetitions. One repetition is taking the hands back to the floor over your head and down to the floor by your thighs.

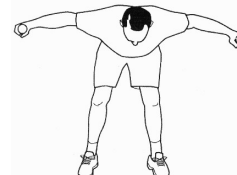


Start with the same weights as for the one minute shoulder exercise. Over time, increase the weights.

Flys – chest and upper back



Strengthens pectoral muscles at the tip of your chest and shoulder muscles.



Strengthens muscles of the upper back and shoulders.

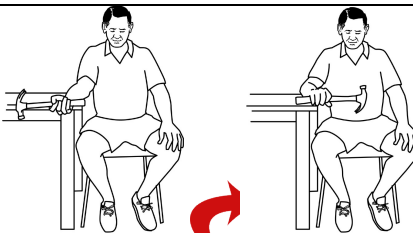
STRENGTHEN YOUR FOREARMS, WRISTS, HANDS AND FINGERS

Forearm curl	Grip strengthener	Ball squeeze	Wrist curl	Hang
				

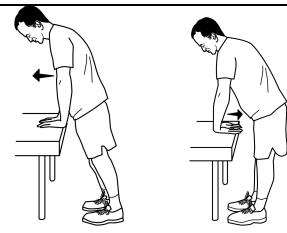
Rubber band finger exercise



Rotating hammer exercise



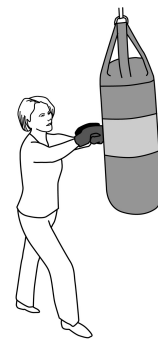
Press hands forward and back



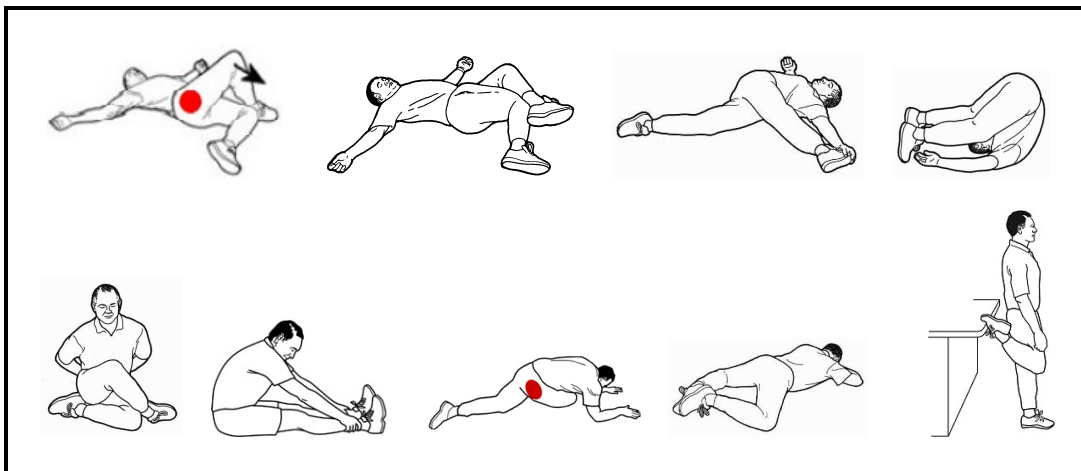
PUNCH HARD AND PUNCH OFTEN

Here's a good way to give your trunk, shoulders, arms and hands a good work out.

I reckon that if everyone did 100 punches every day, offices around the world would be wiped clean of sore shoulders, arms and wrists.



MY MUST DO FLEXIBILITY EXERCISES IN THE GYM



Understanding skeletal relationships within the body is the first step in helping our clients unwind movement and postural patterns that are causing pain, dysfunction and keeping them from optimal movement.

Where you think it is, it ain't!

Ida Rolf

A FINAL WORD

Sensible shoes

Every organisation needs a sensible work shoe and work boot policy. High heels are not work shoes. They are neither safe, healthy nor sensible. Imagine wearing high heels when the building has to be evacuated?

If steel capped boots need to be worn on a worksite, then flat soled, sensible shoes with heels that are no higher than 2cms need to be mandated for staff working in offices. Imagine lifting a 20Kg object off the ground while wearing high heeled shoes. It's dangerous.



Holding on to rails

In many organisations it's mandatory that employees hold onto a rail while going up or down stairs. You only have to trip once in 10,000 times and you could do yourself a catastrophic injury.

All staff have an obligation to call out colleagues who fail to hold onto rails. Carrying something down or up stairs without having a rail to hold onto is dangerous.



Sprained ankles

What are you going to do about a sprained ankle?

First up, spraining an ankle is just another incident that's part and parcel of life. It can happen to anyone, anywhere, at any time.

Give it the best first aid possible; that includes instant icing, strapping, elevating and not bearing weight on it.

The case for all staff doing a first aid course is compelling. Most of the aid will be the aid they give to themselves.



If you sprain your ankle and it's iced and strapped properly, you can keep it elevated and you have a sit down job, chances are you'll be able to carry on or at least be back at work the next day.

Chances are it won't require medical attention, but if it does, get work reimburse you for any costs that you incur, including 'proper' bandages and maybe a spray can of coolant.

Whilst it's doubtful if an X-Ray will be needed (What's happened is ligaments, tendons and muscles have been stretched beyond their pain threshold (some may be torn), once again ask work to reimburse you for the cost of any medical or rehab expenses..

Discipline is doing
what needs to be
done, even if you
don't want to do it.

GUNNADO

- what are you gunnado to improve your strength and your musculo-skeletal health –

When it comes to joint and muscle pain:

The cause of the pain is rarely at the site of the pain

Form (skeletal alignment) follows function. Your ability to adopt a range of (Yoga-type) poses is a sign that your skeleton is in good alignment

The less we move, the less we are capable of moving.

Effective therapies treat the whole body as a unit.

Pain is the body's voice. Listen to your body.

You are pretty smart. But your body is smarter.

Age is not the determining factor in health.

Muscles that do not move are soon muscles that cannot move.

Pete Egoscue

NOTES

If you have any questions, queries, comments, complaints, criticisms and compliments, send me an email.
<mailto:john.miller@millerhealth.com.au>

If you've got good news to report, I'd love to hear it.

John Miller

All the ergonomic furniture in the world won't protect you from musculo-skeletal dysfunction unless it's accompanied by a regular and systematic strength and flexibility program for the muscles that are designed to keep your skeleton in correct alignment.

