



<b><u>INDEX</u></b>	<b><u>Page</u></b>
Introduction	5.
Overview – Hazards, Diseases & Their Control	6.
The Human Body and its Vulnerability	7.
Noise and Vibration	9.
Heat and Cold	12.
Ultraviolet Radiation	14.
Dust in the Workplace	15.
Chemical Hazards	16.
Synthetic Mineral Fibres	20.
Movement Hazards: Manual handling and Repetitive Strain Injuries	21.
Hazardous Work Organisation and Stress	26.
Allergies	29.
Occupational Infections: AIDS, Hepatitis	30.
Drugs and Alcohol At Work	32.
Women and Occupational Health	34.
Techniques of Monitoring, Measurement and Control	35.
Ergonomics	36.
Occupational Hygiene	37.
Medical and Biological Monitoring	40.
Health and Safety Officers	42.
Conducting Inspections and Investigations	43.
Rights of the Health & Safety Officer	45.
Special Focus Issues	50.
<b>Anti-discrimination Policy</b>	52.

**KEY POINTS to be considered in conjunction with Workplace Health & Safety:**

- ALL employees and those working with Pascas (in any capacity) are to be willing to take responsibility for their emotions.
- Otherwise they are just projecting their emotions onto all work mates and visitors and how can you demonstrate and teach that which you are not practising.
- It is very important that everything is done that is harmonious with love and harmonious with truth, and also allows each person to deal with their emotions.
- Everyone is enabled to deal with their emotions whilst doing their work. Crying is welcome here.
- The outcome is to do with the people involved rather than the product.
- Everything must be harmonious with truth and love.
- The goal of this organisation is presenting to the world as much truth as we possibly can, but doing it in a manner that every body, that comes in contact with the organisation, is also committed to following the truth of it.
- The outcome is the people involved rather than the product that is being provided or given away. The focus of management is to ensure that everything is done in a loving manner and done in such a manner that it does not taint the product that is being provided, by how everything operates and how everything works behind the scenes.
- If you cannot do it lovingly then you no longer can do the job.
- The first thing to focus upon is what is going on emotionally, if there is some kind of conflict with inside of the organisation, itself, this needs to be resolved in harmony with love and truth.
- It is the intention to have everyone within the organisation committed to following the truths that they are distributing.
- At times you will feel very frustrated and upset, and you will have other emotions that you will need to work through. That is your law of attraction assisting you in your growth.
- Whenever the transaction becomes unloving to management, whatever you are doing, at that moment, will be taken off you. It will be taken off you until either you get into a point where you are actually loving again, or otherwise.
- Management will be very uncompromising with regards to the principals of love and truth. It is very important, that when someone intends to come into these operations that management is uncompromising with regards to the principals of love and truth.
- There is no expectation for reward. And there is no expectation to be noticed for what is and has been done. And there is no expectation to be glorified, though some will acknowledge the great job done and tell you so.

- This is very, very different to an organisation that the goal may be profit making or some other type of goal.

Our Intelligence is Soul based. The capabilities of discernment, e.g., by kinesiology muscle testing, expand only with the growth of our Soul's intelligence. Upon conception, the creation of both our Spirit Body and Physical Body occurs, bringing forward our unaware Soul to start our journey. Upon death of the Body, the brain dissolves. The mind continues to grow in the Spirit Body until we progress through the 7<sup>th</sup> sphere into the 8<sup>th</sup> sphere at which point we are 'born again', one with God, entering the Celestial Realms, and the mind is no longer. Our soul intelligence grows as does our soul expands with the ever increasing infusion of Love from God.

**Desire for God's Truth  
Desire for God's Love  
and be humble**

**humility is the  
willingness to experience  
one's own emotions.**

**Natural Love Flow**

***Natural love is Creation's love;***

***One can swap back and forwards between paths***

***I am God***

***Intellectual***

***Self reliant (trust myself)***

***Self-determination way of life***

***Mind dominates***

***Adult like***

***Control***

***Millions of paths (man created)***

***Peak possibility is 6th sphere***

***time to complete path:***

***100 years to over 1,000 years***

**Divine Love Flow**

***Divine Love is Soul's love.***

***I am God's son / daughter / child***

***Emotional***

***God reliant (God relationship)***

***Soul-spirit living harmony***

***Soul dominates***

***Child like***

***Feeling***

***Defined path (God created)***

***Peak possibility is infinity***

***(sphere / mansion world are same)***

***5 years to over 10 years to at-onement***

**When your soul is in the job – now you can accomplish a lot of things! 20 Mar 11**

***Feelings first***

## **INTRODUCTION:**

Health and safety in the workplace is of paramount concern to all within the Corporation.

The administration of the program is to be lead by the Workplace Health & Safety Manager as Coordinator, who, in turn, is to be assisted by the Human Resources Manager in developing and maintaining ongoing training on all related issues of workplace health and safety for all teams.

Each work team is to nominate a team workplace health and safety officer. Such nominated officer need not be the team leader and it is recommended that the nomination be rotated throughout the team on a six monthly interval, objective being to bring awareness and related skills to all members in the workforce.

Team safety officers will have the authority to take their review programs and sheets and discuss any areas of concern or potential concern with any member of any team during their routine reviews. Officers are required to regularly take time and seek out potential risky work practices developing in the work place and bring them to the attention of their Leaders and to the program manager being the Workplace Health & Safety Manager who in turn will be supported by a safety officer leader appointed for the main divisions of PASCAS WORLDCARE Complex – Pascas Care Centre, Chaldi College, New Biosphere Agriculture, etc.

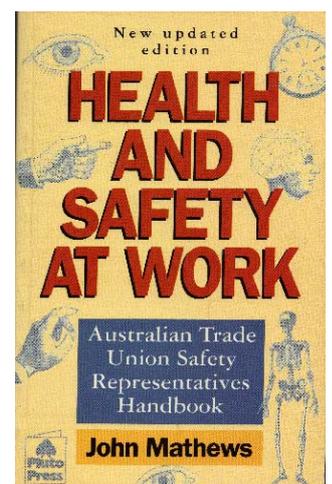
Issues raised should be submitted in a language of purpose. That is, identify the concern and recommend considered action appropriate to modify the risk and improve the situation – we all have, at PASCAS, the same purpose of being here and that is to:

- enhance our own skills,
- enhance our own financial security,
- enhance our way of life for ourselves and our family,
- and most of all, enhance our love for our parent, God / Creator.

Our success with these objectives is dependent upon ourselves, each and everyone, individually.

Though every endeavour is being used to achieve the best practical working environment and work practices, we will never have the perfect situation and we must always seek to improve techniques and conditions to enhance the quality of life and safety at PASCAS WORLDCARE. At the time of implementing practices, we will have aimed for the ultimate solution at that time, but, as time, and technology, and understanding advances then a review may well achieve an enhanced opportunity.

It is the explicit aim of PASCAS WORLDCARE to support and provide resources to continually enhance the conditions of its people, to do this with the greatest of efficiency and speed, by delegating authority for safety officers to respond and act, as well as, involving everyone in the program.



Reference: **Health and Safety at Work by John Mathews**

## **OVERVIEW – HAZARDS, DISEASES and their CONTROL:**

The human body is a magnificent instrument of gas exchange, bringing blood and air into contact through the sheerest of membranes, allowing oxygen to diffuse in and carbon dioxide to diffuse out. For this very reason the human body is also peculiarly vulnerable to the effects of many toxic gases and fumes which the body was never designed to cope with.

In the work environment, workers may inadvertently plunge their hands into fat-soluble solvents like trichloroethylene, which the skin was never designed to keep out, and which seep into the body with devastating effects.

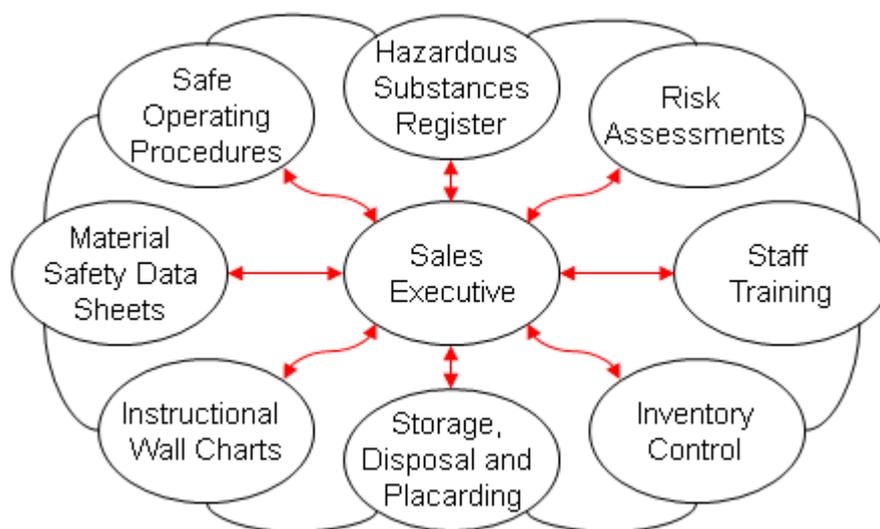
There is the 'flight to fight' response to a warning stimulus, such as loud noise. This response, called the 'stress reaction', is still invoked every time a worker is subjected to high noise levels, particularly impulse noise such as that coming from a slamming door.

We need to examine workplace hazards in detail and focus attention on:

- physical hazards – noise, vibration, ultraviolet radiation, etc
- chemical hazards
- manual handling and movement injuries
- dusts and fibres
- stressful work organisation.

Dusts and fibres common feature is that they scar the lungs over a period of years, leading to crippling lung diseases such as pneumoconiosis. These and many other issues should not eventuate at PASCAS.

Hazards associated with lifting and otherwise moving loads and also repetitive movement such as keyboard work, lifting and other forms of work where tasks have been broken down to short-cycle operations need review. These are all causes of musco-skeletal injuries, of which the worst are back injuries, which can be agonisingly painful and repetitive strain injuries or occupational overuse syndrome.



## **The HUMAN BODY and ITS VULNERABILITY:**

Let us look at the body's vulnerability to attack by the environment being the conditions in the workplace in which people may be required to work.

In spite of its remarkable protective properties, the skin is the organ most damaged in the workplace. It is cut and lacerated by sharp objects; burnt by contact with hot surfaces, steam or fire; chemically 'burnt' by corrosive materials such as acids; irritated and inflamed by chemicals and dusts, causing **dermatitis**; and infected by bacteria in cutting oils, causing **folliculitis**.

Other cells in the epidermis produce black pigment, **melanin**, which protects the body from the damaging effects of **ultraviolet radiation** from such sources as the sun. The more melanin, the more 'tanned' the skin appears to be.

Tight fitting clothes prevent evaporation of sweat and thereby can lead to skin disease such as **prickly heat**.

All parts of the musculo-skeletal system are vulnerable to injury and disease from workplace hazards. Back injuries result from lifting and carrying excessive weights; bones can be broken or crushed in accidents; joints and tendons can swell and become extremely painful as a result of repetitive work, causing occupational overuse syndrome (repetitive strain injuries); and muscles can waste away when the nerve fibres that lead to them are damaged by solvents. Support for the body provided by good posture can be interfered with by poor workstation design, leading to long term complications.

It is because of the perfection of the design of the lungs as a gas-exchange system that they are so vulnerable to attack by dust and chemicals in the air. Chemical fumes can be taken up by the blood as well as oxygen, and then swept around the body where they can exert their effects locally.

Blood is a mixture of cells and plasma. The **plasma** is the major extracellular fluid in the body, carrying salts and organic molecules such as hormones. The cells are of three kinds: white cells needed to fight infection; red cells needed to carry oxygen; and platelets to begin the blood-clotting process.

The life of blood cells is short, so the production requirements of the bone marrow are prodigious, in a 70 kilo man 210 billion red cells are produced every day. Because of this huge production, the bone marrow is particularly sensitive to the workplace hazards that exert their toxic effect via interference in cell division or in the genetic apparatus. Being **anaemic** is a result of loss of red cells. Benzene poisoning results in the lowering of blood cell levels.

Many solvents interfere with the contractions of the heart, leading to **arrhythmias** such as benzene, trichlorethylene and fluorocarbons. Exposure to lead and cadmium leads to hypertension, mediated via the kidneys, while stressful working conditions have been shown to raise blood pressure.

Like the lungs, the gastro-intestinal tract is essentially a nutrient exchange system which brings water and food molecules into contact with blood vessels through a thin layer of epithelial cells. The gastro-intestinal system works well in the case of dust, but was never designed to deal with toxic chemicals.

Cirrhosis of the liver caused by toxic chemicals is identical to cirrhosis caused by alcohol; thus workers who develop liver disease may falsely attribute it to drink.

The sensory system is an extension of the nervous system, providing information about the state of the

environment and the internal state of the body. Classically, five senses are recognised – sight, hearing, touch, smell and pain.

Eyes need particular protection in daylight from UV rays, in particular from the side, this can be achieved with wrap around sunglasses.

Concerns over all these elements is compounded by the introduction of the reproductive organs.

Thus, there is every reason why we need to be vigilant in monitoring our workplace environment.



# LIVE FEELINGS FIRST

## **NOISE and VIBRATION:**

Vibration is deliberately introduced in some jobs. Stonemasons fought in vain the introduction of the pneumatic drill in the last years of the nineteenth century. They have subsequently been suffering from an epidemic of **vibration syndrome**, involving aches in the arms and shoulders, loss of nerve conduction and terrifying **dead finger** ever since.

All of this noise is unnecessary in that it could be designed out of machinery – but it can't.

Sound is energy which is propagated through a medium (air, water) as a succession of small and rapid variations in pressure. The source of the sound is a vibration. This is transmitted to the hearer by waves of compression and decompression that reproduce the vibrating characteristics of the source. We detect these pressure fluctuations by tiny hairs in our inner ear and interpret them as sound.

Nine out of ten organisations with hazardous noise levels state that they provide hearing protectors – but only half check to see if they are fitted.

The noise levels in a workplace at 93 dB (decibels) is 'just a bit' over the legal action point of 90 dB, then a safety officer needs to be alerted to the fact that a noise level of 93 dB is actually **twice as intense** as a noise of 90 dB and, hence, **twice as damaging** to health.

The arithmetic of decibels deals with ratios, not ordinary numbers. If two noises each of 50 dB are added, their combined noise level is 53 dB; in general, any doubling of intensity gives an extra 3 dB. If three similar sources are added (i.e. the intensity tripled) then the combined level increases by almost 5 dB. If noises of different intensity are combined, then their combined sound level is dominated by the noisier component, e.g. a sound of 47 dB added to a sound of 54 dB gives a combined sound of 54.8 dB. If the two sounds are separated by 10 dB or more, then the softer sound adds nothing to the noisier one.

If the regulations set **90 dBA** as the maximum permissible exposure over eight hours (averaged a Leq), then a worker exposed to this noise level is said to have a Daily Noise Dose (DND) of 1.

A noisy environment reduces concentration thus raising the risk of accidents and constitutes a safety hazard in itself. The most prominent hazard associated with noise is its interference with speech communication.

It is widely accepted that noise levels greater than 55 dBA cause annoying interference with work that requires substantial mental effort.

**Deafness** is defined, for compensation purposes, as an average hearing loss taken over different frequencies. The widely accepted criterion in Australia is hearing loss of 30 dB averaged over certain frequencies. Exposure over a working lifetime to noise at average intensity 90 dBA will result in around 42 workers in every 100 being deafened. Even exposure to 80 dBA over a working lifetime will lead to 26 workers in 100 becoming deaf.

Regulations provide that workers should not be exposed to noise in excess of 90 dBA averaged over eight hours (90 dBA) for existing premises and a maximum of 85 dBA for new premises.

The most desirable level of noise at the workplace should be no greater than 85 dBA. An ultimate reduction to 80 dBA should be targeted.

Precision-grade sound-level meters produced by Bruel and Kjaer 22 range measure sound and will enable the isolation of areas requiring the use of fitted ear muffs.

Sound exposure meters or dosimeter (Bruel and Kjaer) can be worn to measure the noise dose by directly integrating the various sound levels over a workshift.

Shields are useful for cutting out the high frequency noise. They are usually made of glass or plastic for visual access. A typical noise reduction would be 8 dBA but a sheet of plywood will give perhaps a 10 dBA reduction.

Personal protective equipment should be regularly checked, cleaned and maintained.

The size of the ear muffs is all-important. If an employer supplies one size or type only, he or she is failing to take account of people with different size ears and heads and of people who wear glasses. Liquid seal muffs are superior to the ordinary foam cushion muffs. Good quality liquid-seal ear-muffs attenuate mid-frequency sound by around 30 dB, but, their effect rapidly falls away at low frequencies.

*The effect of removing ear muffs:*

Because we have no instinctive feel for the energy transmitted by sound it is difficult to understand why even short periods with the protectors off can do so much damage. Calculations have been done which show that muffs which give overall 20 dBA protection give only 6 dBA protection if worn for three hours out of four and still not even 10 dBA protection if worn for 54 minutes every hour. Even wearing the muff for 99% of the time, or, taking them off for about 30 seconds every hour, gives only 15 dBA protection.

The aim should be to prevent all identified health effects of noise by tackling the noise at source:

- Designing new plant and equipment in a manner which results in least noise emission.
- Substituting noisy plant, machinery and tools by equipment that produces less noise.
- Proper maintenance of the equipment.
- Modification of equipment and work processes.
- The control of noise transmission through the use of shields and barriers, sound absorbers and sound-insulating enclosures.

Target noise levels of 85 dBA as a short term standard with reductions down to 80 dBA in the work place as an objective. It needs to be noted that noise levels of less than 55 dBA are required to prevent annoyance and adverse effects on concentration and performance.

Areas of high noise which cannot be silenced to 85 dBA in the short term should be designated as 'noise-hazard areas' and have warning signs displayed.

Audiometric monitoring should be conducted every six months for workers exposed to noise levels exceeding 90 dBA over eight hours. Records of all audiometric assessment are, as in all medical examinations, remain the property of the individual concerned and a summary copy is retained by the Human Resources Officer in strict confidence.

Workers who as a result of audiometric monitoring are found to have hearing loss sufficient to interfere with the safe performance of their duties shall maintain the right of transfer to another process without loss of pay and conditions.

*All hearing loss is permanent and irreversible – audiometry merely quantifies the damage.*

Induction training for new employees is to incorporate noise and its controls.

Noise is a special form of vibration hazard where the vibration is transmitted through air and sensed by the ear. **Vibration** in general is picked up direct from the vibrating object.

The prime health effect of vibration from hand tools such as chipping hammers or pneumatic drills is **vibration white finger (VWF)**, or more graphically, **dead finger**. It is thought that the effects of vibration on the nervous system lead to a constriction of the blood vessels in the fingers.

The complex set of conditions caused by hand-arm vibration, involving muscular weakness, fatigue and pain in the arms and shoulders, as well as, white finger, is now referred to as Vibration Syndrome. Grinders, in addition to vibration, have a long and sorry association with industrial disease because of the dust they create.

Several sophisticated instruments now exist which make the measurement of vibration a relatively easy task. Remember that a vibrating body can be characterised by its frequency number (number of cycles each second) and its amplitude (height of acceleration, velocity or displacement signal).

Mobile plant should be installed with suspended seating which can absorb up to 40%-50% of the vibration. Without such seats, piles become a problem with operators.

Hand drills have been substantially re-designed to reduce vibration levels by 90%, cut the noise in half with a silencer and with reduced weight. With differential piston principles, the reactions from the percussion piston's reciprocating motion are not transmitted to the handle.

Similar devices and attachments can substantially reduce vibration in plant items.

Thus aims include:

- Substituting high-vibration tools with better designed low-vibration tools.
- Improving the suspension of cabs and seats in vehicles.
- Installing engineering controls on vibrating machinery.



## **HEAT and COLD:**

During the summer month's people in all parts of Australia are likely to experience heat stress whilst many workers experience cold conditions in winter months. This is so true in bakeries.

Heat stress areas are those where temperatures exceeds 36°C (97°F).

Excess heat is dissipated by the body via two principal methods:

- Blood is pumped to the skin and away from the internal organs so that heat can be lost by radiation (this is why a person 'flushes' when exposed to heat).
- Sweat is produced and, as it evaporates, it takes heat with it. Note that sweat which does not evaporate, say, due to tight-fitting clothes, is wasted and serves no physiological purpose.

Under cold conditions, the body attempts to conserve heat by restricting blood flow to the skin ('blanching') and through such mechanisms as shivering.

The body is able to acclimatise to constant hot working conditions but not to transient (seasonal) hot conditions such as those that occur in summer months.

Environmental factors that determine the level of heat stress include:

- air temperature
- relative humidity
- air movement
- radiant temperature of the surroundings.

Heat illness is the most visible sign that people are working in unbearable heat. It manifests itself as skin conditions (such as prickly heat), as heat exhaustion (fainting, syncope) or as heat cramps (if body water salt balance is incorrect). When the core body temperature rises rapidly, this is called heat stroke and it can be fatal. The long-term effects of heat stress include:

- heat rash (prickly heat)
- chronic heat exhaustion
- birth deformities and other reproductive problems.

Heat can interact with other workplace hazards such as toxic substances or noise and compound their effect.

Heat exhaustion is characterised by clammy, moist skin, weakness and fatigue, nausea, vomiting, headache and giddiness.

Heat stroke (hyperpyrexia) is characterised by hot, dry skin, rapidly rising body temperature, collapse, loss of consciousness and convulsions. Prompt treatment includes removing the person to a cool area and preferably immersing the body in an ice bath to reduce the excessive body temperature.

Since humidity and air movement are just as important as air temperature in determining heat stress, the wet-bulb temperature is the measure of choice for a hot environment.

The range of **thermal comfort** for workers has been found to be 19°C to 30°C (66°F to 86°F). For

sedentary work the optimum range for temperature and humidity is generally recommended to lie between 21°C and 26°C and 50% to 60% respectively.

For outdoor workers, there can be air-conditioned vehicles and rest areas and shaded areas provided.

When protective clothing is necessary it should fit loosely and have large openings at the bottom to encourage the flow of air over the skin. Cotton is the preferred fabric since it has high vapour permeability.

Provision is to be made for a constant supply of cool drinking water.

Workplaces where the temperature consistently exceeds 36°C should be viewed as heat stress areas. New employees should be given 5-7 days in which to acclimatise to such conditions with a build up of work load over that period.

All workers in heat stress areas should be provided with regular medical checks at least once a quarter to ensure that they are coping with the stress. These checks should include an electro-cardiogram (ECG) to monitor heart condition.

No work should take place in areas where the temperature exceeds 50°C (122°F).



## ULTRAVIOLET RADIATION:

Two out of three Australians who reach the age of 75 years can expect to develop some form of skin cancer.

Those most at risk are people with a fair skin (from Anglo-Saxon backgrounds); these have lower levels of melanin pigmentation in the skin, which by absorbing ultraviolet radiation, protects the skin from other effects.

For outdoor workers sunlight cannot be contained and therefore there has to be dependence on other forms of physical protection, personal protection (creams, sunglasses) clothing (especially headgear) and administrative procedures.

Shade can be created using canopies and other easily erected structures.

Work can be rescheduled to times when the sun is less intense with work to be organised to take advantage of shaded areas during the peak UV periods.

Hats with wide brims can be worn and 'Foreign Legion' hats with loose flaps to protect the neck and ears. Broad-spectrum sunscreens can be used on the skin, provided they have a Sun Protection Factor (SPF) of 15 times or greater. Sunglasses with UV filters can be used to protect the eyes. Cool, loose-fitting clothing, preferably of natural fabrics like cotton, can be worn to protect the skin.

Hats with broad brims are to be provided for outdoor workers. Note that hat brims protect from downward radiation only; if there is exposure to reflected radiation from surfaces, then hats with flaps to protect the neck and ears are needed.



## **DUST in the WORKPLACE:**

Silicosis is a serious lung disease.

It is caused by breathing in silica dust that is so fine it can enter the deepest parts of the lung.

This dust can build up in the lungs and scar them. The main symptom is breathlessness. Over time, usually a number of years, it can become increasingly difficult to breathe. There is no cure for silicosis but **it can be prevented**. Breathing in silica dust may also cause bronchitis. There is also evidence that breathing in silica dust may cause lung cancer.

People who work with silica dusts are at risk.

Silica dust control measures (in priority order):

1. Safer machinery and tools (equipment fitted with water attachments to suppress dust or dust removal devices):

- Fully enclose dusty processes.
- Use local exhaust ventilation or dust collection equipment to suck dust away from operator.
- Use tools fitted with dust extraction (vacuum) devices.
- Use tools fitted with a water attachment to suppress dust.
- Fit large machinery with cabs that have an effective air filtering system.

2. Safe procedures:

- Wet down dust work areas and processes.
- Information and training.
- Standardised work procedures
- Warning signs where necessary.
- Good 'housekeeping' procedures.

3. Respiratory (breathing) protection:

- Use a disposable mask or half-mask with disposable cartridge or a battery powered respirator with a dust filter or an airline respirator. The type of filter you need will depend on the dust levels. Whatever you use make sure it fits and make sure it is effective and sure it is approved for use with dust. If you have a beard, use a respirator with a hood or helmet and visor. Regular checks must be done to see if the equipment needs repairs or replacement. And it must be cleaned regularly.



## CHEMICAL HAZARDS:

The most important routes for exposure for toxic chemicals are **inhalation** (i.e. through the lungs) and **skin absorption** (i.e. through the skin).

Dust which can get right into the lungs where they can be absorbed into the body, are called **respirable**. If the material can also be dissolved, dusts which settle on your skin can also be taken into the body by skin absorption.

**Gases** are defined technically as formless fluids which expand to fill the space available. **Vapours** are the gaseous form of substances normally in the solid or liquid state. Many vapours are heavier than air (such as Vinyl Chloride Monomer) and hug the ground when they leak, or gather in toxic or dangerous concentrations at the bottom of confined spaces. If the vapour density is greater than one, the vapour is heavier than air.

**Aerosols** are very fine liquid or solid particles dispersed in air. Examples are **dust** generated from solid matter, or **spray** generated from a liquid. Another common aerosol is **smoke**.

Chemicals can be corrosive which means they corrode, or burn, the skin or lungs. These burns are just as bad as those inflicted by fire.

**Flammable liquids** burn because they produce sufficient flammable vapour to mix with air. Petrol has a flash point of 38°C (100°F) and will burn at any temperature higher than this. Workers are horribly burnt when flammable liquids or materials catch fire unexpectedly – for example, near welding, or when torches are introduced into 'empty' solvent or petrol drums. Health and Safety offices need to be on the lookout for such danger and are to be provided with appropriate flammability and explosability data.

Chemical burns inside the lungs are extremely painful. Long-term (chronic) conditions include scarring or thickening of the lung tissue in response to chemical dusts (fibrosis or pneumoconiosis); or a development of small modules called granulomatosis, caused for example by beryllium; and cancer. A quite different long-term reaction is sensitisation of the lungs leading to occupational asthma. Lung allergy diseases can also be called hypersensitivity pneumonitis and reactive airways disease syndrome.

Liver function is characteristically affected by solvents.

Heart function is characteristically affected by solvents such as trichloroethylene.

Chemicals can act a primary irritants of the skin, causing **Irritant Contact Dermatitis** which will heal after several weeks and is the most common occupational skin disease. Some chemicals are skin sensitisers, producing **Allergic Contact Dermatitis**. The symptoms of dermatitis will appear to heal; however, it will flare up again on each contact with the sensitising chemical.

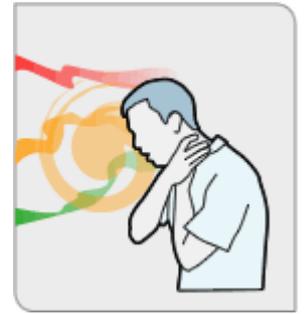
A strategy for dealing with chemical hazards:

- o Every Employee has the right to know what chemicals he or she is working with and what their known or suspected health hazards are.
- o The workplace should be designed and adapted to the needs of workers, rather than adapting workers to the needs of a given technology.

Material Safety Data Sheets (MSDS) are to be collated on every substance brought into the workplace

and copies are to be made available to the Employees who are to use the substances. This information includes:

- what is in the chemical product (ingredients)
- health effects (both short-term and long-term)
- physical description / properties
- first aid information
- requirements for controlling exposures
- storage and disposal requirements.



All data is to be centrally collated in a **Chemistry Register** by the Pharmacist.

Risks from working with chemicals can be reduced in a number of ways and according to the principle that the workplace should be made to fit the worker. Hierarchy of strategies being:

- Eliminate the hazard
- Substitute for less hazardous material
- Isolation of the hazard by total containment of the process
- Engineering controls
- Safe work procedures
- Personal protective equipment.

Some chemicals present too great a hazard for use, these are chemicals which are candidates for elimination by removing them from the workplace altogether.

Using a substitute chemical or process which is less hazardous achieves the removal of the hazard at source in favour of something less hazardous.

If a substance or process cannot be eliminated, then the next best defence is to enclose it completely, to prevent the escape of pollutant.

Engineering controls may mean removing dusts, fumes and vapours through the use of industrial **ventilation** systems – or in laboratories, through the use of fume cupboards. Ventilation is normally taken to mean exhaust or extraction ventilation, such as:

- hoods to suck in the contaminated air;
- ducts;
- air cleaning devices or filters;
- fans, to suck air through the system; and
- portable exhaust ventilation units.

Some simple points to check about a ventilation system are:

- Does the hood draw fumes away from the operator's breathing zone and not past the face?
- Is the hood as close to the source of pollution as possible?
- Is clean air (make-up air) being allowed to enter the workroom to replace air being drawn off?
- If air is recycled, is it efficiently cleaned by the filter? Is the filter cleaned or replaced regularly?
- Is the fan fitted with a silencer and is the ducting smooth and free from sharp angles to minimise reverberation?

'Isolating the hazard' puts a barrier around the process to prevent contamination of the workplace air; Personal Protective Equipment (PPE), also referred to as Protective Clothing and Equipment (PCE), puts the barrier on the worker. Protective clothing for chemical hazards includes:

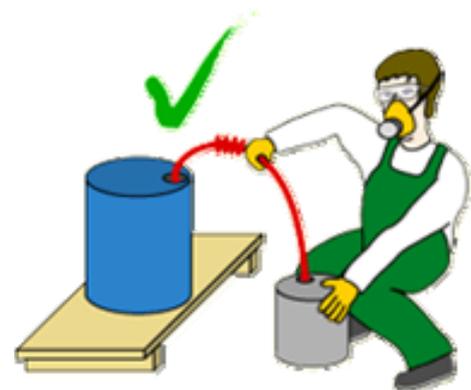
- face masks and shields
  - respirators
  - gloves
  - rubber boots
  - plastic overall
  - goggles
  - airline-fed helmets.
- ✓ Team Leaders are to take full responsibility for all aspects of personal protective equipment use, including cleaning, maintenance and storage. Team health and safety officers should be trained to monitor these procedures.
  - ✓ All workers required to wear PCE are to be trained in the correct fitting and use of each item of PCE.
  - ✓ All PCE purchased is to conform to the relevant Australian Standards and be maintained in conformity to relevant Australian Standards.
  - ✓ All items of PCE are to be replaced immediately if lost, damaged or when shelf life expires.
  - ✓ Use of PCE is to be accompanied by a comprehensive monitoring program to check that workers are really being protected.

### **SAFE WORKING CODE**

- a. The aim is to prevent chemical hazards from affecting the health of workers, by addressing the source of the hazards and modifying the work environment and work processes wherever possible.
- b. A Chemical Register will contain the master collection of Material Safety Data Sheets (MSDS) for all products in use in the workplace.
- c. No chemical product will be allowed to enter the workplace unless accompanied by a conforming MSDS.
- d. No new chemical product or process or equipment emitting chemical fumes or vapours will be introduced into the workplace until there has been full disclosure of the chemical's ingredients and their toxic properties as revealed by the results of toxicological tests from the suppliers.
- e. New chemicals which are mutagenic, carcinogenic or teratogenic in experimental tests in animals will not be introduced into the workplace under any circumstances.
- f. Management ensures that assessment of chemical hazards will be carried out and recorded in consultation with the Health and Safety Officers concerned.
- g. The Company agrees to act on all recommendations according to the following priorities:
  - I. eliminate the hazard
  - II. substitute the hazard
  - III. isolate the hazard
  - IV. engineering controls with environmental monitoring
  - V. safe working procedures
  - VI. use of personal protective equipment.
- h. It is agreed that 'safe operating procedures' will be established for all processes involving the handling, use or generation of hazardous chemicals and that these will be provided close at hand

to operators. Processes where engineering controls do not provide sufficient protection and protective clothing and equipment or administrative controls are needed, will be designated chemical hazard areas and labelled.

- i. In each chemical hazard area, only trained employees may enter, wearing the approved protection.
- j. Regular monitoring of chemical concentrations in the air will be conducted to ensure engineering controls are working.
- k. All designated employees working in 'chemical hazard areas' are offered annual medical examinations at the Company's expense.
- l. All health and environmental monitoring records will be held for a minimum of 30 years.
- m. The Company will make available all relevant information on chemical hazards and copies of relevant standards and regulations.
- n. All new Employees will be provided with a copy of this process and induction training will incorporate the control of chemical hazards.



### **SYNTHETIC MINERAL FIBRES (SMFs):**

Worksafe Australia declared a nation standard of SMFs of 0.5 respirable fibres per millimetre of air. SMFs constitute a family of widely-used fibres made from glass, rock, glass fibre, etc. It is their physical dimensions which are of most concern, rather than their chemical properties.

Continuous filaments are produced from different forms of melted glass which is drawn through tiny holes and wound on a rotating drum. The filaments are then spun together in various combinations to produce flat fibre, called roving, or twisted fibre, or strand mat. These materials are used to produce fibreglass-reinforced textiles.

Fibre dimensions, the longer and more slender they are, the more they approximate to asbestos, with the risk that they might have similar health effects, however, that appears not to be the case.

- o Skin, eye and upper respiratory tract irritation. Many workers exposed to glass fibres experience an intense itching sensation, which can sometimes progress to full dermatitis.
- o Lung scarring / fibrosis. Despite intensive investigations, there is virtually no evidence of SMFs having the capacity to scar the lungs and produce fibrosis, as is done so potently by asbestos.
- o Cancer. All attempts to induce lung cancer in laboratory animals through breathing fibres have met with negative results.

If fibre levels are in the caution zone (from 0.1 f/ml to 1.0 f/ml) then stringent conditions apply:

- Static and personal airborne fibre monitoring to be conducted on a continuous basis, with results being supplied to safety officers.
- Accurate local and general exhausts to be installed where dust is being created.
- Competent people are to be employed to clean work areas daily.
- In high traffic or draughty areas, plastic sheeting is to be used to segregate work areas.
- Warning signs should be displayed.
- Personal protective equipment is to be supplied.
- Worker hygiene is to be respected.



## **MOVEMENT HAZARDS: MANUAL HANDLING and REPETITIVE STRAIN INJURIES:**

According to Worksafe Australia, the occupation that suffers the highest proportion of back injury cases is nursing, where back disorders account for more than half of all injuries. Patient handling is the biggest problem.

Injuries to the lower back, related to lifting of weights and manual handling in general, account for 28% of all occupational injuries in Australia.

Where loads in excess of 16kg are being handled, employees are under an obligation to consult with health and safety officers to reduce the risks associated with handling such loads. A manual handling task is characterised by a combination of the load and the distance through which it is moved. In physics, the product of force by distance is called work.

Handling excessively heavy or awkward objects can cause a variety of health problems to both men and women. These include:

- abdominal hernia
- aggravation of circulatory and respiratory diseases
- fatigue, leading to accidents
- injuries arising from sudden exertion
- back injuries.

Manual lifting of heavy weights can cause acute (short-term) and chronic (long-term) injury to:

- back muscles and ligaments
- spine (sacral and lumbar vertebrae)
- intervertebral discs.

By far the most common cause of backache is strains and injuries to the ligaments and muscles that surround the bones. The more operations a patient undergoes, the lower are his or her chances of recovery from back pain. This spells disaster for the back injury victim. The conclusion to be drawn is that **a first encounter with back pain is to be avoided at all costs**. This makes prevention of back injury the highest possible priority.

Lifting of loads greater than about 16kg when held in close to the body, or equivalent conditions, such as 9kg held between 36cm and 89cm in front of the body, would be potentially hazardous for some people.

The physical dimensions of a load are just as important as its mass in causing back injuries.

It is interesting that back injuries themselves do not increase with the frequency of lifting. Apparently frequent lifting strengthens the muscles of the back and reduces the risk of injury. It is occasional heavy lifting that causes the most damage.

One of the most important issues in the area of weight lifting and injury rates concerns the effects of differences between men and women; between young and old; and between people of different sizes and shapes of people. A women's lifting strength is about 60% of a man's.

For loads away from the body, forces on the erector spinae muscles of the back and on the lumbosacral

disc in the spine, can be as much as 50% higher when using the recommended squat posture compared with the more natural stooped posture. Observations of workers experienced in handling of heavy loads show that the squat lifting posture is rarely used. It is safer to allow workers to use their own common sense and muscle sense than to teach them new drills in performing certain jobs in which a series of pre-determined positions must be consciously assumed.

The mass of the load, its size and shape and the frequency with which it is lifted – as being far more significant in determining who receives back injuries, than personal factors, such as sex, age or lifting technique.

The following criteria are used to identify whether a manual handling operation presents a risk or injury; the Code calls for some modification to the workplace or work practices if any of the criteria apply.

*Movements, posture and layout during manual handling*

1. Is there frequent or prolonged bending down where the hands pass below mid-thigh height?
2. Is there frequent or prolonged reaching above the shoulder?
3. Is there frequent or prolonged bending due to extended reach forward?
4. Is there frequent or prolonged twisting of the back?
5. Are awkward postures assumed frequently or over prolonged periods, that is, postures that are not forward facing or upright?

*Task and object*

6. Is manual handling performed frequently or for long time periods by the employee(s)?
7. Are loads moved or carried over long distances?
8. Is the weight of the object:
  - a. more than 4.5kg from a seated position?
  - b. more than 16kg and handled in a working posture other than seated?
  - c. more than 55kg?
9. For pushing, pulling or other application of forces: are large push / pulling forces involved?
10. Is the load difficult or awkward to handle, for example, due to its size, shape, temperature, instability or unpredictability?
11. Is it difficult or unsafe to get adequate grip of the load?

*Work environment*

12. Is the task performed in a confined space?
13. Is the lighting inadequate for safe manual handling?
14. Is the climate particularly cold or hot?
15. Are the floor working surfaces cluttered, uneven, slippery or otherwise unsafe?

*Individual factors*

16. Is the employee new to the work or returning from an extended period away from work?
17. Are there age-related factors, disabilities or other special factors that may affect task performance?
18. Does the employee's clothing or personal protective equipment interfere with manual handling performance?

Generally, no person should be required to lift, lower or carry loads above 55kg, unless mechanical assistance or team lifting arrangements are provided to lower the risk of injury.

*Modifying the workplace layout*

- storing heavier and frequently used items at waist level
- raising the work level through use of self-adjusting platform
- adjusting the work level to avoid excessive bending of the back
- adjusting work heights, and changing work configurations to improve posture

#### *Modifying and redesigning tools*

- suspending tools to avoid unnecessary loads
- ensuring that tools are well balanced

#### *Rearranging materials flow*

- using gravity feed principle to avoid lowering
- using taps to avoid emptying containers of liquid
- using hoses to avoid lifting containers of liquid
- installing rollers to avoid carrying
- pouring without lifting, by suspending containers

#### *Modifying the task by use of mechanical assistance*

- packing hooks, crowbars, rollers, jacks, bull bars, adjustable platforms, trestles, hand trolleys, rails, wheel sets, levers, hydraulic ramps, etc

#### *Modify task through use of mechanical handling equipment*

- conveyors
- cranes and hoists
- industrial trucks
- scissor lifts
- forklifts
- electric hoists.

Adapt the workplace to human needs (by limiting the size and mass of loads) rather than allow the workforce to be adapted by restricting employment to the strongest and fittest.

Where manual handling is absolutely necessary, the frequency of accidents and back injuries can be reduced by paying attention to the design of the manual handling tasks and to the load itself.

A Code for **fork-lift** trucks should cover such points as:

- speed limits
- designated pathways
- fencing to avoid running off platforms
- placing of mirrors at difficult corners
- good visibility where stacking is to be done
- parking areas
- regular maintenance
- control of exhaust fumes.

Screening requires workers to perform a series of 'strength tests' prior to employment. Whilst it is arguable that such screening tests do give prospective employees an idea as to whether they can meet the demands of a heavy job, it is preferable to protect all workers with realistic standards applicable to all workplaces.

**Repetitive Strain Injuries (RSI)** has been around for a long time and they are characteristic accompaniment of fast-paced industrial work. The rapid development of mechanisation and automation and particularly the introduction of electronic technology, has led to the creation of increasingly simple, single-task, repetitive jobs.

Occupational overuse syndromes are recurrent or persistent pain syndromes of the neck, shoulders and upper and lower limbs induced by excessive and cumulative static and / or dynamic overload of the musculoskeletal system beyond its capacity for recovery.

A **syndrome** is a set of symptoms or disease conditions that can plausibly be associated together. RSIs involve a mixture of pain, swelling, crackling sound (crepitus) and weakness of muscles – all of which can be associated with over-use of muscles in the neck, shoulders, arms and legs.

This spectrum of conditions is caused by the muscles being used to a point of fatigue over and over again ('excessive and cumulative overload') through repeated movements such as assembling the same component or through being held rigidly in the same posture, e.g. at a keyboard or sitting at a bench which is the wrong height. Movements involve **dynamic overload**; an uncomfortable posture involves **static overload**.

The muscles and tendons are built to be able to withstand fatigue and are able to recover if they are given time, a variety of tasks and regular rest breaks. It is the absence of variety and rest breaks that strains the muscles and tendons **beyond their capacity for recovery**.

Aspects of repetitive work most strongly linked with the development of RSI include:

- force, speed and direction of movement
- frequency of movement
- total number of movements
- work posture
- rate of work
- stressful working environments.

RSI arises from:

- poor workplace design
- poor tools and equipment design
- poor job design
- poor workplace administrative procedures
- excessive work rates.

Issues extend to the condition of the floor. Floors are frequently wet thus every precaution needs to be installed to preventing slipping. Slips and falls in similar wet operations represent the most common cause of injury.

If Employees are required to stand in the same position on hard surfaces, the floor must be covered with a semi-resilient thermally non-conductive material.

The preventive strategies to be pursued with the advice of professional ergonomists include:

1. Modifications to the workplace, equipment and task organisation. Some re-organisation according to sound ergonomic principles, (for example, changes to bench heights, seating, equipment design, tool design, number and frequency of movements required by the worker) can contribute to the prevention of RSI. It is essential that workers be trained to ensure that work is carried out according to sound ergonomic principles.
2. Elimination of single-task jobs. Boring and repetitive assembly work and process work, where the job has been deskilled and specialised to the maximum degree, is most frequently associated with RSI and the elimination of such jobs is fundamental to the eradication of RSI.
3. Setting work rates. Workers should be able to complete work at a rate that is comfortable for them and does not lead to the development of RSIs.
4. Job rotation. Workers should be rotated frequently away from repetitive work, to alleviate boredom and to ensure that a variety of sets of muscles and tendons is used.
5. Provision for rest breaks. Where job variety and rotation does not exist the provision of rest breaks which allow rest and movement away from the performance of the same single task is vital.

Medical monitoring. The absence of scientifically validated 'objective' tests for RSI does not mean that workers required to do repetitive work should be left without any individual monitoring. Such monitoring could consist of:

- assessment of active and passive hand, wrist, forearm, shoulder and neck movements.
- isometric muscle contraction against resistance.
- muscle stretching.
- palpation for muscle tone, hardening and tenderness.
- examination for presence of local swelling particularly around tendons and their muscle and bone junctions.
- hand grip power measurement conducted twice with a straight elbow and twice with the elbow flexed, the highest recorded value should be chosen as the measure of the respective function.
- other special test movements as required.



## **HAZARDOUS WORK ORGANISATION and STRESS:**

Hazards at work involve more than the physical, chemical and biological work environment; they are also inherent in the very way that work is organised.

Advances in production technology and the application of 'scientific management' have led to the simplification of work in terms of both the manual and intellectual contributions demanded of employees. This has resulted in the creation of a great many jobs in industry which require very little skill and offer almost no scope for workers to use their initiative, creativity or to make decisions. The situation has not come about by accident but as part of a deliberate policy to employ unskilled labour and eliminate, as far as possible, the scope for human error. Thus many equipment operators and workers on production, assembly and packaging lines carry out repetitive tasks, with work cycles from a few minutes to as little as a few seconds. This is not the objective of PASCAS.

To continue with the overview: After the initial excitement most people experience on starting work with 'new' computerised screen-based equipment, there is a period of depression and then frustration when it is realised just how rigid and stressful machine-paced working can be – particularly if it is combined with electronic monitoring of every action and every mistake the operator makes.

The Australian Bureau of Statistics estimates that approximately a quarter of Australian workers are on shift work.

Shift-work systems are rarely unchanging over time. Most are what are termed 'rotating' systems. Example: The groups rotate through seven sessions on morning shift (7am to 3pm), then a rostered day off, then seven sessions on night shift (11pm to 7am), then four rostered days off, then seven sessions on afternoon shift (3pm to 11pm), followed by two rostered days off. The longest break comes after night shift and the shortest after morning shifts.

Workers on night shifts make more mistakes than day-shift employees and that this is particularly true for rotating shift workers.

More blue-collar and clerical workers suffer from stress induced by their work than do executives. Stress derives from the way work is organised and it can only be prevented if workers seek to have work re-organised.

Stress is normally experienced subjectively as fatigue, anxiety and depression. It is sometimes exhibited as behaviour changes when people become hostile and aggressive. These are all signs or symptoms of stress and indicate that there is something radically wrong with the job or elsewhere. However, a bad job can drive a worker mad.

In a noisy workplace, or in a dull, monotonous job where the pressure to maintain production is intense, or in a work situation full of conflict and poorly defined roles, then our bodies go into a virtual permanent state of 'stress'.

Subjects were given a task involving mental arithmetic against a moderate background noise level of 76 decibels. The noise level then increased to an uncomfortable 86 decibels and the subjects were asked to perform at the same rate. Their measured heart rate and adrenaline / cortisol levels went up, meaning that there was an increase in the physiological cost involved in doing the same task under more stressful conditions.

Workers paced by automated machines showed more signs of stressful arousal (adrenaline levels) and irritation (noradrenaline levels) than manual workers who could pace themselves.

All of PASCAS's process speeds are set by reference to the quality of the product required at the finish, speed is not matched to physical capacity but to quality which is controlled by the Employee – accordingly the Employee is not paced but he sets the pace.

Much work organisation today places workers at risk due to the pressure of boring, monotonous, fast-paced, repetitive work, frequently carried out continuously, for long hours, with high work loads acting as a stick and incentive payment systems as a carrot, under strict monitoring and surveillance and frequently performed during unsocial hours at the convenience of the equipment rather than suiting the needs of workers and their families. It is little wonder then that the health costs of this sort of organisation are high.

- o The faster work is paced and the more exacting and repetitive are its movements, the more the over-used muscles and tendons become strained, leading to inflammation, soreness, swelling and long-term disability.
- o There is the physiological cost of this pressure. The body is placed in a permanent state of arousal, via two major hormones and their effects: cortisol and adrenaline. The body's normal hormone balance is thus upset, this leads to immediate problems (loss of appetite, state of nervous excitement) and longer-term problems like ulcers and high blood pressure.
- o There is mental stress and neurosis, partly mediated via the physiological arousal and partly a mental response to boring and degrading work.
- o There is the risk of accidents due to fatigue, especially amongst workers who find themselves in a permanent state of 'shift-lag'.
- o There is long-term organic disease.

The **quality of the work process should be improved** by: job enlargement and job enrichment; voluntary job rotation for those working on repetitive processes or in autonomous work groups; or breaks organised or non-organised, with a variety of tasks – elimination of single-task jobs, mix of work tasks, rotation of jobs.

The objective is the rescheduling of shift work where it is not necessary to ordinary day work – particularly night shift work. Emphasis should be placed on implementing permanent evening or night shifts rather than rotating systems as these are associated with less health and social costs. In addition, minimise the frequency of rotation of shifts. Clearly, rapidly rotating shifts are to be avoided as far as possible in the interest of worker health.

While twelve hour shifts are not hazardous in themselves, they potentially exacerbate the problems of shift working, particularly if workers use their extra free time to undertake second jobs.

Twelve hour shift work, with correctly designed rosters, may provide benefits to Employees by reducing cumulative fatigue, increasing leisure time and relieving the pressure of seven day shift work. For twelve hour shift work to be advantageous, it is essential the increased leisure time be used for recuperation and recreation and not as an opportunity for additional employment.

Whilst day work does not involve the same disturbances to circadian rhythms as night work, twelve hour day work may still involve disruption to sleep and eating patterns, fatigue, social dislocation and psychological problems.

To reduce the hazards associated with night and shift work, rosters should be designed to:

- have a maximum of two night shifts in succession.
- have at least a twelve hour interval between shifts.
- have a short cycle period with regular rotations.
- include at least two free weekends each month.
- have the day shift not start before 6 am.
- allow workers some flexibility about shift change times and shift length, and
- provide in addition to normal breaks, where practicable, an extended rest period during night shift, breaks should occur at the same time each night.



## ALLERGIES:

Many forms of allergic lung disease have been named after the occupations at risk of developing the disease.

Allergic lung disease states are mediated by immunoglobins, some of which have been specifically identified, setting off a chain of biochemical reactions in the lung tissue resulting in constriction or obstruction of the airways. Symptoms typically including wheezing, coughing, difficulty in breathing and a sense of heaviness in the chest. Once sensitised to a particular chemical, a worker develops an asthmatic attack on being re-exposed to even minute amounts of the chemical. The symptoms do not always appear immediately after exposure; some workers experience an asthmatic reaction several hours later, or after the day's work at night or in the early morning.

The most common groups of chemicals causing contact dermatitis include epoxy resins, cleansers and solvents.

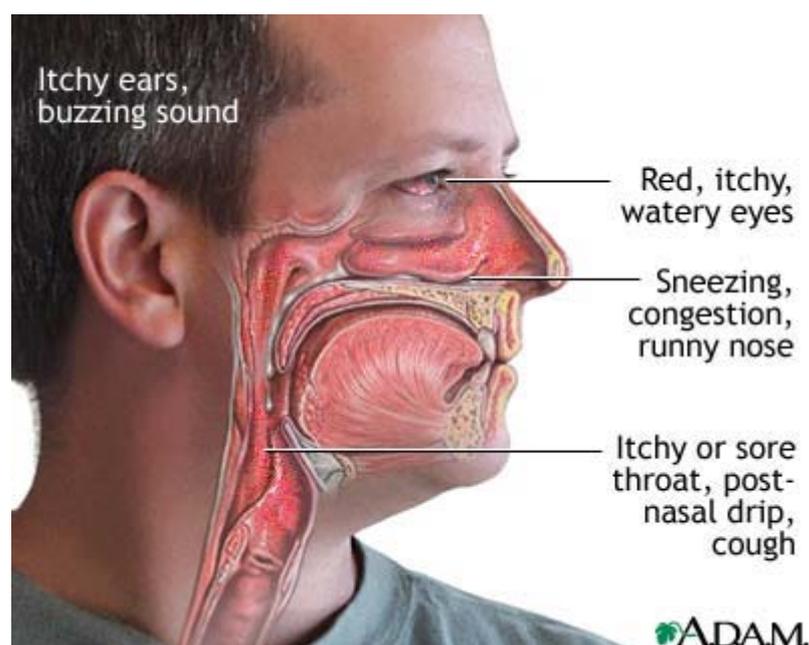
The fact is that contact allergy develops only after previous contact with a given substance, is highly specific to that substance or to closely related chemicals and develops only after repeated contact.

Allergens must be eliminated from the workplace where possible or rigorously controlled to reduce the levels of allergen exposure.

Epoxy resins have been documented as sensitising agents for well over 30 years. Several components in epoxy resin products are known as sensitising agents for lung and skin. The resin itself is a very common Allergic Contact Dermatitis agent in the building industry.

Use of protective clothing, such as gloves and face masks should be seen as the last resort of protection.

Cement is one of the single biggest causes of occupational contact dermatitis, afflicting workers in the cement manufacturing industry, the building industry and in the cement products industry.



## OCCUPATIONAL INFECTIONS: AIDS, HEPATITIS:

The concerns with AIDS have highlighted similar problems with other infectious diseases. Hepatitis is not as lethal as AIDS, but is nonetheless, an extremely serious condition and one which occurs more frequently than AIDS. Traditionally these have been experienced mainly amongst workers exposed to animals.

'Sick Building' Syndrome aptly describes a range of ill-health symptoms associated with offices and other buildings, particularly buildings which are largely sealed. The common factor is the quality of air supplied to the building.

There are five known types of Hepatitis virus. These are Hepatitis A, B, C, delta and E. Infections with types A and B are the most common; types C and E have only recently been identified, and together with type delta, are rare in the general population.

The virus that causes AIDS (Acquired Immuno Deficiency Syndrome) is called Human Immunodeficiency Virus (HIV). The HIV virus is **not** transmitted by sneezing, coughing, swimming pools, public transport, toilet seats, sweat, tears, shared kitchen utensils or insect bites.

There are only three routes of HIV infection:

- Through the transfer of infected human blood, body fluids or tissues, e.g. through a needlestick injury.
- Through transfer from an infected mother to foetus or vice versa.
- Through transfer of infected human fluid in sexual intercourse.

The Hepatitis B virus is transmitted in a similar fashion – and so all the precautions that are mounted for AIDS apply with equal force to Hepatitis B.

Policy Principles, development and implementation:

- Workers with HIV infection who are healthy are to be treated the same as any other worker. Workers with HIV-related illness, including AIDS, are to be treated the same as any other worker with an illness.
- HIV / AIDS workplace policies are to be developed and implemented before HIV-related problems happen in the workplace.
- HIV / AIDS workplace policies are to be communicated to all concerned and be continually reviewed, monitored and evaluated.

Policy Components

A Applying for a job

- Pre-employment screening for HIV antibody, for assessment of risk behaviour or for past HIV tests is not required.

B People with a job

- HIV / AIDS screening is not required.
- Confidentiality is to be maintained.
- No worker has to tell the management about his or her HIV / AIDS status.
- Workers with HIV / AIDS and workers who are believed to have HIV / AIDS must be protected

from discrimination.

- All workers should know how to get information on HIV / AIDS and how to get counselling services.
- No worker with HIV / AIDS is to be refused work related benefits, including promotion and job security.
- Reasonable alternative working arrangements for people whose fitness to work is affected by HIV-related illness is to be implemented.
- No one is to be sacked for having HIV infection. People who are infected are to be allowed to work as long as they are fit enough for work.
- Precautions to reduce the risk of transmitting blood-borne infections, such as AIDS and Hepatitis B, must be taken in all workplace First Aid situations.

The worker in need of emergency First Aid treatment after a fall at work or the road accident victim cannot be equated with drums of unmarked chemicals. If the hazard was an unidentified chemical, strategy would be to not handle it until adequate information about the health and safety properties was available to determine how best to handle the chemical safely. Extension of this strategy to a human being is both irrational and unjustified – however – all body fluids are to be treated as potentially hazardous.

**ICT** | **INFECTION  
CONTROL  
T O D A Y.**



## **DRUGS and ALCOHOL at WORK:**

Alcohol and drug intoxication is a problem of increasing social concern and this concern is spilling over into the workplace. Clearly, if some workers are turning up at the job in a state of intoxication, or are succumbing to behaviour patterns that can be described as addictive, then they can become a threat to themselves and possibly to their fellow workers. If their work performance is impaired, lowering their productivity, then clearly their condition is of concern to the employer.

Drugs and alcohol at work is a new and very different kind of Occupational Health and Safety (OHS) issue.

Workers and safety officers themselves are usually the first to know if one of their colleagues is 'coming under the influence'.

Employee Assistance Programs (EAPs) represent a more considered employer response to alcohol and drug problems than discipline or dismissal. Provided that employers agree to place workplace factors on a par with individual concerns, there is a basis for co-operation in EAPs. The points to be clarified in the design of a program are:

- ✓ How the EAP is to be promoted to the workforce (e.g. ensuring that the message carries no 'victim blaming' overtones).
- ✓ Agreed responses to workers who come forward voluntarily (e.g. privacy and promptness and employment security during assistance).
- ✓ Agreed criteria for identifying problem workers who do not come forward voluntarily (e.g. one or two incidents of poor performance).
- ✓ Agreed measures to be taken with such workers (e.g. counselling and referral to a rehabilitation service).
- ✓ Agreed 'performance targets' for such workers to demonstrate improvement while in the program.
- ✓ Agreed measures to be taken if no improvement is visible.

Drug testing is conducted through several forms of analysis:

- breath analysis (breathalyser) – for alcohol.
- urine analysis – for drugs or their metabolites ingested previously.
- blood analysis – for drugs present in the body.
- performance tests.

Drugs generally sought in such analyses include: alcohol, THC (marijuana), opiates, barbiturates, amphetamines, cocaine, methadone and benzodiazepines.

Policy on Alcohol and Drugs at work:

Workers affected by any kind of drug on the job can be a danger to other workers and themselves. When other workers feel that such a danger exists, they should contact a workers' safety officer and / or leader. A worker who is dangerously affected by alcohol and / or any drug will not be allowed to work until he / she has an acceptable level of sobriety, i.e. deemed fit to do the job. A worker who is having problems with alcohol and / or other drugs, but who is willing to get help, won't be sacked because of that problem. A worker who is having problems with alcohol and other drugs, must stick with a program to keep up that protection from being sacked. A worker whilst attending treatment will be

given accrued sick leave or otherwise leave without pay. A worker who is deemed to be dangerously affected by alcohol or any other drug will be sent home to recover in a taxi at the employee's expense. If this happens twice, the worker will be interviewed by the Health and Safety Officer of his unit and by the Human Resources Manager. If the worker agrees to get help he / she will be given sick leave or leave without pay while attending treatment. If the worker refuses he / she may be suspended or dismissed the next time he / she is dangerously affected.



## **WOMEN and OCCUPATIONAL HEALTH:**

More women are in paid employment in Australia than ever before. Women at work have specific occupational health and safety needs that are not addressed by general health and safety policies. For example:

- Women are concentrated in certain industries where they are exposed to particular dangers such as repetitive strain injury.
- Women differ from men both physically and physiologically and a workplace or work system designed for men is some-times unsuitable for women.
- Women have specific biological experiences such as menstruation, pregnancy and menopause, whose interaction with work needs to be considered.
- Women have traditionally been banned from working with materials and processes likely to damage the developing foetus.
- Women have traditionally been restricted from working in certain jobs under 'protective' clauses in awards and in legislation, e.g. those setting weight-lifting limits for women but not for men.
- Women in paid employment are generally forced to carry extra responsibilities and duties at home and this can add to the damaging effects on health of a stressful working environment that are felt by both men and women.

Physical differences between men and women make it unacceptable to design jobs for women based on data obtained for men, e.g. relating to workplace dimensions, workbench height, etc., suitable for women.

Forced retention of urine is a problem for many women process workers because, in general, their bladders are smaller than those of men.

If the chairs, desks and other items making up the screen-based equipment workstations are adjustable, then the physical differences between men and women, and between workers generally, do not become a problem.

Pregnancy should not be seen as a barrier to employment. Studies examining pregnancy outcome and its link with employment have found no general detrimental effect. In fact, the longer the expectant mother stays at work the better the outcome.

An experience common to all women during the course of their reproductive life is menstruation. The effects of work on menstruation and of menstruation on work is a neglected topic of research. Painful periods are in fact one of the most common disorders amongst women. Pre-menstrual variations in mood, physical symptoms and behaviour seem to be the rule rather than the exception.

Code of Approach to Pregnancy:

- ✓ Physically exhausting work, or work that involves long periods of standing or being confined to a fixed position, has been linked with adverse pregnancy outcomes and poor health of the pregnant woman. Such work duties are to be modified.
- ✓ A pregnant woman is not to be expected to tolerate a situation where she has to work with materials known to damage the foetus.
- ✓ Work is to be structured to ease the extra burden carried by a pregnant women.

## TECHNIQUES of MONITORING, MEASUREMENT and CONTROL:

Safety officers need to be familiar with the broad content of the disciplines involved – epidemiology, medical and biological monitoring, occupational hygiene, ergonomics, and safety and control engineering.

There are four levels of **protection** for people exposed to toxic substances or dangerous processes, assuming that safer substitutes cannot be used. These are:

- ✓ Containment – control the hazard at source.
- ✓ Ventilation and shielding – control of the hazard on its way from source to person.
- ✓ Protective clothing – control of bodily exposure.
- ✓ Medical flushing of toxic substances out of the body – control of body burdens of poisons.

In addition there is the more fundamental form of protection offered by redesigning the tools, equipment, processes, workstations and entire workplace in order to remove hazards altogether. Alternatively, there is the least desirable option of leaving the hazards intact and protecting workers through administration controls like job rotation, permit-to-work certificates, licensing and even total exclusion of certain categories of workers, e.g. women, from employment.

There are four levels of **monitoring** which should trigger some form of protection. But monitoring is not protection. The levels are:

- ✓ Environmental monitoring
- ✓ Biological monitoring
- ✓ Medical monitoring
- ✓ Epidemiology



## ERGONOMICS:

Ergonomics is the 'study of work' and its application to the design of:

- tools and equipment
- workstations
- the work-process
- the workplace as a whole.

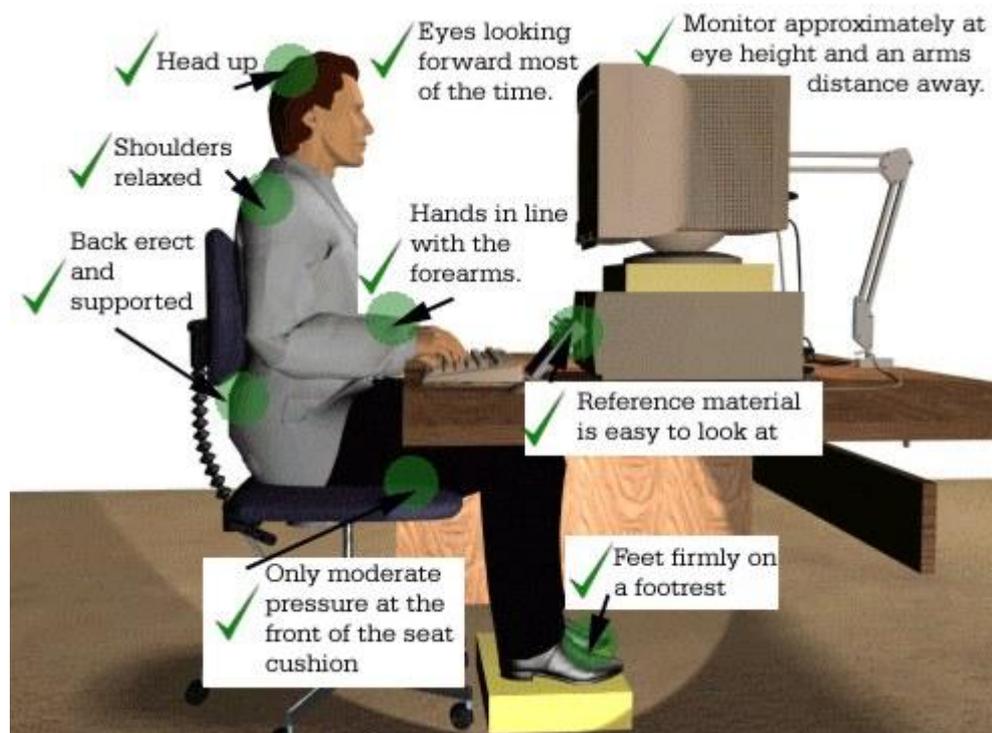
Ergonomics starts with the study of the human form, at rest and in motion.

Almost every aspect of the workplace – the tools and equipment used, the workstations, the work processes as well as the work layout and amenities – is a source of discomfort, hazard or oppression for the worker and is amenable to improvement through ergonomic design.

Single-task, repetitive work, is not only monotonous, boring and stressful, but it leads to repetitive strain injuries. Ergonomics teaches the need for a variety of tools and for job rotation.

Assembly-line work, although still common, is slowly being phased out in favour of batch and small group production, where workers can communicate better with each other and cooperate in the finishing of a discrete product. Again, this is basic ergonomics.

Special attention is needed on this subject for the employees who have disabilities.



## OCCUPATIONAL HYGIENE:

Safety officers need to know the basic techniques so that they are able to critically evaluate an occupational hygienist's report and recommendations applying to their own workplace.

Safety engineering is the modification of tools, equipment and processes to prevent **accidents** from occurring. It draws on the principles of equipment guarding, machine controls and lockout procedures.

Machine guarding is the oldest and best-understood of human protection devices to be incorporated in technology. Fixed guards are required against 'bitey or nip points'.

- Are the guards in place? If not, maintenance is required.
- Are operators removing guards to meet deadlines, or to get bonuses? If so, why?
- Are unguarded moving parts causing accidents? If so, a safety engineer is needed.
- Is access restricted to imaging equipment?

A lockout procedure is one which locks controls to an 'off' position while a worker is in a vulnerable position such as performing maintenance within x-ray equipment.

- Are all maintenance operations covered by lockout procedures?
- Are lockout procedures fail-safe, that is, do they fail or cut out to safety position, rather than active position?
- Are new Technicians trained in the lockout procedures?

Engineering control of health hazards is the modification of tools, equipment and processes to prevent illnesses from occurring. It is concerned with the general control of:

- physical hazards – noise, vibration, radiation, heat and cold
- chemical fumes
- dusts and fibres.

There are certain general procedures available for the control of all these hazards which in general are:

A. Source removal and modification of process:

- Substitution of toxic chemicals.
- Removal of source of noise in pneumatic systems. The shriek and blast of many pneumatic systems is due to fast, turbulent release of air. Redesign of the valves on the exhaust of such system can make them much quieter.
- Removal of source vibration.
- Pelletisation of powders makes them less-easily inhaled.

B. Source isolation and enclosure:

- Enclosing chemical systems.
- Use of fume cupboards in laboratories.
- Use of vibration mountings on shaking machinery and equipment.
- Use of sound enclosure booths around noisy equipment.

C. Pathway modification:

- If the source cannot be enclosed, then its path of transmission to the worker can be interrupted.

The principal measures involved here are **ventilation, insulation** and **use of wet methods** for dust suppression.

Ventilation is a means of removing contaminated air and replacing it with fresh or recirculated air. It is used to remove dusts, fibres, chemical fumes and heat.

Insulation literally means making an island of something, that is, cutting it off from its surroundings. Insulation can be used to protect workers from electricity, heat, cold, noise and fibres released into the air.

Water sprays are used to suppress dust. Wet methods are simple and inexpensive, but, a number of pitfalls exist:

- Is the most dangerous part of the dust being wet and suppressed?
- Is the water causing problems such as slipperiness or greater humidity?
- Is the water adequately disposed of?

Worker enclosures include putting workers in sound-proof booths next to unsilenced equipment. Worker enclosures are always **confined spaces** so special precautions suitable for confined spaces are needed:

- Can the worker see the process and take evasive action?
- Is there sufficient sensory stimulus?
- Is the environment in the container controlled?

**Protective clothing and equipment (PCE)**, the use thereof should always be seen as a last resort, to be employed only when all other methods have been tried and found not to work. PCE include such items of clothing as overalls, helmets, gloves, boots, aprons; and such items of equipment as earplugs and muffs, respirators, goggles, safety glasses, welders' masks and shields. In fact, for every part of the worker's body that may be exposed to hazards, there is an item of PCE available:

NOTE:

**PCE frequently does not provide the protection claimed.** Examples include gloves that do not prevent absorption of toxic solvents, safety shoes that do not withstand falling weights, face masks that clog up quickly and make breathing impossible, ear muffs that provide no protection against high or low frequency noises.

The NSW Occupational Health Branch of the Department of Industrial Relations at Lidcombe has drawn up schedules of 'approved' items of PCE.

Principles to be respected in any Protective Clothing and Equipment (PCE) program:

- o PCE should be adopted only after all other methods of direct control of hazards have been tried and evaluated. Attempts to find alternatives to PCE should be ongoing and these attempts should be reviewed every six months.
- o All aspects of the PCE program are to be detailed in written procedures, covering selection, use maintenance and training.
- o Only items of PCE conforming to relevant Australian Standards, or approved by regulatory authorities will be purchased.
- o All PCE is to personally fitted and issued to individual Technicians. 'Pools' of PCE for

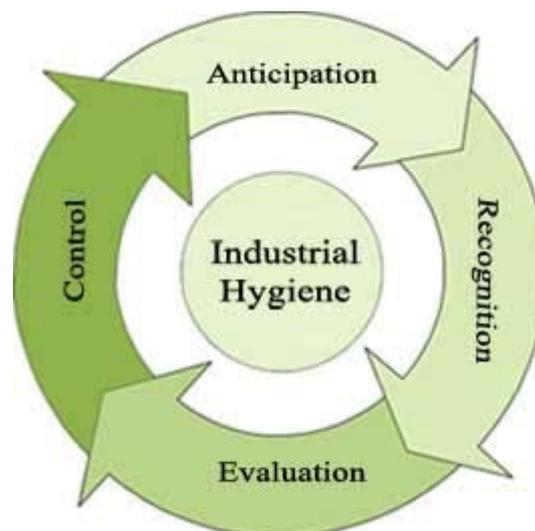
indiscriminate use are unhygienic and unacceptable.

- o All workers should be trained in the safe fitting and use of PCE.
- o No worker is to be charged for any item of PCE as its use is part of the job.
- o All items of PCE are to be checked regularly.

Adequate storage facilities for PCE is to be provided and full washing and showering facilities to be made available with them. Job rotation is to apply in those circumstances where the equipment is oppressive when used.

Criteria to be satisfied by a good environmental monitoring program:

- The program is to have clear, stated aims, for example, to identify levels of hazard where certain actions will be taken.
- The program is to be administered by qualified staff.
- All results generated by the program are to be available to safety officers.
- There is to be clear written procedures or actions to be implemented if environmental monitoring reveals that certain limits have been exceeded.



## **MEDICAL and BIOLOGICAL MONITORING:**

Medical monitoring is the phrase used to describe all the clinical and biological checks that workers go through in the course of their employment – the pre-employment medicals and questionnaires, the tests and examinations required during employment or on return to work after an illness, or to adjudicate a worker's compensation claim. It is monitoring, not of the working environment but of the worker's person.

A pre-employment medical is the examination given when applying for a job. It is designed to assess the applicants general fitness as well as his / her susceptibility to any of the particular hazards that are likely to be encountered on the job.

The pre-employment medical is **not** a full clinical examination as might be carried out if the applicant went to his / her own doctor for a check-up or entered hospital. Thus certain items of information are not relevant for pre-employment medical, e.g. a family history.

The intended work position is advised of by the Company to the Company Doctor and tests are generally referenced to points of concern for future monitoring as well as risk. e.g.:

- hearing in relation to noisy processes
- lung capacity in relation to dusty processes
- back condition in respect to lifting requirements
- allergies in respect to chemical processes
- eyesight and the need for protection.

Epileptics are quite rightly barred from certain jobs, particularly involving heights.

Some examinations are required by law, such as audiometry for workers exposed to noise levels in excess of 90 dBA.

The range of medical tests include:

- o Physical 'side-room' tests – X-rays, ultrasonography, audiometry, eye tests, lung-function tests, ECGs, etc.
- o Test for sensitisation.
- o Cytology (study of the physiological structure).

X-rays may be used as screening checks for workers exposed to dust, they are not effective with regard to back assessments. Lung-function tests are more acceptable means of checking for lung damage caused by dusts or fibres. Other tests check the gas-transfer capacity of the lungs and the dynamic characteristics of breathing.

Eye tests have recently been the object of great attention due to the widespread introduction of visual display units (VDUs).

The development of an allergic reaction to particular substances ('sensitisation') is an increasing problem in industry. Occupational asthma and dermatitis are the principal conditions encountered. Tests have been developed to confirm that a local skin reaction or respiratory difficulty is an allergic, or sensitisation, response to a substance encountered at work. These are called patch tests or prick tests.

Occupational Health Record Keeping national standards are:

**Basic record keeping:** All employers should maintain basic personnel records which give personal information relating to each employee, including family and given name, date and place of birth, address, next of kin, gender, job classification and dates, cause and duration of absences from work.

**Occupational health service record:** These should include, in addition to personal information detailed above, job classification and occupational exposure levels, details of absences from work caused by ill health, details of attendances at the medical centre and dates and details of health surveillance examination tests.

**Access:** On request at any time and on termination of employment the health service should provide the worker with a summary of health and hygiene information relating to his or her exposure to the work environment.

**Occupational hygiene records:** Records of exposure to hazards should include details of sampling and analytical instruments and methods, information linking a sample to an individual, description of work activity where the sample was taken, estimate of likely exposure and a note of relevant protective clothes or equipment worn or used.

**Retention of records:** Records should be held for at least 30 years (i.e. long enough to 'cover the possible generation of chronic disease').



**River of Feeling Life**

## **HEALTH and SAFETY OFFICERS:**

The linchpin around health and safety in the workplace is the health and safety officers in each team, who will be responsible for monitoring and raising all health and safety issues with management on behalf of the group of employees he or she is to represent.

All issues raised are to be monitored by the Health and Safety Manager until every issue is settled. The Human Resources Manager will ensure that each issue is allocated to a party in the Company who can resolve and authorise the works required in relation thereto. Copies of each issue is to be given to the Division Manager or Director who are expected to action upon same promptly.

Even though each team has a health and safety nominee, a group of teams may appoint a group leader who in turn is to be given additional assistance to carry out this function. Leaders are to bring to the attention of the Commercial Manager, CEO and Human Resource Manager any issues of concern that are not being dealt with prudently or as they see fit. Lines of communication are to be direct and open.

Every employee is to have access to a health and safety officer, no matter where or when they are working.

The overriding objective is to resolve all health and safety issues within the team involved which therefore requires delegation of authority and allocation of resources for them to implement the desired remedy within given guidelines.

The leaders of the health and safety officers will be:

Human Resources Manager (Coordinator of Health & Safety)  
Division Directors

This structure ensures one health and safety principal for about 50 employees however this ratio is about one officer for every eight employees when each team has a nominee.

The Coordinator of the health and safety lead team will also be appointed as Occupational Health & Safety Officer (OHS) under the Queensland Workplace Health and Safety Act 1989 and WorkCover.

Training is provided by joint industry and employer courses, by organisations such as the National Safety Council and by educational institutions such as colleges of Technical Advancement of Further Education (TAFE).

The basic facilities needed by the health and safety officers are:

- Time off with pay to perform their functions and attend training programs.
- Access to telephone, desk, filing cabinet, shelves, computer and other office amenities.

Such facilities are to be provided as an annex to the managers offices.



## **CONDUCTING INSPECTIONS and INVESTIGATIONS:**

There are three kinds:

- General inspections of the work area conducted on a regular basis.
- Special investigations to focus on a particular hazard, to follow up an issue raised by anyone.
- Accident inspections, to investigate their causes.

General Inspections: Safety officers are to conduct regular walkaround observations with the aid of a checklist and provisional improvement notices (PINs) in order to:

- Check or observe that agreed procedures are being complied with.
- Detect work methods or habits developing that may lead to a problem.
- Bring to light issues which may not have been identified before.
- Observe whether agreed changes or improvements are being carried out.
- Discuss health and safety issues with Technicians and Employees on the job.

Officers from each team should carry out such random and casual walkarounds as often as they perceive there is a need to do so – everyone benefits from this positive interaction. Matters raised should be resolved between the Officer and Employee on the spot or recommendations for specific action should be reported with details of the matter for attention.

Inspection implies certain activities, such as:

- Gaining physical access to all parts of the workplace.
- Taking photographs and videos for further study and assessment (equipment to be available at the Help Station by the service providers of central office).
- Taking samples for analysis with the aid of the Technical Engineer.
- Talking to Technicians and Employees at their workplace.
- Taking notes and making reports in a constructive positive manner.

Checklists and other aids are to be made available for the Officers so that they can deal with the hazards and problems in their work area (e.g. noise, vibration, dust levels, lifting procedures, slippery floors as a result of water, electrical and fire safety, handling of chemicals, lighting levels, lockout and isolation procedures, presence of safety guards and so on).

Any items requiring attention should be raised with management as soon as possible.

Special Investigation: This might be an investigation of a complaint brought by an Employee or Technician, an investigation sparked by a hazard alert or issues raised as a result of any point of concern. This will involve all top level health and safety officers and relevant management.

Accident Investigation: Regular inspections and constant discussions should prevent accidents from occurring. But accidents will still occur and they need to be investigated thoroughly in order to discover their underlying causes.

The health and safety officers need to be informed whenever an accident or near-miss occurs in the workplace and are required to undertake an emergency inspection of the site of the accident or near-miss.

If the accident was so serious that work has stopped, then work should not be started again until the health and safety officer(s) have been able to conduct an emergency inspection with the management of the area.

Accidents occur; it is now widely recognised, mainly through unsafe systems of work rather than through workers' carelessness. Therefore, the health and safety officer should focus attention on the **underlying causes** of an accident and not just on any momentary loss of concentration by a worker concerned.

When an employee is called into the personnel office after an accident then the Employee's team safety office is to accompany the Employee so that a clear understanding of the accident is recorded and a proper remedy for prevention of recurrence is implemented if possible.

It is a sorry fact that "Australia has one of the highest workplace injury rates among industrialised nations and it is costing Australian industry dearly. With 77 fatalities per million workers our rate is more than twice that of the US and three times higher than the UK and Sweden. Evidence clearly suggests that Occupational Health and Safety committees (OHS) and its complementary Workplace Health and Safety officers can help to reduce the number of industrial disputes, increase productivity and morale and lead to innovation."

Conducting investigations and inspections is the major activity that any safety officer will get involved in, so it is better to start early and perhaps learn from mistakes, than never start at all. Inspections should be always done thoroughly, avoiding the temptation to leave out areas where matters are 'always the same'. It is precisely in such areas that a small change in procedure or in the pace of work can lead to an accident and it is to anticipate such problems that the safety officer has won the right of respect.



### **RIGHTS of the HEALTH and SAFETY OFFICER:**

The aim of the workplace health and safety agreement is to implement a procedure that allows health and safety officers to prevent a continuation of unsafe work. Thus the agreement:

- Recognises the principle that no worker is to be exposed to conditions that constitute an immediate threat to health and safety.
- Recognises the right of the health and safety officer to intervene in such cases on behalf of the endangered worker.
- Provides a procedure for preventing a continuation of the unsafe work.
- Provides that the worker will not lose pay in such circumstances, even if they have to stop work.
- Work will not resume until it is agreed that the hazard has been controlled and no longer represents an unacceptable risk to the safety and health of the employees.

The major function of the health and safety committee is to facilitate co-operation between employer and workers in developing and implementing means to protect the workers' health and safety. They are responsible for formulating, monitoring and disseminating to all employees the standards, practices, rules and procedures relating to the protection of workers' health and safety.

They are to regularly consider:

- Reports on causes of accidents together with recommendations for preventing such accidents from occurring in future.
- Results of all environmental and personal monitoring carried out in the workplace generally submitted by offices on walkabout.
- Results of all medical monitoring.
- New issues developed and introduced on health and safety matters.
- Ongoing training and development of health and safety officer's skill.
- Review of measures taken to ensure the health and safety of persons at the place of work.
- Investigation of any matter at the place of work which is considered unsafe or a risk to health and which has been brought to the attention of the Company.
- Attempt to resolve any such matter, but if unable to do so, seek outside advice.
- Development of an appropriate recording system of accidents and hazardous situations.
- Development of a safe working environment.
- Development of an occupational health and safety policy.
- Monitoring the measures taken to ensure proper use, maintenance, etc. of protective clothing and equipment.

The Committee is to be seen as having the role of developing joint worker-management standards and codes of practice for the workplace.

The Company is to state **how** policy decisions of the committee are to be implemented and **by whom**. Action required is to be undertaken at the level it concerns, each team will implement procedures within their guidelines, if those guidelines do not empower the Team Leader to do so, then, he will obtain such authority as required to ensure the safety of his Team members.

The Health and Safety Committee consists of:

Chief Executive Officer

Commercial Manager  
 Human Resources Manager (Coordinator of Health & Safety)  
 Health & Safety Manager  
 Risk Manager  
 Director of Nursing  
 Director of Medical Services  
 Clinic Director  
 Hotel Manager  
 At least two additional Health & Safety Officers – potentially a total 11 personnel.

Monthly meetings will be held with minutes of those meetings being posted on notice boards the following day.

Health and Safety Co-ordination consists of:

The Health and Safety Manager, being responsible for co-ordination of health and safety, has ready access to the Commercial Manager and Chief Executive Officer and credibility among other managers of the organisation. In order to establish and maintain the administrative framework of the occupational health and safety system, this person has an overview of the complete operation of the company. With the Human Resources Manager will be, as example, the Nursing, Medical Services and Hotel Health and Safety Officers, being the three main supervisors, participating in comprehensive training in the required procedures and systems. It is important that the coordinator does not usurp supervisors by undertaking task that are the responsibility of the three supervisors. The coordinator's responsibilities include:

- o Assisting supervisors to set specific objectives and priorities for action.
- o Monitoring the effectiveness of the overall health and safety management system. This includes:
  - monitoring injury and illness reporting and recording procedures;
  - analysing injury and illness records and statistics;
  - reviewing the results of accident investigations;
  - checking that hazard-control measures are implemented;
  - checking the accountability system, auditing the hazard inspections conducted by supervisors and officers.
- o Ensuring that health and safety policies and procedures are developed and updated as needed in consultation with the health and safety committee.
- o Liaising with outside organisations and consultants for advice and assistance in areas where the organisation does not have the expertise or resources.
- o Initiating key procedures including:
  - preparing health and safety induction training in conjunction with Communications Manager;
  - preparing emergency response systems;
  - listing health and safety responsibilities in job descriptions;
  - establishing a register of all chemicals used in the workplace.
- o Arranging or conduct training in health and safety for all staff in the organisation.
- o Acting as a resource in health and safety for everyone in the organisation. This will include:
  - attending health and safety committee meetings;
  - helping the committee to identify hazards;
  - assisting with hazard inspections;
  - advising on hazard-control measures;
  - distributing relevant information on health and safety generated from both inside and

- outside the organisation;
  - providing specialist advice and assistance to supervisors, officers, health and safety committees and employees.
- o Develop a rehabilitation program, based on the Guidelines.

The rehabilitation program incorporates the following six commitments:

1. A commitment to preventing injury or illness by providing a safe and healthy working environment.
2. A commitment that the rehabilitation process will be commenced as soon as possible in accordance with medical advice.
3. A commitment to ensuring that a return to work as soon as possible is a normal expectation.
4. A commitment to provide suitable duties, where practicable, for an injured worker as an integral part of the rehabilitation process.
5. A commitment to consultation with workers and their representatives.
6. A commitment that participation in rehabilitation program will not, of itself, prejudice an injured worker.

Criteria of a good code of practice generally does the following:

- It identifies hazards clearly and the problems to be avoided.
- It spells out the engineering controls or design of work that will provide the safest possible environment.
- It lays down safe working procedures that complement these basic controls.
- It allocates clear responsibilities, to management and team leaders and members of teams.
- It lists emergency and first aid procedures.
- It spells out technical specifications that should be met by safe equipment.
- It spells out maintenance and training procedures.
- It spells out environmental and medical monitoring procedures, where appropriate.
- It is written in clear English, avoiding unnecessary use of technical terms and code names that make no sense outside the workplace – and if necessary, it is translated into relevant languages for workers of different ethnic backgrounds.

Once the code is produced, it is important that safety officers use continually and that working experience will further enhance this important document.

The tasks facing a safety officer are onerous and no one should seek the office without fully understanding this. On the other hand, the role played by a safety officer, as the 'conscience' of the workplace on health and safety matters, is irreplaceable. Those seeking this office are playing an important community role.

Health and Safety Officers also need to understand just what their legal status is – to what extent they are recognised in law, to what extent they are protected and to what extent they can be disqualified.

A person who is, or has at any time been an employees' safety officer shall not, other than in the course of his duties as a safety officer, divulge any operating or commercial secrets or working processes the knowledge of which has come to that person in his capacity as a safety officer.

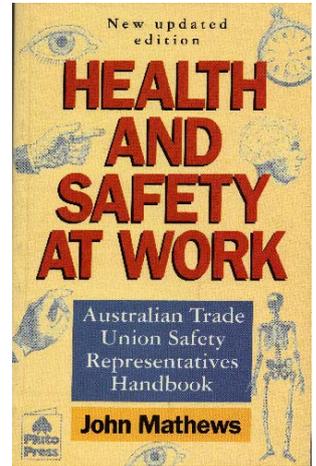
Safety officers are workers and citizens and as such they are as liable to the provisions of the criminal law as any one else. The duties of being a safety officer does not increase these requirements.

Companies can not pass on their legal liability to provide a safe place of work to safety officers. If there are breaches of the health and safety law in the workplace, it is the employer who is liable, not the safety officer.

There are no criminal liabilities attached to safety officers in their role as safety officers in any jurisdiction in Australia. Thus they are exempt from prosecution for pursuing their activities as health and safety officers.

A health and safety officer has the prospect of being sued for damages (i.e. civil liability) for shutting down a plant frivolously. This has never occurred and it is unlikely.

The Company hereby agrees to indemnify the health and safety officers and each of them from any legal liability whatsoever, including any action which might be taken against a health and safety officer personally, arising from the performance of their functions, powers and duties under their appointment. The Company further agrees to keep the health and safety officers and each of them indemnified against all legal liabilities whatsoever arising from their performance of their functions, powers and duties under their appointment.



**The New Way: learning how to live true to ourselves by living true to our feelings.**





## **SPECIAL FOCUS ISSUES:**

### **RADIATION SAFETY**

The regulations and standards with respect to approval for design and operation of facilities to control radiation safety are quite well known in the construction industry and same will be incorporated in the building plans for approval by the Radiation Health Department. Operational safety of the equipment is part of the training at the time of installation and commissioning of the equipment. The Hospital / Clinic, with the equipment supplier, will set down a code of practice / operation for the use of the equipment and all appropriate safety monitors will be installed.

Building plans for the housing of radiotherapy and imaging departments need to be reviewed by a Physicist who then determines the requirements for lead shielding to control radiation scatter and associated issues. These plans are then referred to the Department of Radiation Health for approval. Prior to the deliver of equipment, operators are to be employed who hold Radiation Equipment License and all protocols are to be established.

### **TOXIC WASTES and CYTOTOXIC WASTES**

It should be noted that the local authority – e.g., Gold Coast City Council, will not accept any hospital waste into their waste system. One of the best disposal units in Australia is located at Willawong in Brisbane and this unit accepts waste from interstate.

ACE Waste currently collect from the Gold Coast Hospital and other hospitals on the Coast and will undertake to handle Toxic and Infectious or regulated waste and cytotoxic material and to advise and supply equipment for the storage and handling of cytotoxic waste material.

In July 1996, the applicable Act was amended for the handling, storage and transport of infectious waste. From that date all facilities, vehicles and operators were licensed to handle regulated and cytotoxic waste. The regulations which Pascas will comply with are set out by the National Medical Waste Industry Group – Code of Practice. This code is generally considered as best practice for the Industry.

ACE Waste confirm that they are correctly licensed to handle all hospital waste from a hospital complex and they will supply suitable and approved waste containers to the hospital and are able to carry out daily waste collection from the hospital

### **STORAGE of CYTOTOXIC MATERIAL**

Drugs of this nature are to be maintained in double doored locked steel cabinets built into the wall. The receipt into the hospital and there subsequent issue is to be monitored with a running inventory with appropriate documentation being properly authorised for any movement of such drugs. Protocols are to be maintained for the handling, storage and disposal for Medical Providers, Nurses and Environmental Managers.

Cytotoxic drugs are the responsibility of the Director of the Department that is using same. A comprehensive hospital procedure policy is to be developed and implemented.

### **HELIPAD and HELICOPTER SERVICES**

Safety procedures are to be implemented in accordance with the guidelines to be provided by the Director of Gold Coast Helicopter Rescue Service.

The Civil Aviation Authority sets down all the regulations for helicopter operation and landing sites in a report prepared by Air Services Australia for the CAA called the Civil Aviation Advisory Publication (CAAP). The availability of Helicopter Services is encouraged by the CAA for as locations that are well clear of any fixed wing airport.

Work Place Health and Safety, the State Government Department have no regulations relating to the operation of helicopters and the people associated there to. The Department states that it is up to the operators to use self-regulation and risk assessment and to implement controls as directed by other authorities and the pilots to make sure best practice is maintained.

Fire Services Approval. At the time of completing the first set of Preliminary Building Plans a copy is to be submitted to the Queensland Fire Services who will check, advice and approve at the time of inspection of the new building by Fire Officers for clearance of use. The Department will provide advice to the projects Engineers or any other consultant at the time of design.

Matters of concern relate to floor loadings and the effect of downdrafts onto windows close to the pad which may be erected on an elevated platform over a ground level carpark.

A clearance from the Department of the Environment is necessary however the regulations were amended in 1995 to provide for a reduction in the clearance level from No 1 to No 2. This means that Environmental Department approval is automatic upon the applicant receiving approval from the Gold Coast City Council being the local authority in this case for the operation of helicopters to and from a hospital.

The Gold Coast City Council encourages the use of helicopters for emergency work and would welcome an application in this case as no residential dwellings are within 500 metres of the proposed location at this time. A site option at Robina does plan residential buildings within 250 metres of the site in the future, however these buildings will not be built before the proposed Hospital and therefore new residents would be aware of helicopter flights before purchase and occupation of residential buildings.

## SUMMARY

Protocols are to be developed in regard to all the above issues and similar matters.



# PASCAS WORLDCARE

## ANTI-DISCRIMINATION POLICY

Pascas WorldCare is an equal opportunity organisation. All employees are treated on their merits, without regard to race, age, sex, marital status or any other factor not applicable to the position. Employees may be valued according to how well they perform their duties, their ability and enthusiasm to maintain Company standards of service, it is the passions and desires of the employee that prevail.

The Company does not tolerate any form of discrimination. We believe all employees have the right to work in an environment free of discrimination and harassment. Discrimination undermines proper working relationships and may cause low morale, absenteeism and resignations.

Under Federal and State anti-discrimination laws, discrimination in employment on the following grounds is against the law:

sex	pregnancy	age	impairment
political belief and activity	trade union activity		race
lawful sexual activity	marital status		parental status
religion	criminal record		social origin

Sexual harassment is also against the law.

Managers and supervisors must ensure that all employees are treated equitable and are not subject to discrimination. They must also ensure that people who make complaints, or witnesses, are not victimised in any way. Any reports of discrimination or harassment will be treated seriously and investigated promptly, confidentially and impartially. A written complaint is not required.

Disciplinary action will be taken against anyone who discriminates against a co-worker. Discipline may involve a warning, transfer, counselling, demotion or dismissal depending on the circumstances.

What is discrimination? Discrimination occurs when someone is treated unfavourably because of one of their personal characteristics, any unloving treatment. Discrimination may involve:

- Offensive 'jokes' or comments about another worker's racial or ethnic background, sex, sexual preference, age, disability or physical appearance.
- Display of pictures, computer graphics or posters which are offensive or derogatory.
- Expressing negative stereotypes of particular groups, e.g. "married women shouldn't be working".
- Judging someone on their political or religious beliefs rather than their work performance.
- Using stereotypes or assumptions to guide decision-making about a person's career.
- Undermining a person's authority or work performance because you dislike one of their personal characteristic.

What to do if you are discriminated against. Contact your team leader and the Human Resources Manager, Commercial Manager or Chief Executive Officer who can advise and investigate complaints, but, do not ignore discrimination thinking it will go away – often it just gets worse.

This Company is committed to providing a loving environment which is safe for its employees. You will not be disadvantaged in your opportunities as a result of lodging a complaint.

**When your soul is in the job – now you can accomplish a lot of things!** 20 Mar 11

**The real you is your soul.**



**SOUL**  **SPIRIT BODY**  **PHYSICAL BODY**

Prayer: is emotional exchange with our Heavenly Parents.

**By living true to ourselves, true to our feelings, we are living true to God. It's that simple.**