

## **WARNING - IF YOU WORK WITH LEAD IT CAN AFFECT YOUR HEALTH.**

This leaflet tells you about:

- health problems that can occur if you absorb too much lead;
- what your employer should do to protect your health;
- precautions you should take.

## **WHEN ARE YOU MOST AT RISK?**

When you work in industrial processes which create lead dust, fume or vapour. These include:

- lead smelting, refining, alloying and casting;
- lead-acid battery manufacture and breaking;
- manufacturing lead compounds;
- manufacturing leaded-glass;
- manufacturing and using pigments, colours and ceramic glazes;
- working with metallic lead and alloys containing lead, for example soldering;
- some painting of buildings; some spray-painting of vehicles;
- blast removal and burning of old lead paint;
- stripping of old lead paint from doors, windows etc;
- hot cutting in demolition and dismantling operations and recovering lead from scrap and waste.

## **HOW DOES LEAD GET INTO YOUR BODY?**

When lead and lead compounds are processed, worked or recovered from scrap or waste they can create lead dust, fume or vapour. Your body absorbs lead when you:

- breathe in lead dust, fume or vapour;
- swallow any lead, for example if you eat, drink or smoke, or bite your nails without washing your hands and face.

Lead is not absorbed through the skin - except in the form of lead alkyls (an additive to petrol) and lead naphthenate which are not covered in this leaflet. So if you handle cold metallic lead you will not get lead poisoning.

Any lead that you absorb at work will circulate in your blood. Your body gets rid of a small amount of lead each time you go to the lavatory, but some will stay in your body, stored mainly in your bones. It can stay there for many years without making you ill.

## **HOW DOES LEAD AFFECT YOUR HEALTH?**

If the level of lead in your body gets too high, it can cause:

- headaches;
- tiredness;
- irritability;
- constipation;
- nausea;
- stomach pains;
- anaemia;
- loss of weight.

Continued uncontrolled exposure could cause far more serious symptoms such as:

- kidney damage;
- nerve and brain damage.

These symptoms can also have causes other than lead exposure so they do not necessarily mean that lead poisoning has occurred.

A developing unborn child is at particular risk from exposure to lead, especially in the early weeks before a pregnancy becomes known. If you are a woman capable of having children you should take special care to follow good work practices and a high standard of personal hygiene.

## **WHAT MUST YOUR EMPLOYER DO TO PROTECT YOUR HEALTH AT WORK?**

If you are exposed to lead, lead compounds, dust, fume or vapour at work, the law says that your employer must:

- assess the risks to your health from exposure to lead; decide whether or not your exposure is 'significant' (the law explains what this means), and what precautions are needed to protect your health;
- put in place systems of work and controls, for example extraction ventilation equipment, to prevent or control your exposure to lead, and keep equipment in efficient working order;
- provide washing and changing facilities, and places free from lead contamination where you can eat, drink and smoke;
- tell you about the risks to your health from working with lead and the precautions you should take;
- train you how to use any control measures and protective equipment.

Your supervisor or safety representative should tell you if your exposure to lead is 'significant'. If it is, your employer will also have to:

- provide you with protective clothing;
- measure the level of lead in the air you are exposed to, and tell you the results. If your exposure to lead cannot be kept below a certain level - which is known as the occupational exposure limit - your employer must also issue you with respiratory protective equipment;
- arrange to measure the level of lead in your body. This is done by a doctor at your place of work. You must be told the results of your tests.

## **HOW IS YOUR HEALTH CHECKED AT WORK?**

At your place of work a doctor or nurse takes a small blood sample to measure the amount of lead it contains. This is measured as a number in micrograms of lead for each decilitre (or 100 millilitres) of blood. Serious ill-health problems rarely occur unless people have at least 100 micrograms of lead in one decilitre of their blood (this is usually written as 100 µg/dl). The doctor may also want to test a sample of your urine for the effects of lead. You are legally required to provide the blood or urine sample required for this purpose.

Normally, your blood-lead level will be checked every three months, especially if you are under 18 or a

woman capable of having children. The doctor may decide to test it more often if you do the sort of work where you could rapidly absorb lead (for example work on lead burning processes where exposure to lead fume could be high unless properly controlled). If your exposure and your blood-lead level do not usually change very much, the doctor may check your blood-lead level less often, for example every 6 or even 12 months.

## **WHAT HAPPENS IF YOUR BLOOD-LEAD LEVEL IS TOO HIGH?**

If the amount of lead in your blood reaches 50 µg/dl - which is known as the action level - your employer must try to reduce it to below that level by:

- reviewing all control measures and checking that they are working properly;
- making sure that you are following proper hygiene procedures;
- consulting the doctor about any additional protective measures.

If, despite all the control measures, your blood-lead level reaches 60 µg/dl - which is known as the suspension level - the doctor will repeat the test. (Lower action and suspension levels apply for some employees, see the section entitled 'Why are there lower levels for some employees?') If this confirms the result of the first test, the doctor will usually decide that you should not carry on working with lead. There are some exceptions to this rule and the doctor will tell you about them. Your employer must act on the doctor's decision, and you will not be able to work with lead again or be exposed to it until the doctor considers it safe for you to do so.

If your employer cannot offer you other suitable work where you will not be exposed to lead, you may be suspended from work. In these circumstances, you have the right to be paid by your employer for up to 26 weeks. If your employer refuses to do so, ask for advice from your supervisor or safety or trade union representative. You can apply to an industrial tribunal to enforce your entitlement to suspension pay. You can find out more from the

booklet *Suspension from work on medical or maternity grounds under health and safety regulations*, which is free from any Job Centre.

## WHY ARE THERE LOWER LEVELS FOR SOME EMPLOYEES?

There are lower action and suspension levels for women capable of having children and for young people under 18 as follows:

Category	Action level	Suspension level
(a) Women capable of having children	25 µg/dl	30 µg/dl
(b) Young people under 18 (other than at (a))	40 µg/dl	50 µg/dl

If a woman is pregnant, the lead in her blood can pass into the blood of the baby she is carrying. This may affect its development. So, if you are pregnant it is important to keep the amount of lead in your blood as low as possible.

If you become pregnant, the doctor will automatically certify that you should not do work where your exposure to lead is significant. In the interests of your baby you should tell your employer as soon as your pregnancy is confirmed.

It is against the law for women capable of having children, and for young people under 18, to work in lead smelting and refining and in most jobs in manufacturing lead-acid batteries.

The law also gives greater protection to young people under 18 because they generally have less experience working with a substance as hazardous as lead.

## WHAT SHOULD YOU DO TO PROTECT YOUR OWN HEALTH?

- Make sure you have all the information and training you need to work safely with lead, including what to do in an emergency, for example a sudden uncontrolled release of lead dust or fume.

- Make full use of all the control measures, systems of work and equipment provided by your employer and follow instructions including those for using equipment.

- Follow good and well-tested work practices and especially:
  - keep your immediate work area as clean and tidy as possible;
  - clear up and get rid of any lead waste at the end of each day or shift as directed by your employer;
  - do not take home any protective clothing or protective footwear for washing or cleaning.

- Wear any necessary protective clothing and respiratory protective equipment and return it at the end of the shift/day to the proper place provided by your employer.
- Report any damaged or defective ventilation plant or protective equipment to your supervisor or safety representative.
- Eat, drink and smoke only in the areas provided by your employer that are free from lead contamination.

- Practise a high standard of personal hygiene and especially:
  - wash your hands and face and scrub your nails before eating, drinking or smoking;
  - wash and/or shower and change if necessary before you go home.

- Keep your medical appointments with the doctor where you work.

## HOW IS MEDICAL INFORMATION ABOUT YOU PROTECTED?

The Data Protection Act 1997 protects information held on medical surveillance records. Your employer or the doctor where you work must tell you if a record is being kept on you, and the reasons why. You have the right to see your record and to have any inaccurate information corrected. Your employer (or the doctor) should not reveal any information from your record except for the purposes for which it is kept.

## WHERE ELSE CAN YOU GET INFORMATION?

If you have any questions or worries about working with lead, ask your supervisor, safety officer or union representative.

If you are suspended from work you may seek advice and help on your rights to suspension by contacting the Advisory, Conciliation and Arbitration Service (ACAS).

**Make sure your workmates know and understand the dangers of exposure to lead. Show them this leaflet.**

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**This leaflet contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.**

**The good practice guidance notes are highlighted in separate boxes from the main text.**

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# LEAD and YOU

