

PAINTING

Introduction

We won't stop making art but we **can** stop making ourselves sick!

This kit was designed by artists to warn you of the dangers and give you some tips to improve your working conditions.

Here's to a long, healthy working life!

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What are my art materials doing to me?

All art materials contain chemicals; many can harm or even kill you if they get into your body. You can breathe them in, absorb them through skin contact or swallow them accidentally if you eat, drink or smoke in the studio.

Inhalation (you're breathing it in)

Art materials produce dusts, gases, fumes and vapours which can damage your lungs. From there they can enter the bloodstream, and in some cases deposit toxins in your organs and fat tissue. Damage is not always immediately obvious, it can happen over a period of time. By the time symptoms appear, the damage may be permanent.

Skin contact (you're soaking in it)

Your skin absorbs some chemicals, particularly solvents, and carries them into the bloodstream. Unprotected cuts and sores are an open doorway for chemicals to enter your body. Solvents, acids, alkalis and bleaches destroy the protective barriers in your skin, which can cause eczema, dermatitis and allergies and allow other chemicals to enter your body.

Ingestion (you're swallowing it)

Would you eat your art materials if they were served to you on a plate? You may as well if you eat, drink or smoke in your studio! Gases, vapours and dust settle on everything including food and drink. Unwashed hands contaminate whatever they touch too.

If you swallow chemicals they can damage your mouth, throat, stomach, nervous system, liver and kidneys. Chemicals can make you seriously ill.

Other factors

The effect of chemicals on your body will be *worse* if you smoke, drink heavily, or suffer from allergies or chronic illness, eg asthma, epilepsy. You should take special care if you are pregnant.

Bad work conditions and chemical exposure can contribute to *stress-related* illness and weaken your resistance to disease.

So where's the proof?

Many artists are so used to feeling unwell that it makes it hard to identify the symptoms of chemical poisoning. Some of us don't register anything much until it's too late. You could be feeling the effects of chemical poisoning if you regularly suffer from:

- headaches, tiredness, dizziness or faintness, extreme mood swings (generally after leaving the studio)
- allergies
- skin irritations, rashes, spots
- aches and pains in joints and muscles
- breathing problems at night and during exercise (like walking up the stairs!)

Have you noticed that these symptoms are not as severe when you're away from the studio for more than a few days?

What about my art equipment?

Ergonomically speaking like they say, *it ain't what you do but the way that you do it* that counts. Dangerous work practices make it harder to function efficiently and can cause accidents. Backaches and muscle-strain injuries are often the result of working at benches and easels that aren't adjusted to your height.

Overdoing it?

Working for long periods, particularly on repetitive tasks, can cause permanent

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What's that you say?

Working regularly in a noisy environment, eg sculpturing with power tools, increases the risk of deafness, high blood pressure and stress.

What can I do about it?

Right Away You can clean up your act and that includes your studio! Pull up carpeting and lay down cheap linoleum or another non-absorbent surface that can be wet-mopped or vacuumed (sweeping stirs up dust).

Organize your studio so that everything has a place including separate storage for dangerous chemicals. Store your materials in suitable containers (refer to Material Safety Data Sheet on the product). Label your materials clearly. Set your benches and chairs to a good working height, see Diagram 1. Use an adjustable overhead lamp, eg daylight, colour corrected tube.

Breathe Easy You need air in your studio- if you can't afford exhaust ventilation, open a window or an outer door. A basic rule of thumb is that air should move from behind you, across your work and away from your face to the outside, see Diagram 2.

When you work with dangerous chemicals, protect your-self with overalls, correct gloves and masks. *Remember*, a mask is no substitute for ventilation. The mask must fit your face properly, making an air-tight seal. Make sure you have the correct cartridge for the chemical you are using and change the cartridges regularly.

Survival tips

Don't

- eat, drink or smoke in the work area
- use solvents to clean your hands- use a safe, non-toxic hand-cleaner, eg baby oil
- expose yourself unnecessarily to dangerous chemicals
- work in your bedroom, kitchen or other living area
- work in a pile of garbage
- put solvents or other toxic chemicals in the sewer
- work with solvents if you are pregnant (foetal damage may result)
- expose children, pets or friends to solvents and other dangerous art materials
- store art materials in food containers or the domestic fridge
- use eating utensils to mix or store your materials, and don't prepare or use them in the kitchen
- overload your domestic power system or run a tangle of cords that can trip you up

Do

- protect yourself
- use safer chemicals where possible (non-toxic or less toxic art materials are available)
- work in a well ventilated area. If you can't afford local ventilation open an outer door or window, or work outside
- wash hands before eating, drinking, smoking or going to the toilet
- use an appropriate mask, splash goggles and protective clothing when you handle solvents, acids and inks
- keep lids on containers and trays when not in immediate use
- label containers clearly and store all flammable chemicals in a fire-proof cabinet away from flames and heat
- tie back your hair; don't wear loose-fitting clothing and remove jewellery when you work with machinery. Learn operating and emergency stop procedures
- have a regular medical check-up (give your doctor a list of the chemicals you use and the tasks you perform)

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Before we knew the dangers

The following is a case study of an artist whose health is permanently effected as a result of unsafe exposure to toxic chemicals. Due to possible legal action we cannot name either the artist or the art school concerned.

Artist X studied painting at a Melbourne art school two years ago. The students were using oil, acrylic and house paints, solvents, fixatives and aerosols in an unventilated room. Four months into her course, **Artist X** began to show symptoms of chemical poisoning. She developed asthma for the first time in her life and suffered from persistent stomach pain, vomiting, dizziness, lethargy and throat constriction. **Artist X** became highly sensitive to solvents, hairsprays, make-up, perfume, wheat, milk and some fruit and vegetables.

She wasn't alone; teachers and students complained about the conditions, about fans that wouldn't work, but the administration did not see their concerns about health and safety as a priority.

Artist X was forced to abandon her studies because her chemical sensitivity made it impossible for her to enter public buildings and shopping centres. The petrol fumes from passing cars made a trip to the city into a health hazard.

Once the cause of her symptoms was properly diagnosed she was able to take steps to protect herself and continue her career.

She has established a studio in her shed. At the moment she can only afford cross-ventilation, so she always wears a vapour mask and protective clothing, **Artist X** uses soap and warm water to clean oil paint off her brushes and palette.

She reduces her exposure to pigments and driers by putting out only enough paint for immediate use. The studio is kept clean by wet mopping.

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Educate yourself

- Make sure you know what's in the materials you use
- Keep a file of Material Safety Data Sheets (available from manufacturers and suppliers)

Organize yourself

- Make a place for everything and put it all away at the end of the day
- Keep clean and dirty rags separate. Store dirty rags in metal bins with lids. Dispose of rags frequently
- Adjust work benches and chairs to a safe working height
- Maintain a first aid kit with burn cream, bandaids, eye wash (for chemical burns) and antiseptic cream keep a small chemical fire extinguisher on hand (BCF type for multipurpose use)
- Wet-mop your work area regularly (sweeping stirs up dust). Mop up spills immediately (refer to Material Safety Data Sheet for correct procedure)

Spoil yourself

- Take frequent rest breaks when you perform repetitive tasks
- Wash hands and exposed skin in soap and water immediately after work
- Shower and change into uncontaminated clothing as soon as possible after work (or you and your friends will be soaking in chemicals all night)

Assert yourself

- Insist that manufacturers and suppliers provide thorough Material Safety Data Sheets: don't buy from people who won't
- Lobby for public access studios with good health and safety provisions

Accidents

- If chemicals have been accidentally swallowed do not induce vomiting unless specified on the product label. Call an ambulance immediately.
- Skin contact with chemicals - flush the area with cold, soapy water for at least 15 minutes.
- Eye contact with chemicals - flush the eye with cold water for at least 15 minutes.
- Seek medical attention for severe burns or exposure to fumes. You can call the Poisons Information Centre.

Setting up a safe studio

Stephen Bush is a well known Melbourne oil painter. His concern about health and safety is reflected in the way he works and the layout of his studio. The studio is well organised with storage for paints, solvents and canvasses. The Painting Area the easel sits between two open windows. Localised lighting is placed directly over the easel. Solvents are stored in a lockable cupboard. Only small amounts of solvents, paints and mediums are put out on the workbench, and these are kept sealed when not in immediate use.

Safe work Practices

He avoids overexposure to toxic pigments by using pre-mixed paint. Brushes, palletes and work surfaces are cleaned at the end of each day.

All materials are stored after use. Rags and waste are kept in a sealed metal bin which is emptied regularly.

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What you do effects everyone else: the people you live and work with, your friends and the general community.

The chemicals you use go into the air we breath and if you're careless they can end up in our water and food.

Exposing others to risk

The Environment

There is no safe exposure to cancer-causing materials; substitute other products. Aerosols often contain toxic, flammable propellents that will harm you and the environment; use an atomiser instead but remember to use a suitable mask, goggles and gloves.

Dispose of all your materials carefully. Almost everything you use can be recycled: Your local council can also pick up paper and waste for recycling. Commercial recycling companies accept artists' refuse and, in some cases, pay money for them. Don't mix your chemicals, store them separately for disposal.

Teaching

Maybe you don't care what happens to you but you shouldn't impose unsafe work practices on others-besides that, *you could get sued* for negligence!

It's your responsibility as a teacher to be informed about the chemicals you are using and to ensure that your students use art materials safely. Make sure you know how to treat injuries and deal with accidents. Adults with chronic illnesses and all young children should *not* be exposed to solvents, solvent-based adhesives, oil paints, permanent marker pens, aerosol sprays, acids, indian inks, non water-based paints and inks, dyes, clay dusts, glazes and oxides, epoxy resins and photo chemicals.

Your Rights

The Occupational Health and Safety Act outlines rights and responsibilities for art schools, teachers, artists, suppliers and manufacturers.

Manufacturers and Suppliers insist that manufacturers tell you what is in their products (ask for a Material Safety Data Sheet or MSDS). The MSDS lists the contents of the product, safety procedures for ventilation, protective clothing, fire and spillage, storage and first aid. If the supplier or manufacturer won't give you an MSDS, refuse to buy their product. Choose products that are well labelled. A product is not necessarily safe just because the label says *non toxic*.

Other Artists don't let the people you work with inflict their bad habits on you. Discuss safe work procedures with your colleagues. You can use the Studio Checklist in the back of this kit to assess the safety of your studio.

Self-Employment nobody else is going to take care of you. Budget for health and safety in your grant applications, when you take on commissions, or other employment as an artist. Build in a health and safety component when you price your artwork for sale. You can also declare your health and safety expenses, including fans, protective clothing and materials, on tax; keep all your receipts.

Art schools and Public Access Studios should provide a safe work environment but poor funding limits their ability to do this. You can help them to help you by lobbying for health and safety funding.

One well-equipped, safe public access studio is worth more than all the converted bathrooms, bedrooms and kitchens in Victoria. Contact your access studios and galleries and start lobbying for better conditions.

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It's important to know what's in the chemicals you're using. This is a brief guide to tell you what to look out for.

Pigments are the colourants used in oil, water and acrylic paints; some are highly toxic. Premixed paints will reduce your exposure to toxic pigments. Substitute safer colours where possible.

If you must mix & grind pigments use a dust cabinet, wear a particulate mask, gloves & goggles. Wet mop surfaces after use.

Paint spraying is hazardous, particularly if the more toxic pigments and solvents are used. Wear a combination particulate and gas mask. Wear a gas mask when you use toxic solvents as indicated. Wear gloves & work in a ventilated area when painting.

Avoid speed-drying or burning paints- heat can release dangerous gases.

Don't pour chemicals down the sink. See our section Exposing others to risk for disposal advice.

Toxic pigments

Can be skin, respiratory and gastro-intestinal irritants. Long-term effects could include asthma, major organ & nervous system damage, birth defects and cancer. Look out for burnt and raw umber, cadmium pigments, cobalt blue, -green, yellow, violet, chromium oxide green, emerald green, flake white, mixed white, oil primer (white lead), manganese blue & violet, mars brown, strontium yellow, true naples yellow, veridian, vermilion, zinc yellow. Handle with gloves and use a particulate mask (if water-based) or a gas mask (if solvent-based). Wet mop after use. Remember local ventilation is the only safe way to work with these chemicals.

Safer pigments

May cause skin and respiratory allergies.

Pigments alizarin crimson (rose madder), alumina, barium white, burnt sienna, chalk, chinese white, english red, light red, indian red (red iron oxide), ivory black, mars black, orange, red, -violet and yellow, paris blue, prussian blue, raw sienna, titanium oxide, titanium white, ultramarine blue, -green, -red and violet, yellow ochre, zinc white. Handle with gloves and a particulate mask (if water-based) or a gas mask (if solvent-based). Remember local ventilation is the only safe way to work with these chemicals.

Toxic paint bases

Artists' solvent-based acrylic (gas mask) can be a skin, eye, and respiratory irritant. Possible long-term effects include dermatitis, liver, kidney, heart, nervous system damage and even death. Contents acrylic polymer, toluene, mineral or gum turpentine.

Aerosol paints, varnish (gas and particulate mask) can be skin, eye and respiratory irritants. Possible long-term effects are major organ damage and cancer. Contents fluorocarbons, solvents and pigments. Use atomisers (gas and particulate mask) or apply directly.

Epoxy paint is highly toxic and should always be used with a gas mask. It is a skin and respiratory irritant and long-term effects include sensitization, dermatitis, asthma and cancer. Contents epoxy resin, hardeners, and solvents, eg toluene. House paint bases (gas mask) can be skin and eye irritants. Possible long-term effects are respiratory and central nervous system disorders. Acrylic houst.JIaInt contains propylene glycol, ammonia, formaldehyde and mercury. Enamel housepaint contains xylene and mineral turpentine.

Bitumen paint is a carcinogen- avoid using it or wear a gas mask and gloves in a well ventilated area. Resins and varnishes (particulate mask- add also gas filter if solvents are used) can be skin, eye and respiratory irritants. Possible long-term effects are allergies and asthma. Contents gum acacia or damar. Pastels (particulate mask) containing french talc (asbestos, silica) can be respiratory irritants and can cause silicosis, asbestosis and lung and gastro-intestinal cancer. Remember local ventilation is the only safe way to work with these chemicals.

Safer paint bases

Artists' oil paint can be a skin irritant. Possible long term effects include nervous system damage and other poisoning. Contents stabilizers, lead, manganese and cobalt driers.

Artists' watercolour can be a mild skin, eye and respiratory irritant. Contents gum acacia and preservatives, eg formaldehyde.

Artists' water emulsion acrylic is a skin, eye and respiratory irritant. Long-term effects include allergies, asthma, eye damage and lung disorders. Contents acrylic polymer, ammonia, formaldehyde. Wear gloves. Remember local ventilation is the only safe way to work with these chemicals.

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Solvents

Can be skin, respiratory and eye irritants, cause tiredness, headaches and narcosis. Possible long-term effects are allergies, major organ and nervous system damage, cancer, miscarriage, and birth and genetic defects. Solvents are used as paint driers, thinners and cleaners. Common paint solvents toluene & xylene (don't use those containing benzene), mineral or gum turpentine (odourless turpentine is no safer than other turpentines). Use a gas mask and gloves with all solvents. Substitute warm soapy water, baby oil or Ed Marcus' Safe oil cleaner to clean brushes. Remember local ventilation is the only safe way to work with these chemicals

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