EcoCentre presents
Are you poisoning yourself?
with special guest speakers
Dr Greg Emerson
Narelle Chenery
Human exposure studies show that most of our exposure to pollutants occurs indoors from products that we choose to use.

Most of our exposure to toxins is within our control.

Where do these toxins come from?
Toxins migrate into our bodies by:

Absorption through our skin from toxins in:

- soap & shampoo
- makeup, other cosmetics & personal care products
- detergents
- cleaning products
- pesticides
- any other toxic chemicals your skin comes into contact with
Toxins migrate into our bodies by:

Inhalation of poor quality indoor air contaminated with toxins from:

- pesticides
- cleaning products
- air fresheners & fragrances
- off gassing from furnishings, paint and building materials
- other toxic contaminants
Toxins migrate into our bodies by:

- Ingestion of food and water contaminated with:
  - pesticides
  - other agricultural chemicals
  - heavy metals
  - toxins migrating from plastic food packaging and storage containers
  - other toxins that enter our food chain and water supply
Some plastics are so toxic they are banned in the USA

Baby-bottles toxin banned

WORLD

Chemical found to harm newborns

WASHINGTON: A compound used to make some plastics and widely used in certain brands of baby bottles has been outlawed by legislation passed in the US.

The toxic chemical, Bisphenol A, popularly known as BPA, has been blamed for a range of health problems in infants and is suspected of harming human development.

It has now been banned from all food and beverage containers made or distributed in the US.

Friday’s ban came a week after US officials told the makers of the US baby-bottle industry that they agreed to stop using BPA.

The scientific evidence is mounting that BPA poses serious health risks, especially for children, and manufacturers and retailers have already started to pull items from their store shelves, said Democratic Congressman Edward Markey, one of the bill’s chief sponsors.

“It is time for Congress to act quickly to ban this toxin from all food and beverage containers to protect our children and their health,” Markey said.

BPA is a key ingredient in polycarbonate baby bottles and can leach into food and drinks. It has been linked to developmental disorders, early breast development and blood-related complications.

More than 100 studies have yielded more than 400 results linking low levels of BPA to various health problems, including cancer, obesity and the early onset of puberty, according to researchers.

APP

Sunday Mail
15 March 2009
What is Bisphenol A?

- Bisphenol A (BPA) is a chemical produced for use in the production of polycarbonate plastics and epoxy resins.
- It is made by the condensation of acetone and phenol, catalysed by an acid such as hydrochloric acid (HCl) or a sulfonated polystyrene resin.
- Polycarbonate plastics are used for food and drink packaging, e.g., water and infant bottles, compact discs and medical devices. Epoxy resins are used as lacquers to coat metal products such as food cans, bottle tops, and water supply pipes. Some dental sealants and composites may also contribute to BPA exposure.
- Bisphenol A (BPA), is an endocrine disruptor which mimics oestrogen.
- BPA has been linked to prostate cancer, breast cancer, obesity and neurobehavioral changes.
- Its use has now been banned in the USA and Canada.
## Know your plastics

<table>
<thead>
<tr>
<th>Plastic and Resin ID Code</th>
<th>Found in</th>
<th>Health Risks</th>
<th>Cautions</th>
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</table>
| **Polyethylene terephthalate** | Soft drink, juice and bottled water. Some peanut butter and salad dressing containers | Can leach toxic chemicals such as phthalates, an oestrogen mimic. May leach antimony                                                          | • Most dangerous when scratched or heated.  
  • Never reuse PET bottles.  
  • Don’t leave bottles in hot car |
| **High density polyethylene** | Opaque milk and water bottles | While all plastics may leach toxins in certain conditions, these are generally considered one of the ‘safer plastics’ | • Discard if damaged  
  • Do not microwave |
| **Polyvinyl chloride (PVC)** | Pipes, non-food bottles, soft plastic toys | Leaches phthalates (endocrine disruptors) Phthalates may damage the liver, kidneys, lungs and reproductive system | **Banned in EU** for use in toys and other childrens products  
  • Highly carcinogenic dioxins produced during production and decomposition. |
| **Low density polyethylene** | various containers, wash bottles, plastic bags | While all plastics may leach toxins in certain conditions, these are generally considered one of the ‘safer plastics’. | • Discard if damaged  
  • Do not microwave |
| **Polypropylene** | Yogurt containers, syrup bottles, ketchup bottles, caps, straws, medicine bottles | While all plastics may leach toxins in certain conditions, these are generally considered one of the ‘safer plastics’ | • Discard if damaged  
  • Do not microwave |
| **Polystyrene** | Toys, food trays | Leaches styrene an oestrogen mimic and possible carcinogen. Long term exposure to low dosage can have neurotoxic & other effects | • Avoid  
  • Leaching is increased with acidity eg lemon in tea |
| **Other (includes polycarbonate)** | Lining of cans, lids of glass jars, baby bottles | Leaches Bisphenol A (BPA) an oestrogen mimic causing breast cancer, obesity and effects on hormonal systems. | • Avoid  
  • Banned in USA and Canada |
Environmental Impacts of Plastic

- **It takes large amounts of chemical pollutants to create plastic, as well as significant amounts of fossil fuels.**
- **500 000 tonnes of CO₂ emissions produced annually by water bottles in the U.S.**¹
- **Manufacturing plastics from recycled material reduces the energy input by 70%.**²
- **Australians use more than 1.3 million tonnes of plastic every year, about 71 kg of plastic for every person.**²
- **Around 100 million tonnes of plastic are produced each year, about 10% ends up in the sea. 70% of this sink to the bottom. Studies show 110 litter pieces per km² in the North Sea.**³
- **Plastics degrade very slowly and may persist for hundred or even thousands of years.**
- **The Algalita Marine institute conducted a study of the North Pacific Gyre and discovered that plastic particles of less than 5mm diameter outweighed zooplankton by 6:1.**

¹ U.S. EPA  
² Clean up Australia Ltd  
³ Greenpeace International
Estimation of plastic (PET) drink bottles disposed of around the world every 5 minutes.
Guidelines for safer use of plastic

• Be aware of the health and environmental issues of plastic

• Avoid using plastics where possible particularly where more durable choices are available

• Reduce your use of plastic - especially disposable items

• Avoid or use PET bottles only once then recycle

• Avoid PVC particularly for food and childrens items

• Avoid polystyrene for food items

• Avoid polycarbonate

• Reduce your use of canned foods (jar lids also contain BPA).

• When possible opt for glass, porcelain or stainless steel containers, particularly for hot food or liquids.

• Don’t microwave plastics, use glass or ceramic containers instead.

• Discard any damaged plastic

• Always recycle, reuse safely, dispose of responsibly
Reduce Environmental Toxins

- Grow some of your own and buy organic food
  - www.foodconnect.com.au

- Get a water filter, reverse osmosis will remove fluoride

- Use non toxic cosmetic and personal care products
  - Check the safety of ingredients
    - www.cosmeticsdatabase.com

- Use only natural methods of pest control
Improve your indoor air quality

Use paint with low VOCs

Choose building products and furnishings including floor coverings with low VOCs

Studies show that indoor plants can remove 50 – 70% of VOC’s

Use natural substances and microfibre cloths and mops for cleaning

www.greenpainters.com.au
www.greenpaintshop.com.au

www.ecospecifier.org
Most household toxins can be avoided by making aware and informed choices.
If you would like any further information about tonight’s topics, you are welcome to contact me via email

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Thank you