

Event Summary Report on workshop

**Chemical Pollution -
A threat to our Health?**

**Part of a series of
workshops held by
Health in Your Environment
(HIYE) Voluntary Sector Forum**

Held on 18 September 2003

Summary Report from

Chemical Pollution - A threat to our Health?

Workshop event held on Thursday 18 September 2003

By the Health in Your Environment (HIYE) Voluntary Sector Forum

1. Key recommendations from the workshop

- That some of the chemicals in everyday use around us can pose a significant risk to our health
- That these risks are significantly greater for those from deprived areas and therefore magnify existing health inequalities
- That the public do not have easy access to sufficient knowledge to enable them to make informed choices
- That there is not sufficient control or testing on the production and use of chemicals in everyday products
- That NHAG should consider setting up a conference that will address these concerns from both sides, and from that decide on a way forward to tackle the issues raised

2. Background to HIYE

HIYE (Health in Your Environment Voluntary Sector Forum) is a voluntary sector forum that brings together groups involved in health, social and economic regeneration and environmental issues in Nottingham Health District. Part of HIYE role is to organise a series of workshops, which are open to all. The workshops aim to raise awareness of environmental issues that have an effect on our health and how these issues can be tackled as individuals and action through groups like HIYE.

The workshops were funded by the **NHS Health Initiatives Budget** and the **Nottingham Community Foundation**.

3. Background to the Event

Two speakers were invited to undertake presentations at the workshop exploring issues around Chemical pollution and the impact on our health. The first speaker was:-

- Professor Jane Plant - one of the Britain's most eminent scientists, working at the British Geological Survey. She suffered from breast cancer five times before she learned the relationship between diet and disease. "Your Life in Your Hands" is the book she wrote as a consequence and most recently a book around "Osteoporosis"
- Bex Pleass - from the Friends of the Earth, who is leading locally, the national campaign that is looking at chemical toxicity and its effects on health!

These presentations took roughly one hour with question and answer session. Following the presentations the audience split into four groups to discuss particular issues around chemicals and health and things we can do to reduce the risk individually, as a group and as HIYE. Thirty people attended the event (see section 5 for list of attendees).

4. Summary of presentations

4.1 Summary of Professor Jane Plant's presentation

Professor Plant's presentation was based around research currently being undertaken through her own and other scientists work in the field of geochemistry and the impact on humans. In addition, her presentation covered the impact chemicals from the pharmaceutical and other chemical industries on life.

Professor Plant first described the 6 main groups of hazards chemicals (see appendix 1). She then went on to explain how the chemistry of the local geology has had a dramatic effect on the development and health of humans and other animals. For example, in China, pockets of the population suffered from Kaschin-beck disease and Keshan disease that stunts the growth of humans, this has been caused through a deficiency in Selenium. However, in areas of high Selenium, there has been a toxic effect on the body causing hair loss.

In the UK, Professor Plant explained the annual radiation dose to the UK population came from Natural sources i.e. the bedrock (see appendix 2) is the greatest source of exposure to humans. The construction of buildings can concentrate Radon gas, which has been shown in Jordan with a high rate of lung cancer.

Professor Plant also described Persistent Organic Pollutants (POPs). These are chemicals that cause deaths and acute effects caused by direct and immediate contact, but can also cause cancer, allergies, damage to the central and peripheral nervous systems, diseases of the immune system, reproductive and development disorders, as well as damage to wildlife, through indirect contact. (EEA UPEP 1998). These chemicals can be transported around the world, through evaporation and deposition through the atmospheric layers. Professor Plant illustrated a number of useful chemicals with unexpected effects and the cause for concern. These included:-

Chemical	Effect
• DDT	• Toxic
• PCBs	• Bioaccumulate
• CFCs	• Ozone depleters
• Tributyltin	• Harmful to marine life
• Brominated flame retardants	• Bioaccumulate
• Endocrine disruptors	• Damage reproduction

A large number of chemicals are in everyday use, but very few have been tested (RCEP 2003), this is due to a complex supply of different combination of chemicals and limitations in testing methods. In the pharmaceutical industry world wide thousands of tons are used annually but little is known about the environmental fate.

Professor Plant then went on to explain about Endocrine Disrupting Chemicals (EDCs) which are either naturally occurring or synthetic substances, that interfere with the functioning of hormone systems resulting in unnatural responses. These include some heavy metals, pesticides, surfactants and pharmaceuticals. Research by Shin et al., 1999 has shown that these can increase the chances of diseases such as Breast Cancer.

The British Geological Society along with other international Geological Societies are mapping the geochemistry of sediments in the UK and around the world to find out levels of arsenic, selenium etc to assess their effects on the population and to take action to reduce any harmful effects.

4.2 Summary of Bex Pleass's presentation

Bex Pleass's presentation was based around Friends of the Earth's campaign 'Safer Chemicals'. The campaign is based on the large range of chemical used by industry that do not have basic set of safety data (as also illustrated by Professor Plant) and the harm that they are having on our health and surroundings. The Campaign aims to raise awareness of these issues to the wider public, provide solutions and campaign/enlist retailers in selling safer products.

Bex first introduced to the audience Mr Oblivious - an ordinary man who wakes up in a morning, eats breakfast, shaves, travels to work - normal everyday things - but has put himself in contact with many hazards chemicals unknowingly.

Bex then introduced a series of facts about the chemical industry (see Appendix 3) that includes:-

- over 85% of industrial chemicals do not have basic safety data
- there is over 300 man-made chemicals in our bodies
- the most worrying chemicals are bio-accumulating and hormone disrupters

Across Europe the chemical industry is worth £250 billion. Bex illustrated how Friends of the Earth is building support across Europe for 'Copenhagen Charter' - which looks at

- Peoples right to know about chemicals used in everyday products, incl. Shampoos, plastics, tins, etc.
- Currently no deadline for safety testing for many of these chemicals - they are campaigning for this
- Looking at campaigning on phase out persistent and bioaccumulative chemicals
- Use safest known chemicals and methods rather than cheapest
- Stop hazardous substances by 2020

WWF have illustrated that in the UK, the health service would save £50 billion in 17 years if the chemical issue were tackled.

Friends of the Earth are currently conducting research on retailers such as Tesco, the Body Shop to find out who is taking most action to reduce their use of risky chemicals. Friends of the Earth have produced a league table illustrating the actions and how have pledged to reduce the use of risky chemicals. See Friends of the Earth Website for more details - www.foe.co.uk.

Other organisations involved in the work are:-

- Greenpeace
- WWF
- WI
- Coop
- WEN (Womens Environment Network)

5. Summary of Discussion Groups

Following on from the two presentations, the audience was split into four groups to discuss a number of issues. These issues are:-

- i. What is the range of chemical pollution in our everyday lives?
- ii. How can we minimise the risk to ourselves in our own lives?
- iii. What actions can we take as individuals and organisations to tackle the issue at a wider level? Can you prioritise what organisations need to do?

The results of the Discussion Groups are as follows:-

5.1 Group 1

Group was made up of Richard Thomas, Richard Eddleston, Helen Ross and Sarah Webster

Feedback from the group

Question 2 - Minimise the risk to ourselves

- We need to instruct ourselves about the risks - identify prejudices/interests - have a critical approach
- Make that relevant to our own lives
- Identify emotional responses, values and social norms
- Evaluate - option appraisal
- Decide on an action plan
- Implement
- Review - and then keep up dated

Question 3 - Action

- Promote discussion - through HNAG
- Make it an agenda item
- Promote discussion through using the above process
- Organise a workshop like the FEAT seminar about the topic?
 - Presentation - Look at getting a range of views from opposition to chemicals to for chemicals - practitioners
 - Compare Mr & Mrs Poor against Mr & Mrs Rich

5.3 Group 2

Group was made up of John Carter, Margery Stein, Iain McLellan, Jane Charlton and Peter Charlton

Feedback from the group

Question 1 - chemical pollution in our everyday lives?

- Target the most risky chemicals first
- Medical products (over prescription)
- Preservation and other treatments of food and plants for food production

Question 2- Minimise the risk to ourselves

- Reduce ingestion (e.g. inhalation, eating etc) of chemicals
- Avoid fast foods - prepared meals

Question 3- Action

- Education (spread the 'word')
- Look for alternatives (materials & methods)
- Ethical purchasing chains
- More legislation is unlikely to be helpful
- Simplified labelling system to identify products with risky chemicals (for adoption by manufactures with right attitude)

5.3 Group 3

No names given for the group

Question 1- chemical pollution in our everyday lives?

- Some of the group did know about cling film and fatty foods have an chemical impact on your health
- Some of the group did not know about tin cans
- Doubts about things like Booths Botanic - full of chemicals? Is it really safe to use?
- Body shop Okay?
- Clothing - use organic catalogues - but expensive and limited range
- Buying some of these could help them expand
- Follow advice on WWF website - do and don't buy
- Food - buy organic, buy fair trade (not sure if they are organic?)
- Ikea -
 - MDF/formaldehyde?
 - Home to use cars
- Pollutants from aircraft?

- Pollutions make decisions on money - not on quality of life
- Is recycled plastic safe?

Question 2 - Minimise the risk to ourselves

- Oppose airport expansion and pay tax on fuel
- Don't use cling film
- Wider information to general public
- Campaign for returnable bottles - back to glass
- Go back to soap (e.g. lush on Clumber Street)
- Support farmers markets - ask produces about pesticides

Question 3 - Action

- Lobbying UK and EU governments (see FOE website), write to MP
- Awareness - long term savings outweigh short term costs
- Stunts - using FOE/Greenpeace/WWF material
- Stall at Farmers Market

5.4 Group 4

Unfortunately this group did not return their response.

6. List of attenders

Name	Organisation (if applicable)	Name	Organisation (if applicable)
June Joyce	-	Adrian Horsley	Ecoworks
Mike Hamilton	Gorse Covert Community Centre	Mrs Tuck	-
Caroline Watkins	-	Doreen Stein	-
Irene McGrath	ICC	Marjorie Stein	-
John Carter	-	Ian McLallen	-
Jane Bird	-	John Gower	-
Pauline Lumley	-	Mark Brassington	-
Ruth Youngs	-	Bev Smith	Student, Nottm Uni
Mr Jarton	-	Heidi Wolf	Student, Nottm Uni
Helen Jones	Eden Farms	Sally O'Brian	Student, Nottm Uni
David Blant	-	Victoria Ogbonna	Student, Nottm Uni
Jeremy Jago	Nottm FoE	Mark Sargeant	Student, Nottm Uni
Gordon Ford	-	Becky Calkraft	Student, Nottm Uni
Richard Thomas	HIYE	Peter Charlton	-
Nigel Lee	-	Jane Charlton	-
Helen Ross	HIYE/ Nottm Health Authority	Richard Eddleston	Chair of HIYE
Sarah Webster	HIYE/Groundwork Greater Nottm		

7. Other reading

By Professor Jane A Plant CBE

- Your Life in Your Hands (Revised edition) September 2003
- The Plant Programme 2001
- Osteoporosis. June 2003 (all published by Virgin Books Limited and all available from bookshops or Amazon.co.uk)

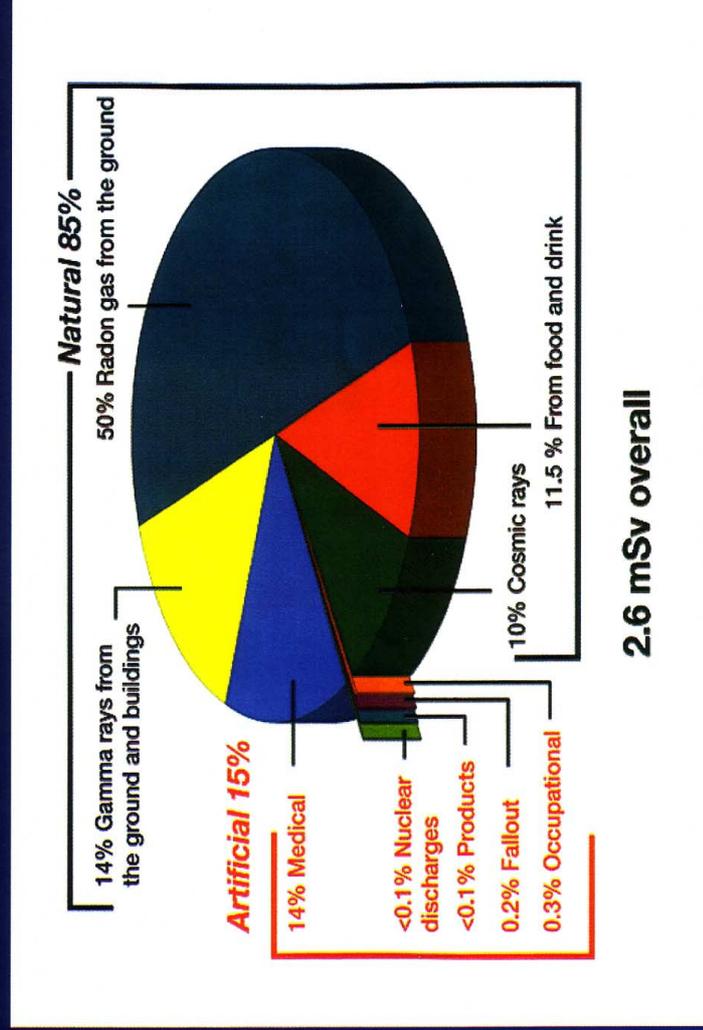
Websites

- www.foe.co.uk
- www.greenpeace.org.uk
- www.wwf.org.uk/chemicals
- www.womens-institute.co.uk
- www.chemicalreaction.org
- www.wen.org.uk

Main Groups of Chemicals

- 1 Inorganic elements e.g. Se essential or potentially harmful depending on levels, speciation and bioavailability
- 2 Potentially harmful elements with species with adverse effects at low levels e.g. As
- 3 Radioactive, including naturally occurring radioisotope series e.g. ²³⁸U. Isotopes from the nuclear industry e.g. ¹³⁷Cs Chernobyl
- 4 Persistent organic pollutants (POPS) and their metabolites – persistent bioaccumulative (lipophyle) and toxic (PBT)
- 5 Synthetic chemicals such as PFOS – different bioaccumulative properties
- 6 Human and veterinary pharmaceuticals – target specific biological receptors with potential for harm at exceptionally low (nanomolar) concentrations

Average annual radiation dose to UK population



In Cornwall, 81% of dose (7.8 mSv) is from radon

Appendix B

Health in Your Environment Voluntary Sector Forum

Thursday September 18th 2003

FRIENDS OF THE EARTH

Context

- Over 85% of industrial chemicals do NOT have a basic set of safety data.
- More and more chemicals in everyday use are being found to be able to disrupt our hormonal systems.
- At the same time, hormone-associated illnesses such as testicular, prostate and breast cancers are all on the increase.
- Some chemicals accumulate in our bodies (fat, breast milk, etc) and/or are persistent in the environment.
- Companies may be increasingly held liable for effects of risky chemicals: manufacturers (chemicals, consumer products) but also retailers, investors and insurers.

Toxic chemicals that can influence our health in our daily lives

Acutely toxic chemicals

See for instance <http://www.biosci.ohio-state.edu/~jsmith/SOP/AppendixBAcutelyToxicChemicals.htm>

Friends of the Earth does not work on these as they are fairly well established and there are tight regulations on these.

Chronically toxic chemicals

See for instance <http://www.radford.edu/~fac-man/Safety/HazCom/chp3.htm>

We don't work on these either as such but they are included in the EU draft legislation under the authorisation requirements (chemicals severely restricted).

They would include:

- carcinogenic
- mutagenic
- reproductive toxic

Chemicals that accumulate in the body or disrupt hormones

Friends of the Earth and other NGOs concentrated on these chemicals in order for these to be phased out by the EU. At the moment, they are included in the EU draft legislation under the authorisation requirements (chemicals severely restricted).

1. Brominated Flame Retardants

- Used as flame retardants in fabrics and plastics.
- Most are persistent and/or bio-accumulative.
- Several have been identified as endocrine disrupters.

2. Bisphenol A

- Used in the manufacture of linings for food cans and lids, and main ingredient in polycarbonate plastics.
- Endocrine disrupter (oestrogenic).

3. Phthalates
 - Used as plasticisers in many PVC products (e.g. vinyl floor tiles, toys), in glues and inks and as solvents in cosmetics.
 - Four commonly used phthalates are endocrine disrupters (anti-androgenic).
4. Alkyltin compounds
 - Used as preservatives, antibacterial agents and catalysts in the production of some plastics.
 - Persistent and bio-accumulative (tributyltin (TBT) and dibutyltin).
 - Endocrine disrupters (TBT and dibutyltin).
5. Alkylphenols
 - Some are used as industrial detergents, in some paints and cosmetic products; others are used as UV stabilisers in some plastics.
 - Proven endocrine disrupters (oestrogenic).
6. Artificial musks
 - Used in perfumes, air fresheners, laundry detergents, etc.
 - Persistent and bio-accumulative - e.g. found in breast milk.
 - Some are endocrine disrupters (oestrogenic).
7. Triclosan
 - Chlorinated organic anti-bacterial chemical used in washing-up liquids, dishcloths, chopping boards and some cosmetics and similar products.
 - Persistent and bio-accumulative - found in human breast milk and fish.
8. Other
 - Pesticides - endocrine disrupters and neurotoxic.
 - Some metals (lead, mercury, cadmium) - neurotoxic and/or immunotoxic.
 - Some plastic additives.

Source: http://www.foe.co.uk/resource/factsheets/chemicals_in_the_home.html and http://www.foe.co.uk/resource/briefings/risky_chemicals_retailers.pdf

How we can better protect ourselves

See FOE tips at:

http://www.foe.co.uk/campaigns/safer_chemicals/issues/cutting_the_risk/

See also Greenpeace's chemical kitchen

<http://www.greenpeace.org.uk/Products/Toxics/main.cfm>

See also WWF's Chemicals & health page <http://www.wwf.org.uk/chemicals/>

How we can better protect our communities

Help us lobby EU institutions for a better legislation on chemicals - see

<http://www.chemicalreaction.org>

Help us lobby retailers - see

http://www.foe.co.uk/campaigns/safer_chemicals/press_for_change/league_table/