

# Briefing



**Friends of  
the Earth**

## Into the Mouths of Babes

Pesticides in the diet and our children's health

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Friends of the Earth

26-28 Underwood Street, London N1 7JQ

Tel: 020 7490 1555 Fax: 020 7490 0881 Email: [info@foe.co.uk](mailto:info@foe.co.uk) Website: [www.foe.co.uk](http://www.foe.co.uk)

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## Introduction

**In our modern world, we are exposed to pesticides in food and often in our homes. It is normal for most children today to be exposed to pesticides from the moment they are conceived, and yet very little is known about the possible long term impacts of this on their health and development. Friends of the Earth believes that our children should not have to start life this way. Supermarkets should do more to make sure the food they sell is safe and the Government should keep its promises about protecting children from pesticides.**

We are exposed to pesticides every day, from many sources. They may be used by farmers to grow crops, by manufacturers to protect their goods, by vets and farmers to treat animals, or by doctors to treat common problems such as head lice. They are also used by people in their homes and gardens, in products such as weedkillers and insect sprays. Residues of pesticides are regularly found in half of fresh fruits and vegetables and in our rivers and streams. They may also be in household furnishings such as carpets, in the fur of pets treated for fleas and on garden plants and surfaces. Every day we are exposed to these pesticides, as are our children.

## Growing Concern

For some time now, scientists have been raising concerns about the possible effects of the different pesticides around us on health, particularly for children. Some scientists believe that the growth of behavioural disorders among children in industrial countries could be in part related to the pesticides to which unborn babies are exposed<sup>1, 2</sup>, and that subtle harm done to the brain early in life may not become evident until much later<sup>3</sup>. Some pesticides have been found to weaken the immune system, and concern has even been raised that exposure to pesticides in the womb could make individuals more vulnerable to their toxic effects as adults<sup>4</sup>.

Safety assessments for pesticides look at each chemical on its own. But food often contains a mixture of pesticide residues - Government figures from 2000 showed that one third of apples and nearly one half of pears tested contained residues of more than one pesticide<sup>5</sup>. Very little research has been conducted on the safety of these mixtures, but some studies have highlighted that such mixtures might pose a risk to the immune system or have the potential to affect behaviour<sup>6</sup>.

### An Apple a Day

The World Health Organisation has recommended that adults and children eat five portions (400g) of fruit and vegetables per day.

FOE agrees with experts that eating plenty of fruit and vegetables is essential for good health and can help to prevent cancer and heart disease, but we also believe that we shouldn't have to eat pesticides with them.

## Hormone Disruptors

A number of pesticides which are commonly found in our food have been identified by the European Union as likely to cause disturbance to natural hormones in our bodies. These chemicals are also found in many consumer goods and they mimic natural hormones, or block them from working properly. It is thought that trends such as falling sperm counts and girls entering puberty earlier may be linked to hormone disruptors. Natural hormones can affect behaviour, brain development and development of reproductive organs. Hormone disruptors can cause problems at very low doses<sup>7</sup>.

## Pesticides in Our Food

Every year, the Government tests a small proportion of the food sold in our shops for pesticide residues, and overall about half of the fresh food tested has been found to contain pesticide residues. For example, 80 per cent of the pears sampled in 2000 contained pesticide residues and nearly half contained residues of more than one pesticide, including hormone disruptors. Residues of 16 different types of pesticide were found in apples tested in 2000, many of them the same as those found in pears.

The Government consistently claims that we do not have to worry about pesticide residues in our food because legal “maximum residue levels” are rarely exceeded. But at the same time, the Government has advised parents to peel fresh fruit and vegetables before giving them to children, in order to reduce pesticide levels<sup>8</sup>. Even the Government won’t say that the levels of pesticides in our food are safe, only that they are “toxicologically acceptable”<sup>9</sup>. Furthermore, the international body that sets standards for pesticide residues in food (the Pesticides Committee of the Codex Alimentarius) is dominated by pesticides companies. At the 2000 meeting, eight countries included a representative from the pesticide industry in their delegation, in addition to the 23 pesticide companies who were already at the negotiations<sup>10</sup>.

Occasionally, the Government’s testing finds levels of pesticide residues above the legal limit in particular foods. For example, one sample of carrots tested by the Government in 2000 was found to contain residues of the pesticide chlorfenvinphos at nearly twice the legal limit. The Government’s advisors played down the risk from this contamination, stating that “*In the worst case situation, where a toddler ate a substantial quantity of carrots ... a mild stomach upset might have resulted*”<sup>11</sup>. But, according to their own figures, a ‘substantial quantity’ of carrots is 100g - or one carrot<sup>12</sup>.

### Supermarket Sweep

Two supermarkets, the Co-op and Marks and Spencer, have banned the use of certain pesticides by their suppliers and restricted many others. They have also agreed to publish on their web sites the results of their own tests for pesticides in the food they sell.

Parents who shop elsewhere should be asking their supermarket why it hasn’t done the same.

The Government wants to encourage children to eat more fresh fruit and vegetables - the National School Fruit Scheme will provide young school children with a piece of fruit every day. Yet when considering the risk from pesticides, the Government seems to think that one carrot is an unusual amount for a child to eat. FOE believes that the Government must take into account the pesticides in our food when considering how it will run schemes to encourage young children to eat more fruit and vegetables. It should aim to provide pesticide free fruit to the school fruit scheme.

It is vital for the health of children to eat plenty of fruit and vegetables and there are simple things that parents can do to reduce their children’s pesticide exposure:

- Buy organic when it is possible and affordable
- Peel fruit and vegetables. This reduces pesticide residues but does not remove them all.

## Babies and Toddlers

Friends of the Earth believes that we should protect growing babies and children from unnecessary risk, including exposure to pesticides. Babies and young children need such special protection because they are particularly vulnerable.

### Growing Bodies

The basic systems and organs of our bodies develop in the womb right through to adulthood. Different systems and organs develop at different times of life. For example, the reproductive system forms in the womb, while the brain has a period of massive growth and development from just before birth through to about two years old<sup>13</sup>. A baby's immune system only starts working after birth and carries on developing right through childhood. Because these organs are growing so rapidly, they are particularly vulnerable to pesticides<sup>14</sup>.

### More Exposed

Babies and young children can have a much greater exposure to pesticides than adults, for several reasons. Firstly, on a weight for weight basis, children drink more water, eat more food and breathe more air than adults. It has been calculated that, in proportion to their body weight, pre-school children consume twice as many fruit and vegetables as adults, nearly three times as much bread and cereals and more than five times as much dairy produce<sup>15</sup>. Babies and young children also tend to have a much less varied diet than adults and so eat more of particular foods.

### Pest Control

There are many safe and effective alternatives to pesticides for the home and garden. Using these will protect your family and still keep bugs at bay.

Further information about these alternatives can be obtained from the Henry Doubleday Research Association. Contact details are at the end of this briefing.

When children play, they are at further risk from pesticides because they are more likely to touch soil, plants or household surfaces to which pesticides have been applied, and young children often put their hands in their mouths. Researchers have found that children whose parents had recently used garden sprays had pesticide residues in their blood stream<sup>16, 17</sup>. Children play with their food, and this can lead them to have greater exposure to the pesticides found on the skin of food, such as fruit, that they handle<sup>18</sup>. To add to this, children may be exposed to the chemicals found in their toys, in toiletries or in household products<sup>19</sup>.

### Paying the Price

Too often, it is children who pay for the pesticides used on the food that we buy. Children living in agricultural areas around the world have been found to have pesticides in their bodies<sup>20</sup> and links have been found to serious health effects such as birth defects and cancer<sup>21, 22</sup>. When farmers and farm workers are exposed to pesticides at work, they can end up taking these home to their children, for example on their clothing<sup>23</sup>.

## Before Birth

Pregnant women already have to think about what they eat and drink to make sure they get a good diet so that their baby can grow healthily. Babies in the womb may also be at particular risk from pesticides<sup>24</sup> and a worrying study in Australia found that three quarters of newborn babies tested had been exposed to pesticides before they were born<sup>25</sup>. It is increasingly being realised that pregnant women need special protection - for example, in respect of pesticides that affect hormone systems, the Royal Society has recommended that "it is prudent to minimise exposure of humans, especially pregnant women" to this type of chemical<sup>26</sup>.

One of the most important things for the health of unborn children is that their mothers have a healthy balanced diet, with plenty of fresh fruit and vegetables. But mothers can increase the protection of their unborn baby by eating organic food when they can. Families can protect their unborn children by not using pesticides in the home and garden.

## Government Inaction

The European Commission has already decided that babies should be protected from pesticides in their food. In 1999, it set a maximum limit for pesticides in milk formula and baby food at the extremely low level of one part in 100 million. But this law only applies to processed baby foods. The first solid food for one in five babies is pureed fruit or vegetables<sup>27</sup> and by 18 months, only four per cent of children are still eating processed baby foods<sup>28</sup>. If we are to take pesticides seriously, we must protect all babies and children.

In the United States, special protection for children is written into the law on pesticides<sup>29</sup>. No such provision has been made for children in the UK, despite the fact that the Government has signed up to a European declaration on the environment and health<sup>30</sup>, in which it was stated that "*We are determined to develop policies and implement actions to provide children with a safe environment, including during prenatal and postnatal development, towards the highest attainable level of health*". The Government must make good on this promise by ensuring that children really are protected from pesticides.

## Press for Change

The means to reduce pesticide use and residues in our food are already available - it is not an unachievable goal. Alternatives to pesticides exist, for example weeds can be controlled with machinery instead of chemicals. Pesticides are frequently used by farmers because of the high standards of appearance required by supermarkets; retailers and customers alike need to think about what they really want from their food. Accepting slightly less perfect looking food could help farmers to reduce the amount of pesticides used.

It is vital for the health of our children that they eat healthy diets with plenty of fresh fruit and vegetables. It is totally unacceptable that they should only be protected from pesticide residues in food if they eat processed baby food. Friends of the Earth is calling for:

- the law restricting pesticides in baby food to be extended to all food, in order to ensure that babies are safe from the moment that they are conceived;
- because this will take time to implement, as a first step legislation should be extended to

- those foods, such as apples, pears and bananas, that infants eat most;
- a ban on those pesticides with most evidence of harm, such as those which cause hormone disruption;
- retailers to take steps, ahead of legislation, to ensure that the food that they sell is free from pesticide residues. Friends of the Earth has already worked with Marks and Spencers and the Co-op on policies to do just this;
- effective monitoring to ensure that food is not being sold which contains pesticides;
- the Government to put in place an action plan to ensure that 30 per cent of farmland is organic by 2010;
- the Government to provide funding for research into alternatives to chemical pesticides, as well as free advice to farmers on the alternatives to using pesticides.

### Take Action

It is clear from what has happened with GM foods (and what has already happened with pesticides) that shoppers have the power to change what they are sold in their food. Putting pressure on your supermarket is a very effective way of taking action. If you want to do something about pesticides in food, here are a few ideas:

- Write to your supermarket, and demand that they make a special effort to ensure that the food children eat is free of all pesticide residues.
- Ask your supermarket to ensure that pesticides which interfere with the hormone system are not used at all on the food that they sell.
- If your supermarket doesn't already publish the results of its pesticide residue monitoring, ask it why not.
- Ask your supermarket what it is doing to help its suppliers find alternatives to chemical pesticides.

## Real Food and Farming Campaign

Food and farming in the UK faces a stark choice. Do we continue to put profit first? Or adopt practices that safeguard the future of what we eat and those who provide it. If we let them, the Government and big corporations will make this decision for us. Friends of the Earth is campaigning for food that is safe from unwanted additions, such as pesticides and GMOs, and for our farming to go forward in a manner that will protect farmers incomes, rural communities, wildlife and the environment now, and in the future. To find out more about the Real Food and Farming Campaign, including how to get involved, please contact us on 0808 800 1111.

For more information on practical methods to reduce pesticide use in the home and garden, please contact the Henry Doubleday Research Association (HDRA), Ryton Organic Gardens, Coventry, CV8 3LG. Telephone 024 7630 3517. Web address [www.hdra.org.uk](http://www.hdra.org.uk)

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