

# OPUS

## ORGANOPHOSPHATE USERS SUPPORT – Mid Wales and Marches Group

To help farmers and their families suffering from organophosphate poisoning.

Patrons: Michael Hooper Bishop of Ludlow, Professor Andrew Watterson,  
Professor Malcolm Hooper, John Melville Williams QC.

**Chairman: Mrs Teresa Layton**

**Committee: Rev'd Ian Charlesworth, Mr John Hoyte, Dr Sarah Myhill,**

**OPUS charity number 1086930**

**Secretary Rev'd Nick Read, 2 The Villas, Dilwyn, Hereford HR4 8HR**

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Dear All,

Hope you are all feeling better than the weather, we all missed the sunshine and vitamin D last year!

The AGM went well in April with Anthony Worthington giving us first hand information about the Gulf War. He told us about his own experiences and hearing the true facts was very disturbing. He now suffers very serious medical problems. The evening went by so quickly, we would all have liked to have heard much more from Anthony.

Our next AGM will be at 7.30pm Friday 19 April 2013 at the Plough Hotel, Market Street, Knighton.

<https://plus.google.com/100882595601101703957/about?gl=uk&hl=en#100882595601101703957/about?gl=uk&hl=en>

Best wishes for 2013.

Teresa Layton  
Chairman

### **MEDICAL UPDATE**

The toxic effects of organophosphate pesticides are now well established. Farmers led the charge with sheep dip flu with organophosphates widely used, not just for sheep dip, but also fly control in the milking parlour and as an agricultural pesticide. We then saw identical clinical pictures in the Gulf War Veterans because of their exposure to the organophosphate sarin used in chemical warfare – the effects of this were made much worse by the use of the nerve agent pyridostigmine, supposedly to protect against the effects of poisoning. More recently we have aerotoxic pilots who are also exposed to organophosphates through the use of tricresyl phosphate in aircraft engines. This is used as an oil improver, burns off and contaminates cabin air – this is pulled over the engines to warm it.

However, we are now seeing the effects of low level poisoning in a much more disturbing way, i.e. our children. Pesticides, including organophosphates, continue to be widely used in the agricultural industry and for insect control. Children are much more susceptible to the effects of pesticides because their brains are developing fast – pesticides are all neurotoxic. A report released by Pesticide Action Network North America in October 2012 details risks. Studies find

that pesticides can compromise intelligence because derailed brain developments means falling IQs.

Pesticides are toxic to DNA and this can result in birth defects and childhood cancers.

Many pesticides are hormone mimics which results in changes in puberty timing – so for example the age at which girls start to see their periods is falling.

Pesticides disrupt the immune system and switch it on inappropriately. This may partly explain the increasing incidence of allergy in children, especially asthma.

Pesticides interfere with insulin sensitivity and would encourage childhood obesity and diabetes. Indeed a study published in *The Lancet* in 2007 by Lee et al looked at the levels of persistent organic pollutants (POPs), including pesticides, in the normal population. They found that those people with the highest level for pesticides, compared to those with the lowest level of POPs were 38 times more likely to be diabetic.

<http://toxfree.net/chlordane/Education/Healthrisk/622.pdf>

What was so shocking about the PAN report were studies detailing how pesticide residues are high in all foods from breast milk to the school lunch. Indeed a woman who is breast feeding will reduce her body burden of pesticides by about a third, simply because they pass out through breast milk – directly into the baby.

Of course government agencies and big business continue to deny pernicious effects of pesticides. A recent example is the scandal over neonicotinamides, which are nicotine like chemicals used for insect control. Early on concerns were raised about their impact on the population of bees, but these were brushed aside by the industry. They are now being called to account – it is clear that industry representatives were economic with the truth and failed to accurately report the results of their own studies confirming these early suspicions.

Furthermore OPs have been replaced to a certain extent by glyphosate, trade name Round Up. A study, published in the *Journal of Environmental and Analytical Toxicology*, reveals that industry studies on glyphosate dating back as far as the 1980s, including some by Monsanto, showed that the chemical caused birth defects in lab animals. But German government authorities tasked with reporting on the industry studies to the EU Commission and member states played down the findings, giving a false impression of glyphosate's safety. The EU approved glyphosate in 2002.

Said Claire Robinson, research director at the science policy platform Earth Open Source and a co-author of the study: "The German authorities introduced irrelevant data to 'disappear' significant findings of birth defects and even went so far as to redefine a birth defect as a 'developmental variation'."

"As a result, Germany set – and the EU authorities accepted – a 'safe' level for glyphosate exposure that may not be safe at all."

Dr Sarah Myhill  
OPUS Medical Adviser