

MIDLANDS

ASTHMA

& ALLERGY

RESEARCH

ASSOCIATION

**MAARA** is an East Midlands based charity formed in 1968 which:

- ◆ conducts research into the cause and treatment of asthma and allergy;
- ◆ runs a treatment centre which gives a specialised clinical allergy service to patients;
- ◆ has specially trained nurses available to give practical help and support;
- ◆ runs an extensive information service in Derby and Leicester;
- ◆ carries out aerobiological research and has a pollen and fungal spore data bank extending over several decades;
- ◆ gives support to the local Peanut and Nut Allergy Groups.

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*Chairman Don Pearson Treasurer Roger Chapell Medical Adviser Martin Stern*

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*MAARA donated £3000 to the Department of Child Health in Leicester to help purchase a £6000 Quinton Exercise Treadmill to investigate the relation between exercise-induced asthma and other symptoms in asthmatic school-children.*

*The photograph shows a patient being monitored on the treadmill.*

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*A personal message from the Chairman, Donald E. Pearson . . .*

In the 14 years that I have been associated with MAARA and served on the Executive Committee there have been many changes, and one or two dramas.

We have seen an increasing interest, nationally and internationally in the field of aerobiology. Our own aerobiologists at Derby and the staff in the Botany Department at Leicester University whom we support financially, are in the forefront of prestigious research and noted for the high quality of their work.

We have also had a splendid effort from the staff in Leicester in carrying out clinical trials which have been the backbone of our financial support. Liz Emmerson and her dedicated helpers deserve our thanks for this support. We must also thank them for the strict quality control that they have provided for our clients who have been impressed by our standards.

A special thank you to all of the patients without whom we could not have carried out the trials.

The quality of care and the successful diagnosis of patients by the clinic at Derby would not have been possible without the expertise of Dr Darnell who is also carrying out a joint research project with Derby University. You can read more about this in the newsletter.

I would, in this my first year as Chairman, like to thank all of the Executive for their support especially Roger Chappell who has kept our sights firmly fixed on financial management.

Our Association could not function correctly without strong medical and scientific supervision and in this we have had the never ending support of Dr Martin Stern our Medical Adviser.

MAARA could not exist without a totally committed staff, I send my gratitude to all of them. My personal thanks go to Julie Corden and Eva Day for helping me in my role as Chairman.

So, as we go forward, the Association has a first class team with solid plans for the future. I hope to see you all at the AGM on Thursday 30 May in the Large Committee Room at Leicester General Hospital.

*News*

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## MAARA presents new research at American Meeting . . .

PEOPLE spend more and more time indoors, and indoor air can be very different from that of outdoors. We have developed a portable 24-hour indoor air sampler which is small and light enough to be taken to patients homes.

At the annual meeting of the American Academy of Allergy, Asthma and Immunology in March 1996 we presented our first results with this new instrument. The instrument was developed by Dr Stern with Burkard Manufacturing Company Limited, specifically to investigate indoor allergies. The aerobiology work was done by Julie Corden and Wendy Millington (MAARA Derby) and by Ursula Allitt (Cambridge) who is a scientist with an international reputation on airborne fungal spores.

The indoor sampler was compared with the standard Burkard outdoor trap with encouraging results. We used two indoor samplers in three very different inhabited houses and some large differences have been found between indoor and outdoor spore counts. In the house with windows open most of the time spore counts were similar but in another house indoor counts were higher than outdoor counts due to an indoor source of spores. In a dry double-glazed house indoor spore counts were much lower than outdoors which should be marvellous news for those unfortunate people who get terrible asthma attacks when spore counts suddenly become high as they do in wet weather at certain times of the year.

Aerobiologists now have for the first time a serious instrument for indoor aerobiology, and being first with this new invention puts us in a position to beat the world. Research is continuing and shows the great benefit of close teamwork within MAARA.

## Are YOU Allergic to Trees !

WE KNOW Spring is round the corner when we glimpse the sight of catkins hanging from the tree, these catkins release large amounts of pollen in early spring.

Tree pollens which can cause allergic symptoms, include Hazel, Alder, Birch and Oak. Birch pollen is well known as a significant aeroallergen especially in northern Europe, estimates suggest that between 10-20% of the population of northern and central Europe are allergic to Birch pollen.

The timing of the pollen seasons varies depending on the weather but trees also have a biological rhythm having cycles of high and low pollen production in different years.

Research indicates that it is the presence of pollen at a certain threshold level which triggers the allergic response.

Perhaps the next time you get your hay fever symptoms early in the year - think - could tree pollen be the culprit!

## MAARA support for Aerobiology

MAARA Derby is a member of the European Allergy Network (EAN). This network was formed in 1986 with a central database opened in Vienna in 1988 to receive daily average pollen concentrations for the main allergic pollens, e.g. grass and birch. The development of a national and international database has resulted in more accurate pollen forecasting.

In the UK there are 12 EAN sites and MAARA supports two of these at Derby and Leicester. There has been joint collaboration on research with resulting publications. At present studies are being under

taken to look at long terms grass and birch pollen and note any change in flowering times in response to the warmer springs.

Derby has a very important archive of pollen and spore data from 1968 and is one of only two sites in the UK with 365 days a year data on both pollen and fungal spores. This data is important in long term studies of levels of hay fever and asthma so that the causes of asthma outbreaks can be studied more closely. It is thought that exposure to pollens and/or fungal spores in the summer increases the chance of a severe asthma attack so this research is of great benefit to doctors and their patients.

## MAARA funds Asthma Research Project



Xiujie Luan, Research Student

THE acute exacerbation of asthma in many late onset asthmatic patients seems to be related to bacterial infection. The exact association between asthma and bacteria remains unknown so a joint MAARA / Derby University research project is to investigate which bacterium or component of a bacterium triggers an asthma attack in adults. Late onset asthma patients have never suffered from an allergy before and they have no allergic family history.

Xiujie Luan has come to Derby to carry out this scientific research. She was a registrar of respiratory medicine in China and came to this country in 1993 to study respiratory physiology at Edinburgh University. Xiujie is very interested in respiratory disease and she is very pleased to be working for her PhD on late onset asthma at MAARA Derby. She wishes to thank all those people who have supported MAARA and enabled this research project to go ahead.



An early Tree Pollen. Hazel Pollen, and twig with male catkin, and female flowers with protruding stigmas.

## Are you a Hay Fever Sufferer?

How can you escape high grass pollen counts? Go to the low pollen count areas in the UK

The Welsh coast and mountains; Western coast and hills; Cumbria; The Pennines; All moorland areas; The Scottish Highlands and Islands . . .

Have a lovely time !

## New Volunteer for MAARA

DAVID VINCE, our weather man and member of MAARA Executive Committee, is helping Derby Aerobiologists two mornings a week. He tells us Derby has had the coldest winter since 1985 and in January the lowest sunshine for 35 years. What has the summer in store?



## Severe allergic reaction to Pine Nut Protein

A 30-year-old female patient was investigated at the Derby MAARA Clinic following emergency hospital treatment after eating 'Chicken Tuscany' processed meal which contained pine nuts. Whilst eating the meal she experienced tingling and swelling of her lips and throat discomfort, followed by a generalised urticarial rash. She was given an adrenaline and chlorpheniramine tablets at the hospital and her symptoms resolved.

At the MAARA Clinic, investigations established that she had a precedent family history of atopy, her maternal grandfather and sister had suffered from eczema. The patient had had asthma for one year when she was 24 years of age. Fifty skin tests were carried out and there was a slight reaction to house dust mite antigen, the peanut antigen was negative. A blood sample was taken which was tested for specific antibodies to 11 varieties of nuts with one strong positive to pine nut proteins.

As far as the patient is aware, her only exposure to pine trees was one round of golf whilst on holiday abroad 2½ years ago - the golf course being situated near a pine tree forest, and every year she has a Christmas tree in her house.

The patient has since eaten cashew nuts with no ill effect but she is now avoiding eating foodstuffs containing pine nuts.

This serious allergic reaction demonstrates the need for foodstuffs containing any nut proteins to be prominently labelled and not just listed in small print, together with 21 other ingredients as in the case of 'Chicken Tuscany'.

R. Darnell, MD



## Nut Allergy News . . .

At the 1996 American Academy of Allergy, Asthma and Immunology meeting there was detailed discussion about nut allergy and anaphylaxis produced by food allergy.

### Desensitisation using nut extracts is still not recommended.

Adrenaline injections were being advocated at the first hint of a reaction by nearly all the participants. I believe this is wrong and would result in huge numbers of unnecessary injections. The disadvantages of being too 'trigger happy' with adrenaline are:

- children don't like injections;
- whilst adrenaline is remarkably safe, no drug is totally safe;
- the business of supplying adrenaline could come into disrepute if opponents can argue convincingly that they are being used on totally unnecessary occasions;
- unnecessary use of adrenaline costs not only the price of the injection kit, but also the expense of transport to hospital (it is axiomatic that if the reaction is severe enough to require adrenaline it also requires a visit to hospital with observation for three hours), the cost of hospital care, and the time of teachers, parents and others.

Obviously, doctors who advocate giving adrenaline for the slightest reaction are concerned that the reaction however mild, can turn into a life-threatening one. Some specialists in the USA say they are issuing two EpiPens for each location, as they feel it is essential to be able to give a second injection before the ambulance arrives. I have been asked to do this in Leicester. The ADA-Kit adrenaline self-injection kit and the AnaHelp are capable of delivering more than one dose. EpiPen delivers only one. There is no doubt that injected adrenaline has a limited duration of action. At the meeting the opinion was expressed that intramuscular adrenaline would wear off in about 20 minutes, but a published experiment on 12 volunteers showed adequate persisting blood levels at two and half hours, and the levels were not followed to find out when they become inadequate for treatment (Heilborn H, Hjemedahl P, Daleskog M, Adamsson U. Comparison of subcutaneous injection and high-dose inhalation of epinephrine - implications for self-treatment to prevent anaphylaxis. *Journal of Allergy and Clinical Immunology* 1986; 78:1174-9). These injections were subcutaneous, whereas the automatic injection kits are designed to guarantee intramuscular injection, which acts more quickly and which may wear off more quickly.

The prospect of doubling the number of EpiPens in circulation horrifies me. The issue of two sets would be justified for use in remote situations. Ambulance crews are trained and permitted to use adrenaline in some areas but not in others. This anomaly should be cleared up if only for the benefit of those people having their first anaphylactic reaction.

I would like to see a choice of devices for adrenaline injection available including AnaHelp or Ana-Kit.

Martin Stern



Dr Martin Stern, MAARA Medical Adviser is accepting a cheque for £100 from Mr Richard Wainer and Mr Mahesh Mandalia, Chairman of the Leicester Branch of the National Asthma Campaign. The donation will go towards work done by the Asthma Research Unit at Leicester General Hospital. (Photograph courtesy of the Leicester Mercury).

## MAARA supports Allergy Self Help Groups . . .

Peanut & Nut Allergy Support Group, Derby. Co-ordinator Jan Daniells, 21 Orchard Close, Ockbrook, Derby DE72 3RQ. Tel: 01332 663470.

The Group was formed in November 1995 to offer support and information to affected people within the Derby area. We meet on a three-monthly basis at MAARA in Derby and are hoping to have both informal and more formal meetings, where visiting speakers will address the group. We aim, through group effort, to give up-to-date information, practical advice and moral support to long term sufferers and those who have recently discovered that they or a family member suffer from an allergic reaction to nuts.

The Peanut Allergy Support Group, Leicester. Co-ordinator Shirley Hammond, 10 Parkland Drive, Oadby, Leicester. Tel: 0116 2713836.

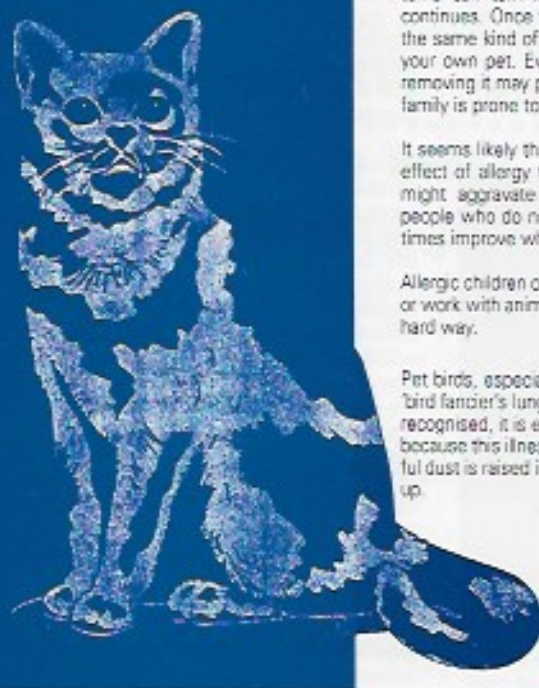
The Peanut Allergy Support Group was formed in February 1994, and since then media coverage and Government lobbying has resulted in a very positive response from the general public. The group is growing and at present has 60 members, who are campaigning for better food labelling. They have regular correspondence from the Ministry of Agriculture, Fisheries and Food who are attempting to improve the labelling system. In Leicester some schools now ban peanuts from their menus.



# Pets and Allergy

If your pet makes you wheeze a little, should you get rid of it?

What should you do if your child gets itchy eyes after stroking the cat?



## House Dust Mite Protection

MAARA sells bedcovers cheaply all sizes . . .

Single bed, 1 pillow **£87.95\***  
Double bed, 4 pillows **£131.80\***

Also in stock duvet covers  
All items may be bought separately

\*Prices may change without notice

You or someone in your family is bound to be very fond of the pet. Keeping pets is a marvellous experience for children. Taking the dog for a walk may be the only exercise you get. Balancing the risk of allergy against the reasons for keeping pets can be difficult, and the final word does not rest with the doctor.

All furry and feathered pets, not only cats and dogs, are likely to cause allergies in susceptible people. The more contact someone has with the animal, the worse the symptoms are likely to become. Cats, dogs and horses seem to cause a lot of asthma for this reason. Animal hair and dust stick to clothing by static electricity and are spread far more than most people realise. Even if you personally keep away from the pet, it may still make you ill. It may be worth staying away from home for a while to find out if a pet is causing the symptoms.

Some experts think that washing the cat is helpful. This needs to be done about once a week and you have to gradually introduce the cat to the idea of being washed by first of all sitting it in the sink a few times, giving it something to eat and stroking it, then gradually putting it in the sink and wiping it with a damp cloth and so on until eventually you can wash the cat with water. You do not have to be exceptionally thorough, and cats get perfectly used to this as long as you don't get water in their ears. However the latest evidence is that cat washing does not help.

But even if your pet leaves the house it takes many months of regular cleaning before you achieve really worthwhile reductions in the dust they have left behind. Merely washing the cat is less effective.

The commonest form of allergy to pets seems to be a mild 'nettle rash', often on the eyelids, or a bit of sneezing or wheezing, within a few minutes of handling the pet. These mild symptoms can turn into severe ones if contact with the animal continues. Once this happens, visits to other people who keep the same kind of pet become a problem, even if you get rid of your own pet. Even if your pet is not causing any symptoms, removing it may prevent future illness if you or someone in your family is prone to allergies of the nose or chest.

It seems likely that allergy to one substance may aggravate the effect of allergy to another; for example, mild allergy to a pet might aggravate house dust allergy. This may explain why people who do not notice any harm from handling a pet sometimes improve when they get rid of it.

Allergic children or young people should not plan to become vets or work with animals. Too often this lesson has been learned the hard way.

Pet birds, especially pigeons, can cause another kind of allergy, known as 'bird fancier's lung'. This is another (although rarer) lung disease. Once it is recognised, it is especially important to avoid further contact with the birds because this illness can cause permanent damage to the lungs. More harmful dust is raised if the droppings are allowed to dry before they are cleaned up.

## Desensitisation for cat allergy

At the 1996 AAAI Conference we heard the latest results with a new desensitising vaccine.

For some years experimental treatment has been going on with a vaccine which we heard about as 'Catvax', or 'Allervax Cat'. This is the first of a generation of desensitising vaccines designed to act directly on the lymphocytes needed for producing the antibodies which cause allergy. The hope is that these will not risk the catastrophic anaphylactic reactions which have led to the existing desensitising injections being virtually banned in the UK since 1986.

The experimental treatment was tested at the Johns Hopkins medical school in the United States, by an outstanding team of medical scientists with top reputations in the field of desensitisation. They fitted out a room in which cats were kept, and patients were tested by being placed in this room.

The results were disappointing. It is not clear that the new vaccine is more effective than the old, and a few serious reactions to the vaccine did occur. Don't give up hope though; in the course of this work more has been learned about the immune system, and about cat allergy.

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Pets are one of the three main causes of allergic asthma in Britain, along with house dust mites and grass pollen. Asthma and allergy due to pets are avoidable.

## WOULD YOU LIKE TO HELP MAARA?

(We enclose a donation to MAARA for research)

£ .....

(We enclose a subscription for MAARA membership  
Subscription £3.00 for one year, £10.00 for five years.)

£ .....

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**12 Vernon Street, Derby DE1 1FT**

**Tel: 01332 362461**

**OR**

**MAARA**

**Asthma & Allergy Information & Research Centre**

**Leicester General Hospital**

**Gwendolen Road, Leicester LE5 4PW**

**Tel: 0116 2735090**

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## DONATIONS 1995

Arberetum Masonic Lodge; Mrs Bates; Mrs Mary Bentley; Blaby Methodist Playgroup; Sir Arthur Black Trust; Blackfordby Church; Cherry of Wharf Way; Daniels Pharmaceutical; Derby Masonic Golfers; Derby Opera Company; Daxford Tubes; Mr Dhiman; Englass Charitable Trust; Forest Centre Wine Club; Fosse Health Trust; Friends of Knaptoft Church; Mr & Mrs Gilman; Intercity; Leicester Branch National Asthma Campaign; Leicestershire & Rutland WI; Loughborough University; Market Harborough Working Mens Club; Mr & Mrs B Marvin; D Moss; MR Market Research; Newmount Ladies Fellowship; Sinfon Community School; Spondon Bowls Club; Mr M Tarrant & Friends; Thomas Hill & Company; Thumby Bingo Club; Thumby Cub Scouts; Toth South Leicester District; Wheatheaf Wine Circle; Woolworths; Wreake Valley Community College; Wyvern Lodge; Also many thanks to everyone who gave donations in memoriam.



Martin Stern