MIDLANDS ASTHMA & ALLERGY RESEARCH ASSOCIATION

News letter

DECEMBER 1991

MAARA IS ALIVE AND WELL!

MAARA, so recently in crisis, is thriving. Instead of the financial losses which threatened our very existence in 1988-89 and when closure was talked of as inevitable at the Special General Meeting, I can reveal that the figures for the financial year just ended (September 1991) and subject to audit, show a very comfortable surplus of income over expenditure.

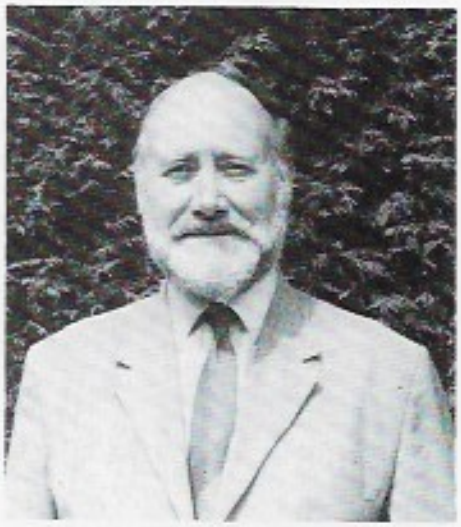
Having regard for the Association's recent troubles and the unavoidable effect on public perceptions, the turn around in the financial state is remarkable and although, due to the very nature of our charity, we remain very dependent upon unpredictable income sources, the future looks very rosy.

Our grateful thanks go to all who have helped us through a very difficult time and put us on our feet again. Our morale has so often been boosted by donations raised by coffee mornings, bring and buy sales, marathons, schools, church groups, Inner Wheel, Rotary, industry, covenant holders, members, etc, etc. Our special thanks must go to the bereaved who send money raised instead of buying floral tributes. It is always sad in these circumstances but it is a lasting memorial to loved ones.

Last but not least, we are grateful to our army of clinical trial patients who help research by testing new treatments on behalf of the pharmaceutical industry.

We take great care to make sure that the money is wisely spent, and now that we are earning enough we must expand and increase our research work on the things which we know are important in the fight against asthma and allergic disease.

Please continue to support us — we need you.



Richard Keene

Richard Keene
Chairman

Help needed . . .

MAARA is a worthy cause, we have the expertise and the facilities for research, but we do need more money **NOW**.

You can help MAARA in at least five ways:

1) By becoming or continuing to be a member of MAARA

2) By organising fund raising events

3) By taking out a covenant

4) By remembering MAARA when you write your will

5) By a donation

Newsletter

IT'S IN THE AIR!
• Aerobiology 1991 •

THERE have been some exciting developments in Aerobiology in the UK over the past year. The British Aerobiology Federation (BAF) has been formed to include all those engaged in aerobiological research and all people interested in promoting aerobiology.

Within the federation, a core of six members at sites in Cardiff, Derby (MAARA), Edinburgh, Isle of Wight, Leicester (MAARA) and North London are members of the European Aeroallergen Network (EAN). This network was set up to provide comprehensive pollen monitoring throughout Europe. The computerised data is supplied to the general public, allergists, pharmaceutical companies, botanists, climatologists, palaeontologists and used as an aid in agricultural and crop research.

The grass pollen monitoring side of BAF was named POLLEN UK and in order to produce standardised counting stations, MAARA Derby was selected as a training centre. This year 23 sites were in operation during the hay fever season and gave the pollen count to the media, etc. The weather in June this year was very wet and cold and the counts were the lowest since records began. No high counts were recorded in Derby until 21 June and the season then continued unusually into August.

Pollen monitoring is now well co-ordinated and it is hoped that fungal spore monitoring will follow in the near future. MAARA Derby is one of only two sites monitoring fungal spores and pollen levels on 365 days of the year.

Looking at spores through a microscope.

Spores divide into two main groups: those present in the air in dry weather and those present in wet weather. They can cause major problems for asthma and allergy sufferers. A sudden increase in spores, for example, after a thunderstorm, can exacerbate asthma attacks, and therefore this continual monitoring can be of help in identifying susceptible patients.

In London the number of patients with hay fever is increasing whilst grass pollen levels are falling. With pollution levels in mind MAARA is looking at nitrogen dioxide measurements, although unlike London, pollen counts in the Derby area do not show the same trends.

MAARA has been at the forefront of aerobiological research in the UK since 1968. This is largely due to the generosity of the general public. Let us hope that in the 1990's aerobiological research will be able to continue here for the benefit of patients with an allergic response.

WHAT IS ALLERGY?

ALLERGY is a condition which can be likened, for practical purposes, to immunisation.

When a person is immunised against diphtheria, whooping cough, tetanus, etc, the doctor is making the patient allergic to these harmful germs, usually by a series of injections, using dead pieces of protein made from cultures of these germs.

Conversely, allergy can be regarded as an unwanted naturally occurring immunisation usually against some harmless environmental and rarely some foodstuff proteins, which gain entry to the tissues of the body by routes other than by injections.

Subsequent exposure to specific proteins to which the patient has become sensitised either deliberately by immunisation or naturally by allergy, results in the body defence mechanisms being activated, which in the former case (immunisation) prevents live, dangerous germs from causing disease, but in the latter case (allergy) causes an unnecessary and unwanted inflammatory reaction as occurs in asthma and hay fever.

The body defence system (the immunological response) is designed to identify, become sensitised to, and react against alien (ie. non-self) proteins.

Why some people develop allergies and other people do not is not yet clear. Factors being studied at the moment are:

1. Genetic susceptibility;
2. Preceding infections, especially viral;
3. Noxious agents, eg. motor exhaust fumes;
4. Airborne particles, eg. pollens, spores, animal dander;
5. Incorrect weaning of babies.

MEET THE STAFF

From left to right: Wendy Millington (Aerobiologist), Dr Royce Darnell, Liz Emmerson (Research Nurse), Dr Martin Stern, Julie Corden (Aerobiologist), Eva Day (Secretary), Ann Harries (Administrator), Martin Judd (Research Assistant), Anne Spanswick (Asthma Nurse), David Edwards (Appeals and Accounts).
Not pictured Margaret Smith (Medical Secretary).

1991 HAY FEVER TRIAL A SUCCESS

ONCE again MAARA has distinguished itself by successfully completing a large clinical trial on a new anti-allergy medication for hay fever.

About 600 people came to our centres in Leicester and Derby volunteering to try a new antihistamine which may have effects over and above those of previous medications. After screening, 352 patients fulfilled the criteria for entry to the trial. To make sure that the final results were not a product of our imagination, some of the volunteers received dummy treatment (placebo) and neither we nor they knew at the time which kind of treatment they were being given. This is vital because in every trial some people get better whilst taking the placebo, whilst others seem to get quite striking 'side effects' on the placebo. What is really happening here is that the first group would have recovered anyway and the second group are suffering from concurrent events which could be interpreted as side effects. Therefore, without this control group of patients taking the placebo we would always be unsure about the true effects of the new medication, as what we are looking for is a medication which will produce improvement much more often than placebo and 'side effects' no more often than placebo. Comparative studies are necessary in order that patients for whom the medication is eventually prescribed can have confidence that everything has been done to make sure that their treatment is as safe as far as human effort can determine.

People sometimes find that conventional medicine does not help their illness and are often tempted to try 'alternative medicine', often with the thought that 'at least it can do no harm'. One of the most striking ways in which 'alternative medicine' differs from conventional practice is that alternative medicines are not tested with the use of placebos and the safety testing is of a much lower standard. Therefore many of the 'cures' that have been claimed may be nothing more than coincidence. People often think that because an alternative remedy is made from natural products it must be safe.

There have been some horrible examples in which this turned out not to be true. Comfrey used as a herbal remedy was found to cause liver damage. L-tryptophan sold in health food shops was recently found to contain a contaminant which caused a worldwide outbreak of an obscure illness with 5,000 cases reported (probably many others unreported) and 27 known deaths. Even the best methods can never make sure that we know all the side effects, but what we can do is to make sure that all those people who take part in the early clinical trials are followed up carefully by questioning and blood tests (blood tests would easily have picked up the problem with L-tryptophan) so that we do detect side effects if this is possible. Furthermore, our record keeping is rather like that in a bank, and these standards are enforceable by law.

The International Association for Allergy and Clinical Immunology held its three-early meeting in Kyoto, Japan in October 1991. One of the things which emerged very strongly from some of the lectures was the finding that some antihistamines seem to have more beneficial effects than that of just blocking the effect of histamine. This is now an important area of research in allergy treatment. The antihistamine which we have been testing does show promise that it will do more than the older ones. Having firstly tested its efficacy in controlling hay fever, we hope to take part in work which will tell us whether this is true. By pursuing clues of this kind MAARA hopes to help develop the anti-allergy medications of the future.

WELL, BLOW ME!

photograph by courtesy of the Leicester Mercury

MAARA in Leicester benefitted from a ball held to celebrate the first birthday of the BUPA hospital in Leicester. More than 200 guests attended and raised money to buy a Vitalograph breath-monitoring machine. Mike Hall, manager of the hospital, on the right of the picture, is presenting the machine to Don Pearson our Vice-chairman. Don, as Chairman of the Leicester branch, would personally like to thank all those groups and individuals who have worked so hard to bring in funds over the years. Without their loyal support, the unit would not have been able to expand and purchase equipment which is so vital to research.

FOOD FOR THOUGHT

An occasional cause of Urticaria

URTICARIA, also known as nettle rash or hives, is a raised skin rash and/or swelling which can affect the whole body, the individual lesions somewhat resembling a gnat bite.

The skin reaction is caused by histamine release into the skin by mast cells which lie just underneath the skin. Mast cells are the first line of defence for the body. We want these to react by releasing histamine, which initiates an inflammatory reaction in order to repel any dangerous germs trying to gain entry to the body but we do not want them to react when there is no just cause as occurs in urticaria.

There are a number of types of urticaria related to possible causes but the mechanism (mast cell reaction) is the same.

In the United Kingdom, urticaria is occasionally related to foodstuff (eg. strawberry, lobster, tinned tuna fish, peanut), but more often related to additives, colourings and preservatives in foodstuff. Some patients give a history of the onset of urticaria being preceded by a stomach and bowel upset (gastric 'flu, diarrhoea, etc). The mast cells of the bowel and the skin are related as they are of the same type. Although there are a number of causes of urticaria it is always worthwhile the patient trying the effect of a fresh food diet in addition to the medication prescribed by the doctor.

A fresh food diet eliminates all food colourings, additives and preservatives and it can easily be managed by avoiding all tinned, bottled, prepacked, frozen (other than home freezing) and processed foods. Only fresh meat (not beefburgers, sausages, etc) fresh poultry, fresh vegetables, fresh fish (avoiding smoked/dyed fish) should be eaten.

Medication for urticaria is usually an antihistamine, and the one prescribed should be long acting (ie. one which will help protect for 24 hours) and it should be taken on a regular basis each day for at least six weeks, (six weeks being the minimal time for the immunological response to become quiescent, ie. the mast cells to be settled down).

When a fresh food diet has been found to be beneficial, by the patient being free from urticaria without the need for medication (discontinued after six weeks), the diet should be maintained for a further six weeks, ie. three months in all as this is the minimal healing time of the body.

NB — A correctly balanced fresh food diet is in no way injurious to health and may even determine good health in the future.

HOW TO JOIN MAARA

THE annual subscription is £3.00 for 1 year, £10.00 for 5 years. Contact either the Derby or the Leicester office (see below).

How to contact us

The Midlands Asthma & Allergy Research Association (MAARA) is registered as a charity No: 257131 under the Charities Act, 1960.

Head Office, 12 Vernon Street, Derby. Tel: (0332) 362461. The Association's administrator is Mrs Ann Harries.

The Chairman of MAARA is Councillor Richard Keene. He can be contacted through the Head Office. The Vice Chairman is Mr Donald Pearson, 56 Penzance Avenue, Wigston, Leicester.

The Leicester Branch address is The Asthma & Allergy Research Unit, Leicester General Hospital, Gwendolen Road, Leicester LE5 4PW. Tel: (0533) 735090.

Notes on Asthma — Bronchodilation

EVERYONE experiences bronchospasm (wheezing) when subjected to air polluted by noxious agents such as ammonia fumes, some volatile chemical solvents and burning materials in fires, etc .

A few people experience bronchospasm when exposed to very cold air, severe exercise and to air ladened with cigarette smoke, etc. In this case the symptom may be relieved by inhaling a bronchodilator infrequently, as and when required, in order to relieve the temporary constriction of the airways and thereby restore lung function to normality.

In moderate or more severe cases of asthma, the lung capacity and function is reduced, therefore regular medication is needed in order to restore and maintain normality.

There are many contributory factors and causes of asthma, some known and some as yet still unknown to medical science. When contributory factors have been identified (eg. house dust mite, animal dander, etc) the patient is advised to minimise his or her exposure to them and this often helps in reducing the amount of maintenance medication needed and in some cases may prevent acute asthma attacks.

No matter what the causes and contributory factors may be, the body's response to them is an inflammatory reaction in the lung. There are two basic components to this reaction, namely, a nipping of the air pipes due to constriction of the muscle around them, and inflammation within the wall of the air pipes.

To successfully treat asthma, two things need to be done:

a. Relax the muscle of the airpipe (by Ventolin, Pulmadil, etc).

b. Get rid of the inflammation, the swelling of which is closing the airpipe (by Becotide, Pulmicort, etc).

One can liken an asthmatic reaction in the lung to a fire in a room of a house. The fireman has to gain entry through the door (which can be equated to the bronchodilator) and he then has to play water on to the fire (the water in his hosepipe equates to the anti-inflammatory steroid).

Hitherto, the bronchodilators have had a duration of action of about 6 hours, therefore they needed to be repeated at least 4 times every 24 hours. This is not very convenient when the effect wears off during the night and the patient is awakened by breathlessness.

Longer acting bronchodilators are being developed and one of the first to be made available is a development of Ventolin, known as Serevent. This has a duration of action of 12 hours therefore it can be beneficial to some patients, especially those who have sleep disturbances caused by asthma.

It should be remembered that this longer acting bronchodilator medication is only a means of 'opening the door' for a longer period. It is not the 'water' in the fireman's hosepipe. An anti-inflammatory steroid will still be required as it is the COMBINATION THERAPY WHICH IS NEEDED FOR THE SAFE AND SUCCESSFUL TREATMENT OF MODERATE AND SEVERE ASTHMA PATIENTS.

Printed by Duplitype (Offset) Limited, 29 York Road, Leicester LE1 5TT - Tel: (0533) 555174 - Fax: (0533) 471046