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Report to Parents
Childhood Asthma Prevention Study (CAPS)

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Dear CAPS Parents,

You have been one of several hundred wonderful parents who have patiently participated in our study of asthma prevention in children from birth to age five years. It has been a great study, and we could do it because you did it with us. It has attracted interest from around the world: parents and doctors everywhere are keen to learn whether there is sound advice they can use to help lower the risk of asthma in their children and patients. As we promised we would, we are writing now to tell you what we have found so far, and about our plans for the future study of 'CAPS kids.'

As you know, CAPS began in 1997 and involves research workers from the Children's Hospital at Westmead, Liverpool Hospital, the Woolcock Institute of Medical Research (formerly the Institute of Respiratory Medicine) and the University of Sydney.

At the time the study began, the available scientific evidence pointed to dietary fats and house dust mites as important in the development of asthma. We designed the Childhood Asthma Prevention Study (CAPS) to test whether reducing the levels of house dust mite and/or supplementing the diet with omega-3 fatty acids (which are contained in fish oil) might lessen the risk of asthma and allergic sensitisation in children.

As we explained at the time, when we enrolled your child before birth, we randomly assigned him or her to one of four groups. In one group parents reduced house dust mites only, in a second parents used omega-3 rich oils only, in a third group parents made both of these changes, and in a fourth group they made no active changes at all (although they would have given their children 'placebo' oil supplements.)

Currently, the youngest child is 5.5 years old and the eldest just over 8 years old. There are 516 families still participating in the study. All the children in the study have completed their medical assessments at 18 months, three years and five years, and we are therefore in a position to share the results with you.

Results from the earlier assessments (at 18 months and three years)

At 18 months, we found that parents in the study groups had achieved a 70% reduction in house dust mite allergen concentration in the beds. In the group using omega-3 oil supplements, these fatty acids were higher than in the blood of children in the control group.

We found no lower rate of onset of asthma and allergy in the house dust mite study group at 18 months. The omega-3 fatty acid diet supplement achieved a modest reduction in the number of children with wheeze at this age, but no reduction in allergy.

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We found at age three years less cough in the diet supplement group, especially among children who were already allergic. We also found that fewer children in the house dust reduction group were allergic to house dust mites. Overall, there were no differences in wheeze among the groups.

Results from the five-year medical assessments

House dust mite intervention

In the house dust reduction group, we found that the levels of house dust mite at home remained lower, but that this was not linked with a lower risk of asthma. We found a higher rate of some aspects of eczema in the house dust mite reduction group. Therefore, if your child is still using mattress or pillow covers on their beds, you may wish to remove them, particularly if he or she has eczema.

Diet intervention

Although we found that children in this group had higher levels of omega-3 fatty acids in their blood, the dietary intervention also had no effect on the development of asthma. While there may be other good reasons, to do with nutrition, for continuing these diets, we cannot say that they will prevent asthma or allergy.

What do the results mean?

We found that neither of the interventions we tested had a beneficial effect in reducing the risk that children will develop asthma or allergy at this time. As a result, we can save parents doing unnecessary things, or blaming themselves for failing to do these things, to prevent their child getting asthma.

Where to from here?

First, we plan to publish these results in an international medical journal shortly. This will add to the nine previous publications and numerous presentations at conferences, both in Australia and overseas, that have already occurred as a result of this research that you have participated in.


Second, we think it is worthwhile to see whether the children we have studied have any differences when they are aged eight years. This is because it is possible that the benefits of the measures taken in early life may not become apparent until after age five years. We will not continue the experiment but would like the opportunity to speak with you and test your child again when he or she is eight to see how they have developed. We will be contacting you with some more details about this a few months before your child's eighth birthday.

Third, there are other aspects of nutrition and good health that we wish to study, using the information that we collected. For example, we are talking with other health research workers, including those interested in nutrition and heart health for example, because the interventions and some of the information we have collected is relevant to these aspects of health, as well as to asthma and allergy. We would not embark on these additional studies without telling you about them in detail, and obtaining your permission.

Finally, let us say again how incredibly grateful we are to you for your participation in this study. It says good things about community spirit in Australia today that we had your cooperation, in such detail and for so long. We wish you and your child all the very best for the future.

If you wish to ask a question about the study, please do so. The best way to contact me is by mail at PO Box M77, Missenden Road PO, NSW 2050 or by email: g.marks@unsw.edu.au

Yours sincerely,



Guy B. Marks, for the CAPS Investigators