

# I NTERNATIONAL S TUDY OF A STHMA AND A LLERGIES IN C HILDHOOD

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## NEWSLETTER – DECEMBER 2008



Dear ISAAC Colleagues and friends,

We say this each year “Where has the year gone?” December is well underway and soon will be into a new year which we hope will promise to be an exciting time for ISAAC.

The nineteenth annual Steering Committee meeting was held in September this year in Casablanca, and was hosted by our National Coordinator for Morocco, Zoubida Bouayad and our Regional Coordinator for French Speaking Africa, Professor Nadia Ait-Khaled. This meeting was followed by an ISAAC symposium for Moroccan Health Professionals. Our grateful thanks to Zoubida and Nadia for their successful organisation of both of these meetings.

The Steering Committee discussed many ideas about the strategy of ISAAC Phase Four and decided that the key component will be information sharing on the ISAAC Website. To assist with this process and to update the ISAAC website, we are delighted to welcome Eamon Ellwood to the ISAAC International Data Centre team in Auckland New Zealand in his position as ISAAC Research Information Technologist. Eamon has begun updating the website and adding new publications to the already impressive list of manuscripts posted on the website. We hope to go ‘live’ with the new look website in January 2009. We encourage you all to view the existing website publications section and advise us if there are corrections or additions required. This would greatly assist us in keeping the publications section current to be of maximum value to you.

As you know, we have been circulating an ISAAC Phase Five Expression of Interest form to gauge how many centres are interested in a further prevalence study. We believe we have had an extraordinary response with 169 replies of whom 152 (90%) indicated to us that they would consider participating. A decision was made at the Steering Committee meeting to try and secure global funding which will enable all collaborators to undertake an ISAAC Phase Five without having to find their own funding. This is a big ask and will not be easy. We hope we may be successful and we will be keeping you updated on this progress.

I would like to draw your attention to the issue of authorship of the ISAAC global publications. Collaborators are entitled to cite papers when the ISAAC Phase Three Study Group is named after the writing group. In each case, the collaborators in the study group are named at the end of the paper. Not all centres are in every global paper (for example some centres did not include some of the Environmental questions and therefore the Principal Investigators are not named in the group authorship).

Finally I would like to welcome Dr Carsten Flohr and Dr Francesco Forastiere as new members to the ISAAC Steering Committee. We are delighted they have joined us.

We have a lot more yet to achieve with ISAAC and as I have already mentioned, 2009 promises to be an exciting time of development for ISAAC. It will be an interesting year.

On behalf of the ISAAC Steering Committee and the ISAAC International Data Centre I wish you a safe and happy Christmas and New Year.

Warmest wishes

*Innes*

Professor Innes Asher ONZM

# Congratulations to:



Professor Richard Beasley CNZM  
Wellington New Zealand

Richard has been awarded a Companion of the New Zealand Order of Merit. For services to Medical Research - in particular asthma. This is one of the highest national honours in New Zealand.

# Congratulations to:

Professor Ed Mitchell  
Auckland New Zealand

Ed has been awarded the Nils Rosén von Rosenstein Medal by the Swedish Pediatric Association, and the Swedish Society of Medicine. This is for his outstanding contributions to the progress of Paediatrics, promoting the health of children. This award will be presented to Ed in Sweden in April 2009



# Congratulations to:



Professor Hywel Williams  
Nottingham, United Kingdom

Congratulations to Hywel for being appointed one of the first 100 senior investigators with the UK National Institute of Health Research. Only two dermatologists in the UK were invited to join on the basis of an analysis of bibliometrics, grants and contribution to the National Health Service as a whole. The appointment is for four years and comes with a small stipend.

# Congratulations to:



Professor Ulrich Keil  
Münster, Germany

Congratulations to Ulrich, who has been elected Fellow of the Royal College of Physicians (United Kingdom). The celebration took place in London on Thursday 12<sup>th</sup> Jun 2008.

And last but by no means least.....

# Congratulations to:



**Dr Carsten Flohr**  
Nottingham United Kingdom

Congratulations also to Carsten, who has won a National Institute of Health Research (NIHR) Clinician Scientist Award in the UK.

Carsten will be relocating from Nottingham to London in summer next year, where he will be working at the MRC/Asthma UK Centre in Allergic Mechanisms of Asthma at King's College London. As part of this award, Carsten will investigate the links between genetic and environmental causes of skin barrier impairment, clinical eczema and allergic sensitization in the context of a large birth cohort study.

**A fantastic achievement from 5 of our ISAAC Steering Committee members.**

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## ISAAC Profile

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### Eamon Ellwood

ISAAC Research Information Technologist



I was born in Wellington, New Zealand, and moved to Auckland, when I was 6 years old and have lived here ever since. I am married to my wife Titania, and have four children aged between 11 and 15 years old.

I trained as a primary school teacher, and taught intermediate school (ages 11-13) for many years.

During this time I was introduced to web page design completely by accident, when my wife needed assistance for one of her psychology assignments, which was to be presented as a web page. In helping her I got hooked and started using web page design in my classroom teaching, creating class websites each year, and introducing my students to web page design. Each year my class web pages grew more advanced and complex as my students and I learnt new techniques, and eventually I came to the conclusion that not only was designing web sites more interesting than teaching, web pages were also, generally speaking, better behaved than children.

So I left teaching to gain a qualification in web design, which I completed this year. At the start of this year, Philippa (my step mum) told me of a position that was available at ISAAC, updating the existing website. I had been aware of ISAAC through Philippa's descriptions at family gatherings, and it sounded like an interesting and exciting project. I duly came in and met Innes, and discussed the plans for the new website and was offered the position. Since then I have been working diligently to improve the site, to make it more useful to the ISAAC community. There have been many improvements (please see report on the next page), and more are planned for the future.

In my spare time, I enjoy life in the outdoors, and love to be out in the wilderness as much as possible. I am involved in camping, tramping, abseiling, caving and sailing through the scout movement, which I have been part of since I was 12.

## ISAAC Website Upgrade

Over the year, the ISAAC website (<http://isaac.auckland.ac.nz/>) has been undergoing a significant upgrade, and will continue to be developed throughout 2009. This is in order to make it as useful as possible to the ISAAC community. This upgrade has been undertaken in three stages. Firstly, the publications have been updated, secondly, the design and layout of the site has been redesigned, and finally, throughout next year, new content will be added.

The first aspect of the website to be upgraded was the publications section. Previously, these were listed on the website in their various categories –phase 1, phase 2 methodological etc – which while well organised, was difficult to find a specific publication, particularly if you didn't know which category it fell into.

The publications have now been put into a searchable database which allows you to search by title or author, year, journal or category. In addition to this, the list of ISAAC publications has been updated with a further 163 publications, bringing the total number from 191 to 354 publications. We encourage you to make use of this facility (<http://isaac.auckland.ac.nz/publications/publicationsintroduction.html>)

Please check to see that your articles have been included. If not please contact me at [e.ellwood@auckland.ac.nz](mailto:e.ellwood@auckland.ac.nz). Also please check the category it is listed under (see the drop-down list on the search page for categories) If it does not show up in a search of the category you think it should, please let me know. We have not been able to categorise all of the new publications we have located, and need your feedback to enable this aspect of the search page to function fully.

As the ISAAC site is designed to support collaborators in their research, it was decided to include as many abstracts and full text articles as possible as well as the references in the publications database. Thus far, 303 abstracts are available and 81 full text articles or links to open access articles. This is a work in progress as we negotiate with the various journal publishers, to be able to add as many articles as possible.

In addition to the newsletters, a news and announcements page has been added to the website. This is to keep the ISAAC community up to date with what is happening in the ISAAC study more frequently than the bi-annual newsletter. If you have any noteworthy events or announcements, please let me know and I will add them to the webpage.

The second 'phase' of the website upgrade was redesigning the layout of the website, and this is nearing completion. This new design for the website was unveiled to the Steering Committee at their meeting in Casablanca. In addition to an appealing new look, the navigation menus and structure have been redesigned to be more user-friendly. This consists of a main menu across the top of the page, and submenus for the different sections of the website on the left hand side. This new look ISAAC website will be up and running as of 1 January 2009, so watch this space!

The final and most involved phase of the upgrade is the addition of new content. Currently the proposed new content to be added includes:

- Useful links to be added to resources section e.g. good research /resource sites, asthma information sites open journal sites etc
- Management recommendations
- Entry level 'information pages' about asthma, eczema and rhinitis
- News & announcements for news page
- Phase 2/3 centers to be added

If you have any information that could be added to the website, particularly any good internet links, please forward them to me.

The ISAAC website is designed to be a resource for you. When you return from your Christmas/New Year holidays, please have a look at the new site. If you have any ideas or suggestions for improvements or new items you would like to see added, please don't hesitate to contact me [e.ellwood@auckland.ac.nz](mailto:e.ellwood@auckland.ac.nz) . Your feedback is welcomed and appreciated.

Kind regards  
Eamon Ellwood

ISAAC Webmaster  
[e.ellwood@auckland.ac.nz](mailto:e.ellwood@auckland.ac.nz)

## ISAAC TRADE MARK – a successful application

The IIDC recently applied for “ISAAC” to be registered as a Trade Mark in New Zealand. We enclose a copy of the ISAAC Trade Mark Registration for your interest.

Ministry of Economic  
Development  
Manatū Ōhanga

Intellectual Property Office  
of New Zealand

## CERTIFICATE OF TRADE MARK REGISTRATION

Number 764070

I hereby certify that the above trade mark has been entered on the register of trade marks under Section 51 (a) of the Trade Marks Act 2002 on 9 October 2008, with a deemed date of registration of 26 February 2007.

The details of registration are as follows:

ISAAC

Registered in the name of Monica Innes Asher, Department of Paediatrics, Faculty of Medical and Health Sciences, The University of Auckland, Level 12, Auckland City Hospital Support Building, Park Road, Grafton, Auckland, New Zealand  
Contact Address: Monica Innes Asher, Department of Paediatrics, Faculty of Medical and Health Sciences, The University of Auckland, Level 12, Auckland City Hospital Support Building, Park Road, Grafton, Auckland, New Zealand

Class 42: research concerning the worldwide prevalence, time trends and causes of childhood asthma, allergic rhinoconjunctivitis (hayfever) and eczema

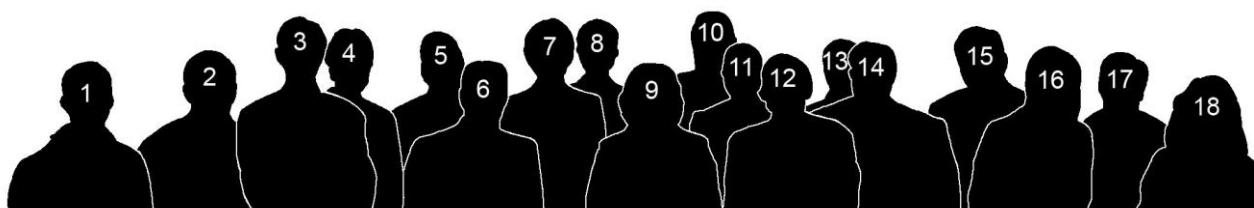


Neville Harris  
Commissioner of Patents, Trade Marks and Designs





## Report from the ISAAC Collaborators Reception at the ERS, Berlin 2008



- |                                   |                                |                                    |
|-----------------------------------|--------------------------------|------------------------------------|
| 1. Rudy Pagcatipunan, Philippines | 2. Francesco Forastiere, Italy | 3. Virendra Singh, India           |
| 4. Gudrun Weinmayr, Germany       | 5. Sundeep Salvi, India        | 6. Mohammad Shamssain, UK          |
| 7. Innes Asher, New Zealand       | 8. Denis Charpin, France       | 9. Margarita Figueroa, El Salvador |
| 10. Joost Weyler, Belgium         | 11. Mohammed Elbagir, Sudan    | 12. José Rosado Pinto, Portugal    |
| 13. Juha Pekkanen, Finland        | 14. Osman Yusuf, Pakistan      | 15. Malcolm Sears, Canada          |
| 16. Andrea Kleiner, Germany       | 17. Luis García-Marcos, Spain  | 18. Athina Papadopoulou, Greece    |

### **Absent from photo**

Zorica Zivkovic  
Chris Lai

Richard Beasley  
Colin Robertson

Erika von Mutius

### **Report from Innes.**

The 2008 ISAAC Collaborators reception at the ERS was as usual a wonderful occasion. This is always a great opportunity to meet up with ISAAC colleagues we have already met and to meet new colleagues. The ERS is now a huge organisation and by holding an annual ISAAC Collaborators Reception at the ERS, the ISAAC Steering Committee are meeting an increasing number of the ISAAC family. We thank you those of you who managed to attend this occasion and we hope that ISAAC colleagues will continue to support this endeavour. It is an opportunity for you all to meet and exchange ideas, the annual ERS venue providing a opportunity for you to get to know each other.

The 2009 ERS meeting will be held in Vienna, Austria and we will let you know who the hosts for the ISAAC/ERS reception will be in due course.

## Prevalence and risk factors for wheezing in children from rural areas of north India

Surendra K. Sharma, M.D., Ph.D., and Amit Banga, M.D.

### ABSTRACT

*Phase I of the International Study of Asthma and Allergies in Childhood (ISAAC) showed marked variability in the global pattern of allergic disorders. Risk factors for asthma in children from rural areas of developing countries have not been studied. The purpose of this study was to document the prevalence of asthma-associated symptoms in children residing in rural areas and to determine risk factors for its development. We studied 8470 school children, aged 6–7 years and 13–14 years, from 10 villages on the outskirts of Delhi, India, over a 6-month period. The study was performed using the Hindi translated version of Phase III of the ISAAC questionnaires. All of the questionnaires were self-reported by children and/or parents. Frequent passage of trucks through the street near home (odds ratio [OR]: 95% CI, 1.7 [1.2–2.4]), maternal smoking (OR: 95% CI, 1.5, [1.1–2.1]), paternal smoking (OR: 95% CI, 1.3 [1.0–1.8]), total number of cigarettes smoked by both parents of more than seven per day (OR: 95% CI, 1.9 [1.3–2.7]), paracetamol intake of more than once a month (OR: 95% CI, 1.9 [1.4–2.6]), and current exposure to cats (OR: 95% CI, 1.5 [1.1–1.9]) were independently associated with occurrence of recent wheezing (in the last 12 months), whereas fruit intake of more than twice a week had a protective effect (OR: 95% CI, 0.7 [0.5–0.9]). There is a significant burden of asthma-associated symptoms in children of rural areas of north India. Occurrence of wheezing among children from rural areas of Delhi is determined by a complex interplay of environmental agents that induce allergic sensitization and are proinflammatory and environmental agents that supplement the antioxidant stores.*

(Allergy Asthma Proc 28:647–653, 2007; doi: 10.2500/aap2007.28.3059)

**Key words:** Air pollution, asthma, atopic disease, epidemiology, ISAAC, maternal smoking, paracetamol, passive smoking load, questionnaires, risk factors, survey

Reprinted with kind permission from Dr SK Sharma,  
ISAAC Principal Investigator, New Delhi, India

## Poem from the book titled “Sing Song”

Author Anne Kennedy, New Zealand.

### What he saw

Inland from all the wet Saturdays  
the children’s faces carry the rain  
broadcast from the window, winter’s  
freckles. The kids couldn’t care less

about how impressionable they are.  
All over Auckland becalmed in  
their floating houses, playing with  
the ones who arrived in a lifeboat

hauled in the front door (while their  
sleepy mother tipped backwards into  
the street) and the raincoats, and joined  
the raucous quoits, deck tennis, snakes

and ladders and corduroy knees and  
other triumphs of the human spirit-  
if you happen to have the time for them  
between scratching. They’ve run out of

aqueous cream, a fucking disaster.  
Mum (her) drives to the chemist. Sometimes  
they’ve sailed home across the city at  
dusk past the Sky Tower which the kids

notice every time, its colour, and you  
wonder what they noticed before, because  
they’d forgotten the aqueous cream.  
The chemist is out of their brand. Damn.

Drive to St Lukes, neither chemist there  
has it either-an epidemic? Rat let loose  
from a trunk of bedding. Back to Grey Lynn.  
That’s Auckland for you, stringing

the octaves of a zither as you go about  
your business. She settles for the  
wrong brand. Not *very* much different  
says the beautiful chemist, it’ll do

till Monday’s delivery. It doesn’t.  
As soon as they smear the virgin cream  
on her skin (already itchy) she reacts  
fizzing like alchemy. She’s squirming

tearing, clawing at her flesh. Agony.  
This new cream doesn’t agree with her.  
Different views. What a drag. What a  
weekend. The rain falls and it falls  
and the father sees a Buddha in the

Comment from Professor Hywel  
Williams ISAAC Steering Committee  
Centre for Evidence Based  
Dermatology Queen’s Medical Centre,  
University Hospital, Nottingham UK.

"I liked this poem because I have heard such tales so many times from parents of the children who I see in my eczema clinic. It also made me laugh in parts. Getting a child with severe eczema set up for a holiday can be a nightmare, and one of the worse scenarios is running out of child's preferred creams, and being given all sorts of other things which may or may not suit. In the pursuit for a substitute, there is then the risk of being told different and possibly conflicting pieces of advice by other people. A lot of old twaddle is talked about emollients by the health profession and others who offer opinions on eczema treatment, as the evidence base is really not very good at all. The phrase "The musculature of their famous narrative structures has long ago gone to blancmange" is so brilliant. I shall have to remember that phrase when I meet some mothers of children with severe eczema in the eczema clinic I am about to go to in an hour's time".

window, floating, then the girl's sore  
body bearing the imprint of the trees  
and the roar of the motorway, its history

of pigs and he says, Maybe she's  
allergic to the other cream too, the  
right cream. The mother looks at him.  
Couldn't be, she says, look who

Prescribes it, the GP the homoeopath  
the naturopath, the dermatologist  
at the hospital, the magazine for white  
children, the GP again (okay, not

the Chinese doctor on K.Rd)  
they all say that moisturising  
is the most important thing and  
aqueous cream is the most benign

cream. They've known for a long  
time there will be no discoveries, no  
turning points, no happy endings.  
The musculature of their famous

narrative structures has long ago  
gone to blancmange. But because it's  
a while since anyone had anything  
sensible to say about anything, or even

thought any sensible thoughts and the  
father is convinced and the mother  
thinks the father has an unaccustomed  
glow she remembers from the old days

they leave off the aqueous cream for  
the time being and sit back and expect  
hell. See, just the same. Well, maybe  
a slight improvement but that could be

anything, that's just a coincidence.  
She's still scratching a bit but not  
quite as much, perhaps, we'll  
give her till dinnertime, the cream's

handy. By dinnertime she seems ever  
so slightly better, the skin less inflamed  
her fingers less busy, her vision outwards  
for a moment, she's looking at the rain!

Well, it's the best night's sleep  
she's had since homeo boy (they can  
joke now) treated her, since they can  
remember, since she can, in her endless life.

The next day the eczema shrivels  
before their eyes. By day three, it's  
almost gone and the relief, the child's  
relief, her relief seems applied to her face.

Published 2003 Auckland University Press

<http://www.nzbookcouncil.org.nz/writers/kennedyanne.htm>  
<http://www2.auckland.ac.nz/aup/books/kennedy-singsong.html>

"patient's corner"

Lyrics from a song titled

ASTHMA

*In the winter sun of August '83*

*On the golden hills that cradle Canterbury*

*Runs Jasmine my wonderful retriever*

*I cut Jess' hair but this I do not remember*

*And happiness like this you don't find easily*

*My lungs were small and weak with all the drug*

*(As I fell under the asthma spell)*

*And swimming in the hospital pool did not help much*

*(bunking P.E. when I'm feeling bit wheezy)*

*Ventolinhaler, Flixotide, Dr. Beco and his nebuliser*

*Medication like this you can get easily*

*Though it isn't always clear I had to get my asthma from somewhere*

**Reproduced with kind permission by Dudley Benson, taken from the album *The Awakening*, 2008.**

<http://www.amplifier.co.nz/artist/22941/dudley-benson.html>.

For those unaware of the term "bunking P.E." this is kiwi for not doing a Physical Education class, which is mandatory in NZ schools.

Do you have a poem or a story from a patient with allergic disease? - if so please send us a copy and we will see if we can publish it in "patient's corner"

## ISAAC Publications of worldwide analyses (update December 2008)

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### ISAAC Phase One Publications (worldwide)

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#### 1.0 Preliminary Papers

- 1.1 ISAAC Phase One Manual. 2<sup>nd</sup> ed. Auckland and Münster: ISAAC Steering Committee, 1993.
- 1.2 Pearce NE, Weiland S, Keil U, Langridge P, Anderson HR, Strachan D, Bauman A, Young L, Gluyas P, Ruffin D, Crane J, Beasley R. Self-reported prevalence of asthma symptoms in children in Australia, England, Germany and New Zealand: an international comparison using the ISAAC written and video questionnaires. *Eur Resp J* 1993; 6: 1455-61. [240 citations to November 2008]
- 1.3 Asher MI, Keil U, Anderson HR, Beasley R, Crane J, Martinez F, Mitchell EA, Pearce N, Sibbald B, Stewart AW, Strachan D, Weiland SK, Williams HC. International study of asthma and allergies in childhood (ISAAC): rationale and methods. *Eur Resp J* 1995; 8: 483-91. [809 citations to November 2008]

#### 2.0 Main Findings

- 2.1 Strachan D, Sibbald B, Weiland S, Ait-Khaled N, Anabwani G, Anderson HR, Asher MI, Beasley R, Björkstén B, Burr M, Clayton T, Crane J, Ellwood P, Keil U, Lai C, Mallol J, Martinez F, Mitchell E, Montefort S, Pearce N, Robertson C, Shah J, Stewart A, Von Mutius E, Williams H. Worldwide variations in prevalence of symptoms of allergic rhinoconjunctivitis in children: The International Study of Asthma and Allergies in Childhood (ISAAC). *Paediatric Allergy Immunology* 1997; 8: 161-76. [201 citations to November 2008]
- 2.2 ISAAC Steering Committee (Writing Committee: Beasley R, Keil U, Von Mutius E, Pearce N). Worldwide variation in prevalence of symptoms of asthma, allergic rhinoconjunctivitis and atopic eczema: ISAAC. *Lancet* 1998; 351: 1225-32. [1430 citations to November 2008]
- 2.3 Williams H, Robertson C, Stewart A, Ait-Khaled N, Anabwani G, Anderson HR, Asher MI, Beasley R, Björkstén B, Burr M, Clayton T, Crane J, Ellwood P, Keil U, Lai C, Mallol J, Martinez F, Mitchell E, Montefort S, Pearce N, Shah J, Sibbald B, Strachan D, von Mutius E, Weiland S. Worldwide variations in the prevalence of symptoms of atopic eczema in the international study of asthma and allergies in childhood. *J Allergy Clin Immunol* 1999; 103: 125-38. [267 citations to November 2008]
- 2.4 ISAAC Steering Committee (Writing Committee: Asher MI, Anderson HR, Stewart AW, Crane J). Worldwide variations in the prevalence of asthma symptoms: International Study of Asthma and Allergies in Childhood (ISAAC). *Eur Respir J* 1998; 12: 315-35. [466 citations to November 2008]

#### 3.0 Other Overview Papers

- 3.1 Asher MI, Weiland SK, on behalf of the ISAAC Steering Committee. The International Study of Asthma and Allergies in Childhood. *Clin Exper Allergy* 1998; 28 (suppl 5): 52-66. [86 citations to November 2008]
- 3.2 Beasley R, Ellwood P, Asher I. International patterns of the prevalence of pediatric asthma the ISAAC program. *Pediatric Clinics of North America* 2003; 50(3):539-53. [28 citations to November 2008]
- 3.3 Lai C, Pearce N. The contribution of ISAAC to the understanding of asthma. *Leukotriene Res & Clin Rev* 2001; 2: 1-4.
- 3.4 Mallol J, Asher MI, Williams H, Clayton T, Beasley R. ISAAC Findings in children aged 14 years: an overview. *Allergy Clin Immunol Int* 1999; 11: 176-82.
- 3.5 von Mutius E. Epidemiology of asthma: ISAAC—International Study of Asthma and Allergies in Childhood. *Pediatr Allergy Immunol* 1996; 7(9 Suppl): 54-6.

#### 4.0 Ecologic Analyses

- 4.1 Anderson HR, Gupta R, Kapetanakis V, Asher MI, Clayton T, Robertson CF, Strachan DP, and the ISAAC Steering Committee. International correlations between indicators of prevalence, hospital admissions and mortality for asthma in children. *Int J Epidemiol* 2008; 37: 573-582. [1

- citation to November 2008]
- 4.2 Anderson HR, Poloniecki JD, Strachan DP, Beasley R, Björkstén B, Asher MI. ISAAC Phase 1 Study Group. Immunization and symptoms of atopic disease in children: results from the International Study of Asthma and Allergies in Childhood. *Am J Publ Health* 2001; 91: 1126-9. [58 citations to November 2008]
  - 4.3 Burr ML, Emberlin JC, Treu R, Cheng S, Pearce N, and the ISAAC Phase I Study Group. Pollen counts in relation to the prevalence of rhinitis and asthma in the International Study of Asthma and Allergies in Childhood (ISAAC). *Clin Exper Allergy* 2003; 33: 1675-80. [24 citations to November 2008]
  - 4.4 Ellwood P, Asher MI, Björkstén B, Burr M, Pearce N, Robertson CF and the ISAAC Phase One Study Group. Diet and asthma, allergic rhinoconjunctivitis and atopic eczema symptom prevalence: an ecological analysis of the International Study of Asthma and Allergies in Childhood (ISAAC) data. *Eur Respir J* 2001; 17: 436-43. [59 citations to November 2008]
  - 4.5 Foliaki S, Björkstén B, Kildegaard-Nielsen S, von Mutius E, Cheng S, Pearce N. Antibiotic sales and the prevalence of symptoms of asthma, rhinitis and eczema in 13-14 year old children: The International Study of Asthma and Allergies in Childhood (ISAAC). *Int J Epidemiol* 2004; 33: 558-63. [18 citations to November 2008]
  - 4.6 Mitchell EA, Stewart AW, on behalf of the ISAAC Phase One Study Group. The ecological relationship of tobacco smoking to the prevalence of symptoms of asthma and other atopic diseases in children: The International Study of Asthma and Allergies in Childhood (ISAAC). *Eur J Epidemiol* 2001; 17: 667-73. [14 citations to November 2008]
  - 4.7 Shirtcliffe P, Weatherall M, Beasley R, on behalf of the ISAAC Phase I Study Group. An inverse correlation between estimated tuberculosis notification rates and asthma symptoms. *Respirology* 2002; 7: 153-5. [14 citations to November 2008]
  - 4.8 Stewart AW, Mitchell EA, Pearce N, Strachan DP, Weiland SK, on behalf of the ISAAC Steering Committee. The relationship of per capita gross national product to the prevalence of symptoms of asthma and other atopic diseases in children (ISAAC). *Int J Epidemiol* 2001; 30: 173-9. [46 citations to November 2008]
  - 4.9 von Mutius E, Pearce N, Beasley R, Cheng S, von Ehrenstein O, Björkstén B, Weiland S, on behalf of the ISAAC Steering Committee. International patterns of tuberculosis and the prevalence of symptoms of asthma, rhinitis and eczema. *Thorax* 2000; 55(6): 449-453. [97 citations to November 2008]
  - 4.10 Weiland SK, von Mutius E, Hüsing A, Asher MI on behalf of the ISAAC Steering Committee. Intake of trans fatty acids and prevalence of childhood asthma and allergies in Europe. *Lancet* 1999; 353: 2040-41. [71 citations to November 2008]
  - 4.11 Weiland S, Hüsing A, Strachan DP, Pearce N, on behalf of the ISAAC Study Group and ISAAC Europe. Climate and the prevalence of symptoms of asthma, allergic rhinoconjunctivitis and atopic eczema in children. *Occup Environ Med* 2004; 61: 609-15. [37 citations to November 2008]

### **Other Papers**

- 5.1 Crane J, Mallol J, Beasley R, Stewart A, Asher MI, on behalf of the International Study of Asthma and Allergies in Childhood (ISAAC) Phase I study group. Agreement between written and video questions for comparing asthma symptoms in ISAAC. *Eur Respir J* 2003; 21: 455-61. [27 citations to November 2008]
- 5.2 Pearce N, Sunyer J, Cheng S, Chinn S, Björkstén B, Burr M, Keil U, Anderson HR, Burney P, on behalf of the ISAAC Steering Committee and the European Community Respiratory Health Survey. Comparison on asthma prevalence in the ISAAC and the ECRHS. *Eur Resp J* 2000; 16: 420-6. [59 citations to November 2008]

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## ISAAC Phase Two Publications (worldwide)

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### 1.0 Preliminary Papers

- 1.1 Weiland SK, Björkstén B, Brunekreef B, Cookson WOC, von Mutius E, Strachan DP, and the ISAAC Phase II Study Group. Phase II of the International Study of Asthma and Allergies in Childhood (ISAAC II): rationale and methods. *Eur Respir J* 2004; 24: 406-412. [57 citations to November 2008]

### 2.0 Main Findings

- 2.1 Wienmayr G, Weiland SK, Björkstén B, Brunekreef B, Büchele G, Cookson WO, Garcia-Marcos L, Gotua M, Gratziau C, van Hage M, von Mutius E, Riiikjävrv M-A, Rzehak P, Stein RT, Strachan DP, Tsanakas J, Wickens K, Wong GW, and the ISAAC Phase Two Study Group. Atopic sensitization and the international variation of asthma symptom prevalence in children. *Am J Respir Crit Care Med* 2007; 176: 565-74. [13 citations to November 2008]
- 2.2 Flohr C, Weiland SK, Weinmayr G, Björkstén B, Brabäck L, Brunekreef B, Büchele G, Clausen M, Cookson WOC, von Mutius E, Strachan DP, Williams HC, and the ISAAC Phase Two Study Group. The role of atopic sensitization in flexural eczema: findings from the International Study of Asthma and Allergies in Childhood (ISAAC) Phase Two. *J Allergy Clin Immunol* 2008; 121: 141-7. [0 citations to November 2008]
- 2.3 Weinmayr G, Forastiere F, Weiland S, Rzehak P, Abramidze T, Annesi-Maesano I, Björkstén B, Brunekreef B, Büchele B, Cookson WOC, von Mutius E, Pistelli R, Strachan DP, and the ISAAC Phase Two Study Group. International variation in prevalence of rhinitis and its relationship with sensitization to perennial and seasonal allergens. *Eur Respir J* 2008; 32: 1250-1261.
- 2.4 Gehring U, Strikwold M, Schram-Bijkerk D, Weinmayr G, Genuneit J, Nagel G, Wickens K, Siebers R, Crane J, Doekes G, Di Domenicantonio R, Nilsson L, Priftanji A, Sandin A, El-Sharif N, Strachan D, van Hage M, von Mutius E, Brunekreef B and the ISAAC Phase Two study-group. Asthma and allergic symptoms in relation to house dust endotoxin: Phase Two of the International Study on Asthma and Allergies in Childhood (ISAAC II). *Clin Exp Allergy* 2008; 38: 1911-1920.

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## ISAAC Phase Three Publications (worldwide)

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### 1.0 Preliminary Papers

- 1.1 Ellwood P, Asher MI, Beasley R, Clayton TO, Stewart AW and the ISAAC Steering Committee. International Study of Asthma and Allergies in Childhood (ISAAC II): Phase III rationale and methods. *Int J Tuberculosis Lung Dis* 2005; 9: 10-6. [42 citations to November 2008]

### 2.0 Main Findings

- 2.1 Asher MI, Montefort S, Bjorksten B, Lai CKW, Strachan D, Weiland SK, Williams H, and the ISAAC Phase Three Study Group. Worldwide trends in the prevalence of symptoms of asthma, allergic rhinoconjunctivitis and eczema in childhood – ISAAC Phases and Three repeat multicountry cross-sectional surveys. *Lancet* 2006; 368: 733-43. [171 citations to November 2008]
- 2.2 Pearce N, Ait-Khaled N, Beasley R, Mallol J, Keil U, Mitchell E, Robertson C, and the ISAAC Phase Three Study group. Worldwide trends in the prevalence of asthma symptoms: Phase Three of the International Study of Asthma and Allergies in Childhood (ISAAC). *Thorax* 2007; 62: 757-62. [6 citations to November 2008]
- 2.3 Björkstén B, Clayton T, Ellwood P, Stewart A, Strachan D, and the ISAAC Phase Three Study Group. Worldwide trends for symptoms of rhinoconjunctivitis: Phase Three of the International Study of Asthma and Allergies in Childhood. *Paediatric Allergy Immunol* 2008; 19: 110-24. [57 citations to November 2008]



- 2.4 Williams H, Stewart A, von Mutius E, Cookson B, Anderson HR and the International Study of Asthma and Allergies in Childhood (ISAAC) Phase One and Three Study groups. Is eczema really on the increase worldwide? *J Allergy Clin Immunol* 2008; 121(4): 947-54.
- 2.5 N Ait-Khaled, N Pearce, H R Anderson, P Ellwood, S Montefort, J Shah, and the ISAAC Phase Three Study Group. Global map of the prevalence of symptoms of rhinoconjunctivitis in children: The International Study of Asthma and Allergies in Childhood Phase Three. *Allergy* (In Press).

### **3.0 Environmental Questionnaire Analyses**

- 3.1 Beasley R, Clayton T, Crane J, von Mutius E, Lai CKW, Montefort S, Stewart A, and the ISAAC Phase Three Study Group. Paracetamol use in infancy and later childhood and risk of asthma, rhinoconjunctivitis and eczema in 6 to 7 year old children: ISAAC Phase Three. *Lancet* 2008; 372: 1039-1048. [1 citation to November 2008]

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