

News on eczema from the Centre of Evidence-Based Dermatology

Hywel Williams
University of Nottingham

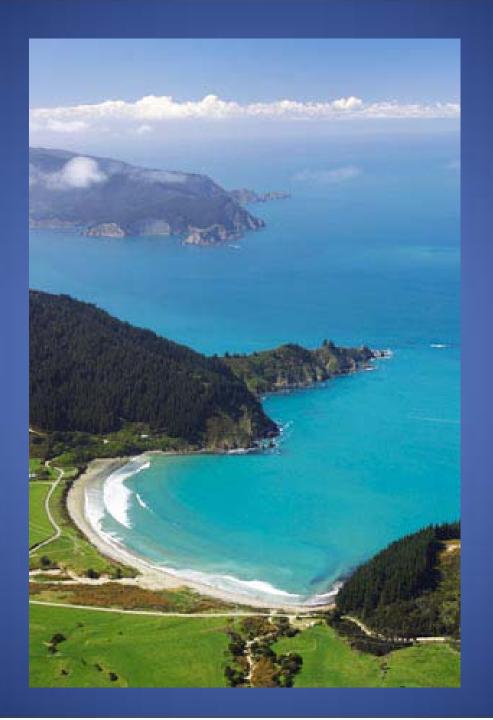


Greetings from Nottingham







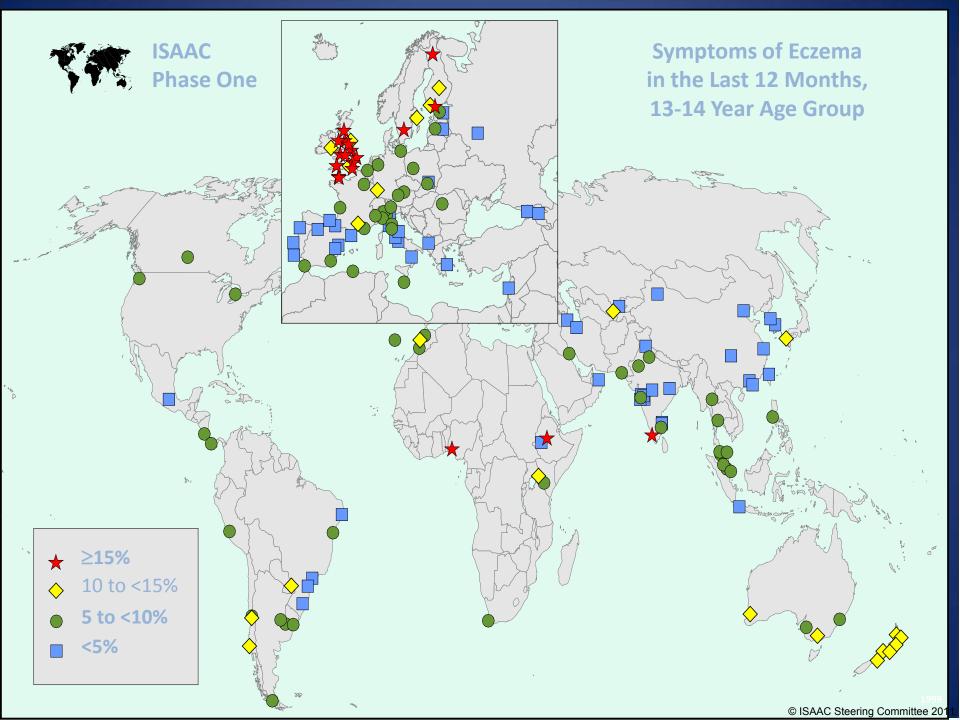


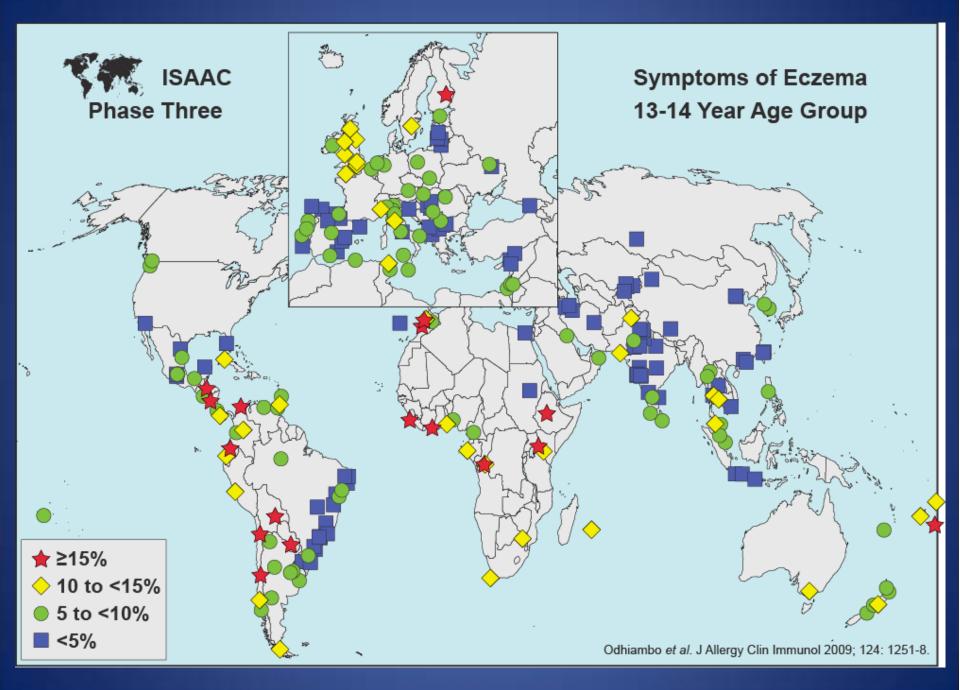
Making connections....

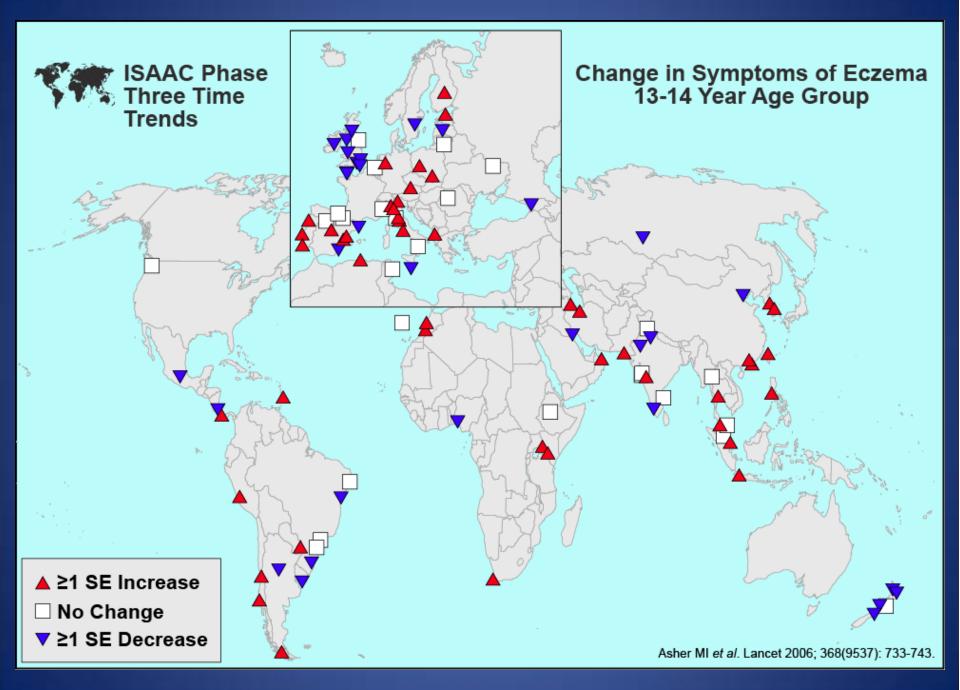






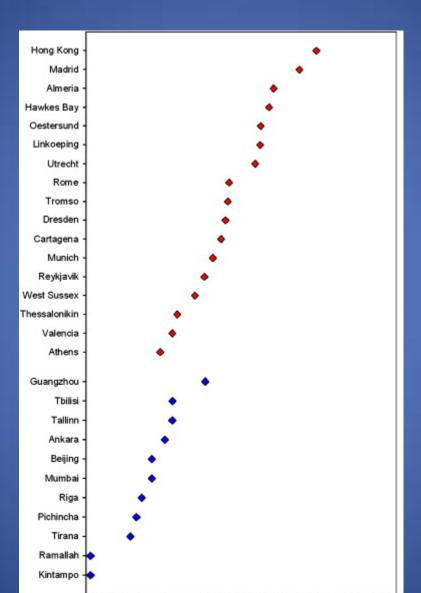








ISAAC Phase Two



atopic vs. nonatopic



The Koru of eczema



What I am going to cover

- Introduce the Centre of Evidence-Based Dermatology
- Our global collection of randomized controlled trials
- The water softener study
- The Harmonising Outcome Measures for Eczema project
- Our mapping of eczema systematic reviews
- Five ways my practice has changed

Conflicts of interest

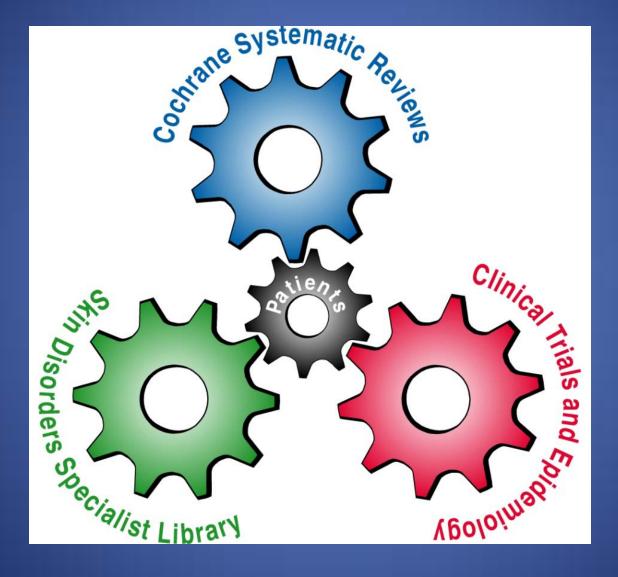
I work for the UK National Health Service

 I have no financial or research associations with pharmaceutical or for-profit companies

 I have previously accepted some emollient samples from a pharmaceutical exhibition

Williams HC, Naldi L, Paul C, et al Conflicts of interest in dermatology. *Acta Derm Venereol*. 2006;86(6):485-97.

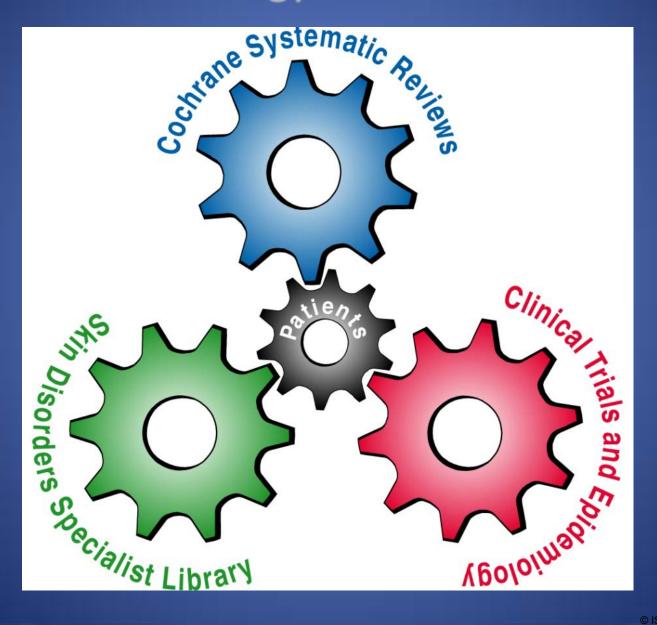
The Centre of Evidence-Based Dermatology



Recently published reviews:

- Probiotics for treating atopic dermatitis
- Anti-staphylococcal interventions for atopic dermatitis
- Topical treatments for chronic plaque psoriasis
- Safety for topical corticosteroids in pregnancy
- Excision margins for melanoma
- Interventions for erythema nodosum leprosum
- Interventions for Old World Cutan Leishmaniasis
- Interventions for pemphigus vulgaris www.thecochranelibrary.com

The UK Dermatology Clinical Trials Network



Trials portfolio-funded studies





<u>Prophylactic Antibiotics for the Treatment of Cellulitis at Home:</u> investigating whether prophylactic antibiotics can prevent further episodes of cellulitis of the leg (320K).



<u>S</u>tudy of <u>T</u>reatments for <u>P</u>yoderma <u>Gangrenosum <u>P</u>atients: first trial of its kind to formally evaluate the most commonly used treatments for <u>pyoderma gangrenosum</u> (800K).</u>



RCT to compare the safety and effectiveness of doxycycline with prednisolone for the treatment of bullous pemphigoid (830K).

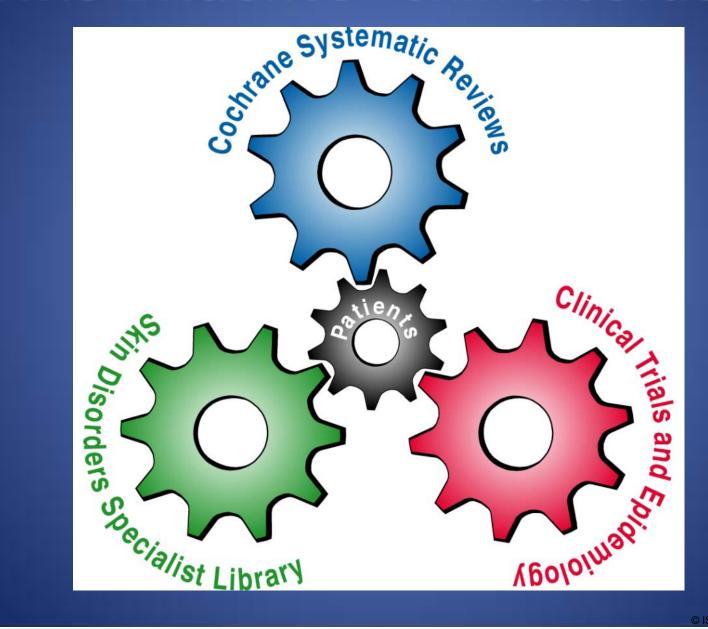


Softened **W**ater **E**czema **T**rial: investigating whether water softeners help reduce the severity of eczema in children (930K).



LIMIT-1 Phase II study investigating the use of imiquimod in the treatment of lentigo maligna (250K)

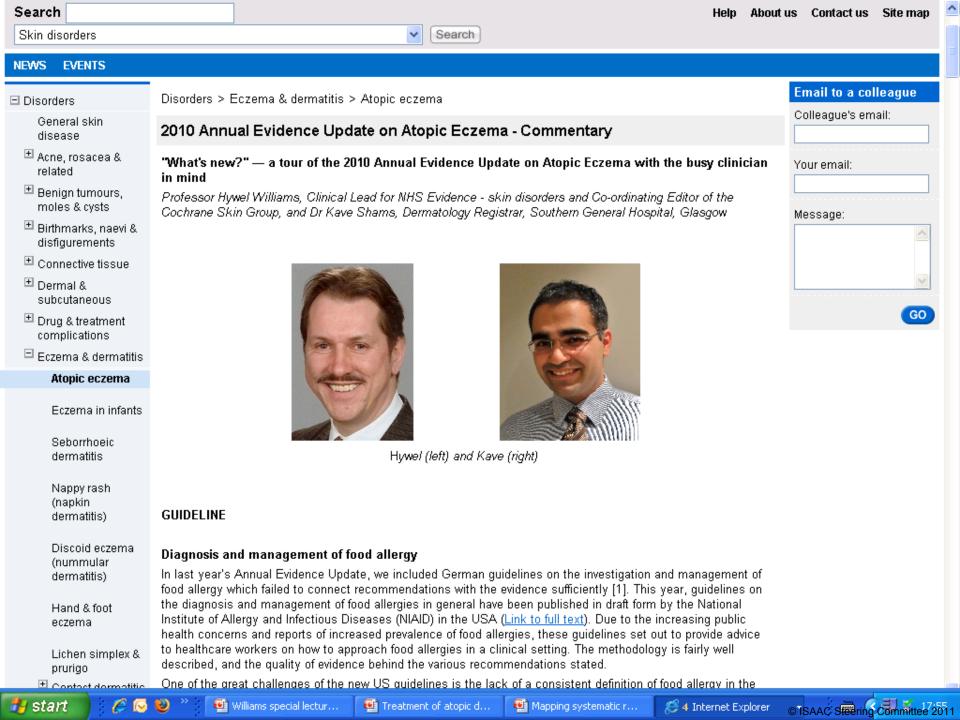
NHS Evidence - skin disorders



National electronic library



www.library.nhs.uk/skin



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Mapping the evidence on atopic eczema treatments:



....An update of all randomized controlled trials on atopic eczema since the 2000 HTA review

www.greatdatabase.org.uk

Potential users

 Clinicians who want to see if their treatments have been tested properly

Those writing treatment guidelines eg JDS

Those doing systematic reviews

Those writing funding applications







2000 - 2009





HOME

TREATMENT CATEGORIES TREATMENTS

TRIALS

FEEDBACK

GLOSSARY

SEARCH

Search

Background

This database has been created as part of a larger National Institute for Health Research funded programme investigating ways to set priorities and reduce uncertainties for people with skin disease. The database contains information on randomised controlled trials on treatments for eczema. The database will be periodically updated.

This database represents independent research commissioned by the National Institute for Health Research (NIHR) Programme Grants for Applied Research (RP-PG-0407-10177). The views expressed in this resource are those of the author(s) or the trial authors and not necessarily those of the NHS, the NIHR or the Department of Health.

Aim

To provide a comprehensive, easy to use and access resource which contains pertinent information about randomised controlled trials of eczema treatments, in order to facilitate and speed up future eczema research projects.

Future research collaboration

The data contained within this database is just part of a much larger data set being collected. We are keen to hear from anyone who is interested in collaborating with us to use this information, which includes detailed results data on efficacy outcomes. Please contact us at great@nottingham.ac.uk











2000 - 2009





J	TREATMENT CATEGORIES	Search		
	Antihistamines and Mast Cell	TREATMENTS Cetirizine		
	Antimicrobial and Antiseptic	Chlorpheniramine		
	Agents	Fexofenadine		
Backgr	Complementary therapies	Fexofenadine		
This dat	Dietary interventions	Ketotifen	e for Health Research funded progra	mme investigating ways
to set p	Non-pharmacological	Loratidine	e. The database contains informatio	
controll	treatments	Sodium cromoglycate	iodically updated.	
This dat	Other interventions	Topical doxepin	ne National Institute for Health Rese	arch (NIHR) Programme
Grants (Other topical agents		sed in this resource are those of the	author(s) or the trial
authors	Systemic immunomodulatory	of the NHS, the NIHR or the Depa	rtment of Health.	
	agents			
	Topical corticosteroids			
	Topical immunomodulatory			
	agents			
Aim				

Future research collaboration

Close Footer ted in collab For those who use this database in their work, it should be cited as follows in efficacy outcomes. Please

Nankervis, H, Samuels, HJ, Delamere F, Thomas, K, Williams HC. The Global Resource of Eczema Trials. Centre of Evidence Based Dermatology, Accessed at www.greatdatabase.org.uk on









2000 - 2009





	Antihistamines and Mast Cell	TREATMENTS	
	Stabilisers	Cetirizine	TRIALS
	Antimicrobial and Antiseptic	Chlorpheniramine	Capella-2001-European Journal of Dermatology-A randomized trial of
3ackgr	Agents	Fexofenadine	leukotriene receptor antagonist montelukast in moderate-to-severe atopic Trial 35 dermatitis of adults
	Complementary therapies	Fexofenadine	
This dat	Dietary interventions	Ketotifen	Diepgen-2002-Pediatric Allergy and Immunology-Long-term treatment with cetirizine of infants with atopic dermatitis: A multi-country, double-blind,
o set p controll:	Non-pharmacological treatments	Loratidine	randomized, placebo-controlled trial (the ETAC trial) over 18 months
	Other interventions	Sodium cromoglycate	
This dat		Topical doxepin	he National Institute for Health Research (NIHR) Programme
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	Topical corticosteroids		
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Author	Title	Year	Journal
Capella	A randomized trial of leukotriene receptor antagonist montelukast in moderate-to-severe atopic dermatitis of adults	2001	European Journal of Dermatology

Intervention A	Oral montelukast and placebo tablets and pharmacologically inert, non-moisturising, non-greasy gel
Intervention A schedule	Montelukast = Once a day, Placebo tablet = Three times a day, Placebo cream = twice a day on atopic eczema lesions and xerotic skin
Intervention A dose	10mg montelukast
Intervention B	Cetirizine and clarythromycin and topical mometasone furoate 0.1% or topical methylprenisolone aceponate 0.1% and topical emulsions containing urea or ammonium lactate
Intervention B schedule	Cetirizine = twice a day for 6 weeks. Clarythromycin = twice a day for 10 days. Topical preparations = 6 weeks.
Intervention B dose	10mg cetirizine, 250mg clarythromycin, topical cream on atopic eczema lesions (except face and external genitalia), topical emulsions on xerotic skin.
Comments on Interventions	Oral and topical steroids were given to the montelukast group to minimise outward differences between groups and to avoid the introduction of placebo effect bias. Ethical considerations forbade the use of a true placebo.
Is the trial randomised?	Yes
Is the trail blinded?	Yes
Country	Not stated
Single or multicentre trial	Not stated
Type of trial	Not stated
Number of participants randomised	32 participants. 16 in each group.
Follow up	Baseline and 6 weeks
Inclusion criteria	Adult (18 years or over). Moderate to severe atopic eczema (SCORAD 30 or over). Eczema to fulfil Hanifin and Rajka criteria. Consulted due to a flare up and/or intolerance to and/or ineffectiveness or previous treatments.
Exclusion criteria	No drug active on atopic manifestations except inhaled or intranasal drugs or eye drops (corticosteroids, short and long acting beta-2- agonists, cromones, spaglumic acid, anticholinergics alpha-1-angonists in the event of coexisting allergic asthma, rhinitis or keratoconjunctivitis) for 10 days before the study.
Description of	





Please use it.....





www.greatdatabase.org.uk

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Hard water and eczema

- Ecological link between hard water and eczema prevalence in UK, Spain and Japan
- Anecdote that eczema improves with soft water
- Link plausible since increased soap
 needed in hard water irritates the skin

www.swet-trial.co.uk

Softened Water Eczema Trial

A multi-centre randomised controlled trial of ion-exchange water softeners for the treatment of eczema in children



Funded by the HTA (Health Technology Assessment programme)

Chief Investigator: Professor Hywel Williams

Centre of Evidence Based Dermatology, University of Nottingham



Study design

	STUDY PERIOD = 16 weeks				
	0 to 12 weeks	12 to 16 weeks			
Group A	Usual eczema care + water softener installed (n = 155)	Unit removed	Option to purchase		
Group B	Usual eczema care + delayed installation (n = 155)	Unit installed	unit at reduced cost		

Parallel group, single-blind, randomised controlled trial

SWET Study now completed

- 330 children recruited = moderate/severe eczema
- Primary outcome = change in eczema severity at 12 weeks
- Huge interest and high follow-up
- Results out PLoS Med Feb.15th!





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The problem – how to measure eczema severity



Outcome measures – a real mess

Too many – at least 20 named scales

Many not tested at all (Charman C et al *JID* 2003;
 120:932–941)

 Some are only partly tested (validity, repeatability, sensitivity change, consistency, interpretability)

Some that are tested do not pass the tests

Schmitt J, Langan S, Williams HC. What are the best outcome measurements for atopic eczema? A systematic review JACI 2007;120:1389-98.

What's all the **FSSS about?**

Take it EASI

TIS a right mess

Me too!

Meet my SIS

My name is **ADAM**

Copyrighted 1800

SCORAD scores again

SASSAD rules OK

Give me a POEM

ADASI tonight?

IGADA bad headache

THE TOWER OF BABEL.

Why core outcomes?

Easier to compare, contrast and synthesise results

Reduces risk of inappropriate outcomes

Reduces risk of selective reporting outcome bias



New Trends in Allergy

& 6th Georg Rajka Symposium

International Symposium on Atopic Dermatitis
Munich, 22 - 24 July 2010

HOME I Harmonising Outcome Measures for Eczema

Hywel Williams and Jochen Schmitt

Universities of Nottingham and Dresden



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Published: 13 September 2010 Your email: related Benign tumours, moles & cysts Message: 🖽 Birthmarks, naevi & disfigurements subcutaneous complications Atopic eczema, used with kind permission of Dr Amanda Oakley, New Zealand Dermatological Society. @ DermNet NZ. Eczema & dermatitis Atopic eczema Welcome to the fourth Annual Evidence Update on Atopic Eczema produced by NHS Evidence - skin disorders. with the results of a search for new quidelines and systematic reviews published or indexed since the last Eczema in infants Annual Evidence Update in September 2009. There is also a "what's new" analysis, discussing the new evidence and its implications for clinical practice. Seborrhoeic dermatitis Contents 1. Introduction Nappy rash (napkin 2. Results of 2010 Annual Evidence Update on Atopic Eczema dermatitis) 3. Commentary and analysis - "What's new?" 4. Summary points and implications for practice Discoid eczema (nummular 5. UK DUETs uncertainties update dermatitis) 6. Systematic reviews on atopic eczema from 2000-mapping by topic 7. Link to National Eczema Week (National Eczema Society) Hand & foot eczema 8. Methodology Lichen simplex & prurigo Contact dermatitis Publication Type: Annual Evidence Update Publication Date: 13 Sep 2010 Publisher: NHS Evidence - skin disorders Creator: NHS Evidence - skin disorders Venous eczema Next Review Date: 03 Sep 2011 Other eczamatous disorders **Topics** Occupational Internet © ISAAC Steering Confunction 2011 Done

2010 Annual Evidence Update on Atopic Eczema - Home Page

General skin

 Colleague's email:

NHS Evidence - skin disorders

formerly a Specialist Library of the National Library for Health

NHS Evidence Home > Specialist Collections > Skin disorders Home.

Publisher: NHS Evidence - skin disorders

prurigo

THIS ENGOING TIGHTS OF	2. The street of				
Search	Skin disorders	Search	Help	Ab	
NEWS EVENTS					
□ Disorders	Disorders > Eczema & dermatitis > Atopic eczema				
General skin disease	Systematic reviews on atopic eczema - INDEX PAG	E			
Acne, rosacea & related	This is the index page for a mapping by topic of systematic review of treatments for atopic eczema).	ews on atopic eczema published from 2000 onwards (the date of the HTA			
 Benign tumours, moles & cysts 	The systematic reviews are those found in the searches for the Ski 2007, 2008 and 2009.	n Disorders Specialist Library's Annual Evidence Updates on Atopic eczema fo	or		
Birthmarks, naevi & disfigurements	Index of main topic headings:				
■ Connective tissue	g				
Dermal & subcutaneous	Epidemiology				
Drug & treatment	Prevention				
complications	Topical treatments				
☐ Eczema & dermatitis					
Atopic eczema	Systemic treatments				
Eczema in infants	Phototherapy				
Seborrhoeic	 Dietary treatments for established eczema 				
dermatitis	Psychological and educational interventions				
Nappy rash (napkin	Complementary and alternative therapies				
dermatitis)	Other interventions for established eczema				
Discoid eczema (nummular dermatitis)	Link to homepage of Annual Evidence Update on Atopic Eczema				
Hand & foot					
eczema	Publication Date: 14 Sep 2009	Publication Type: Systematic Review			
Lichen simplex &	Publisher: NHS Evidence - skin disorders	Creator: Grindlay D			

Creator: Grindlay D

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Systematic reviews on atopic eczema - Epidemiology

This is a mapping by topic of **systematic reviews on the epidemiology of atopic eczema** that have been published from 2000 onwards. The systematic reviews were found in the searches for the Skin Disorders Specialist Library's Annual Evidence Updates on Atopic Eczema. The links given are to the PubMed abstract or free full text where available.

Please see also the full version of the 2007 NICE Clinical Guideline "Atopic eczema in children: management of atopic eczema in children from birth up to the age of 12 years". This includes a systematic review of the diagnosis (Chapter 3), assessment of severity, psychological and psychosocial wellbeing and quality of life (Chapter 4), epidemiology (Chapter 5) and identification and management of trigger factors (Chapter 6) in atopic eczema in this age group.

Aetiology	2009	Filaggrin gene defects and risk of developing allergic sensitisation and allergic disorders:
	2009	Meta-analysis of filaggrin polymorphisms in eczema and asthma: robust risk factors in atopic disease
	2007	Toward a major risk factor for atopic eczema: meta-analysis of filaggrin polymorphism data
	2005	Atopic dermatitis and the 'hygiene hypothesis': too clean to be true?
	2004	How atopic is atopic dermatitis?
Risk factors	2008	Caesarean delivery and risk of atopy and allergic disease: meta-analyses
	2008	A bidirectional relationship between psychosocial factors and atopic disorders: a systematic review and meta-analysis
	2006	What causes worsening of eczema? A systematic review
	2004	No epidemiological evidence for infant vaccinations to cause allergic disease
Co-morbidities	2008	Alexithymia and dermatology: the state of the art
	2007	Atopy and risk of brain tumors: a meta-analysis
	2007	Risk of developing asthma in young children with atopic eczema: A systematic review
Diagnosis	2008	Diagnostic criteria for atopic dermatitis: a systematic review
_	2006	What is meant by a "flare" in atopic dermatitis? A systematic review and proposal
Severity & outcome measures	2007	What are the best outcome measurements for atopic eczema? A systematic review
	2003	Measuring atopic dermatitis severity in randomized controlled clinical trials: what exactly are we measuring?
	2000	Outcome measures of disease severity in atopic eczema
Disease impact	2008	The socioeconomic impact of atopic dermatitis in the United States: a systematic review
•	2008	Sleep disruptions in parents of children and adolescents with chronic illnesses: prevalence, causes, and consequences
	2008	A bidirectional relationship between psychosocial factors and atopic disorders: a systematic review and meta-analysis
	2003	Treatment of atopic dermatitis and impact on quality of life: a review with emphasis on topical non-corticosteroids

Display Settings: ✓ Abstract Send to: ✓

J Allergy Clin Immunol. 2009 Jun;123(6):1361-70.e7.

Meta-analysis of filaggrin polymorphisms in eczema and asthma: robust risk factors in atopic disease.

Rodríguez E, Baurecht H, Herberich E, Wagenpfeil S, Brown SJ, Cordell HJ, Irvine AD, Weidinger S.

Division of Environmental Dermatology and Allergy, Helmholtz Zentrum Munich and ZAUM-Center for Allergy and Environment, Technische Universität München, Munich, Germany,

BACKGROUND: The discovery of filaggrin (FLG) null mutations as a major risk factor for eczema represents a milestone toward the understanding of an important mechanism in this complex disease. However, published studies demonstrate differences concerning design and effect size, and conflicting results for asthma have been reported. OBJECTIVES: We sought to provide a more accurate estimate of FLG effect sizes and to better refine FLG risk profiles within the broad and inclusive eczema diagnosis. We also sought to provide a more detailed and conclusive estimate of the risk for asthma associated with FLG null alleles. METHODS: We performed a meta-analysis of 24 studies on FLG mutations and eczema involving 5,791 cases, 26,454 control subjects, and 1,951 families as well as 17 studies on asthma involving 3,138 cases, 17,164 control subjects, and 1,511 offspring, RESULTS; Both case-control and family studies showed strong associations with eczema. Case-control studies were heterogeneous, whereas family studies yielded more homogeneous results. Combined analysis showed that FLG haploinsufficiency strongly increases the eczema risk (odds ratio [OR], 3.12; 95% CI, 2.57-3.79) and is associated with more severe and dermatologist-diagnosed disease. FLG mutations are also significantly associated with asthma (OR, 1.48; 95% CI, 1.32-1.66). However, although strong effects for the compound phenotype asthma plus eczema (OR, 3.29; 95% CI, 2.84-3.82) were observed, there appears to be no association with asthma in the absence of eczema. CONCLUSIONS: This meta-analysis summarizes the strong evidence for a high eczema risk conferred by FLG mutations and refines their risk profiles, suggesting an association with more severe and secondary care disease. FLG mutations are also a robust risk factor for asthma and might help define the asthma endophenotype linked with eczema.

PMID: 19501237 [PubMed - indexed for MEDLINE]

- Publication Types, MeSH Terms, Substances
- LinkOut more resources

FULL-TEXT ARTICLE

Related citations

The burden of disease associated with filaggrin mutations: a popu [J Allergy Clin Immunol. 2008]

Filaggrin mutations, atopic eczema, hay fever, and asthma in chi [J Allergy Clin Immunol, 2008]

Filaggrin null mutations and childhood atopic eczema: a popula [J Allergy Clin Immunol. 2008]

Review Filaggrin gene defects and risk of developing allergic sensitisation and [BMJ. 2009]

Review Atopic eczema and the filaggrin story. [Semin Cutan Med Surg. 2008]

See reviews.

See all.

All links from this record

Related Citations

Gene

Gene (GeneRIF)

HomoloGene

Nucleotide (RefSeg)

Nucleotide (Weighted)

Protein (RefSeq)

Protein (Weighted)

Taxonomy via GenBank

UniGene

GEO Profiles

Recent activity

Turn Off Clear

PubMed

PubMed

Meta-analysis of filaggrin polymorphisms in eczema and asthma: robust risk facti PubMed

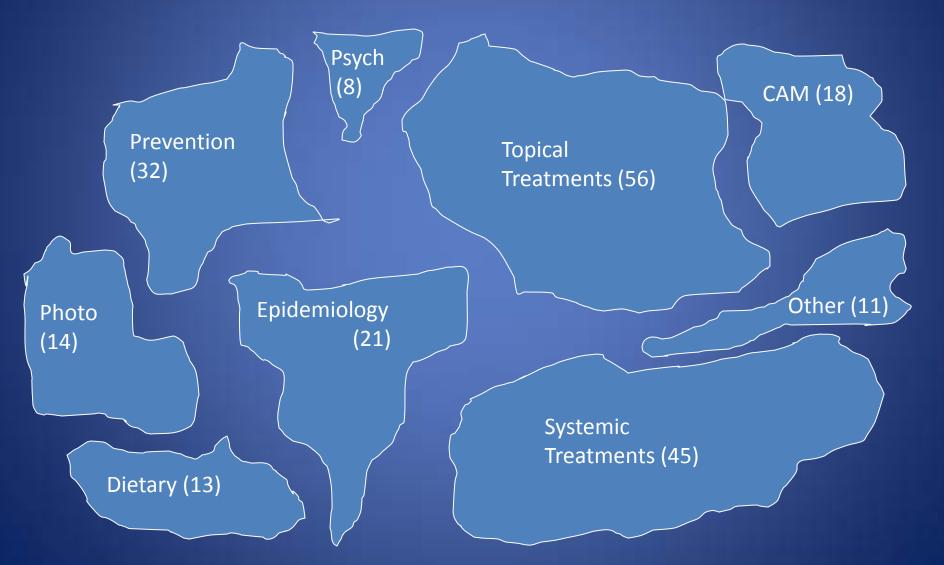
Preatrophy: covert sign of thinned skin.

Q covert AND dermatology (6)

Allergic and non-allergic rhinitis in

swimmers: clinical and cytological as PubMed

The 2010 "map" of atopic eczema systematic reviews



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Question: All this evidence is all very well, but has it made any difference to your clinical practice for people like me with eczema?

Five things that I have changed

- 1. I now only prescribe topical corticosteroids once a day
- I do not prescribe bath emollients
- I use weekend therapy with TCS for maintaining eczema remission
- 4. I use topical tacrolimus and TCS concurrently at different body sites and times of the week
- 5. I am more likely to explore dietary factors in the first year of life

What I have covered

- Introduced the Centre of Evidence-Based Dermatology
- Our global collection of randomized controlled trials – the GREAT database
- The water softener study SWET
- The Harmonising Outcome Measures for Eczema project - HOME
- Our mapping of eczema systematic reviews
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