

# Eczema Prevention



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# Conflicts of Interest

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I participated as a site principal investigator in a trial of hydrolysed formula for preventing eczema from 2007 to 2011, and received speaker fees and support for conference attendance from infant formula companies during this period

I gave expert testimony in a legal case regarding hydrolysed formula health claims in 2016

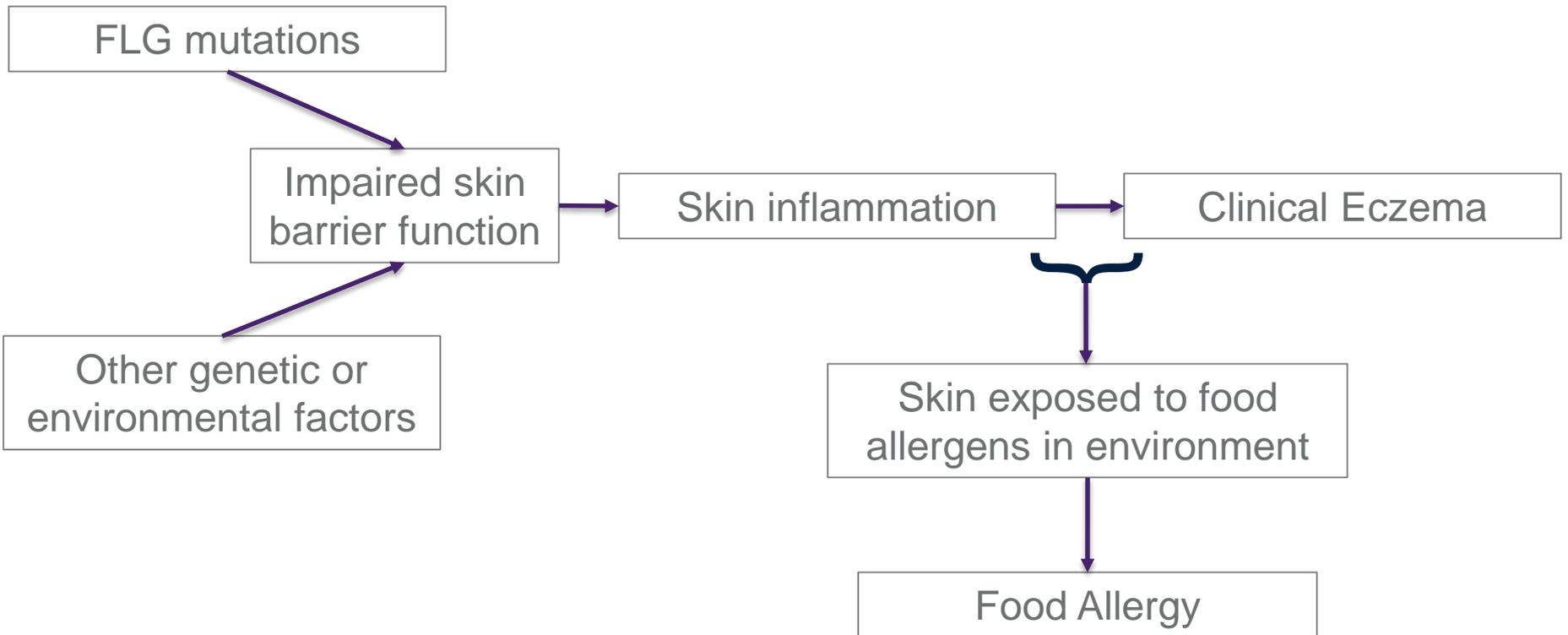
I have no other conflicts of interest in relation to this presentation

# Eczema Prevention

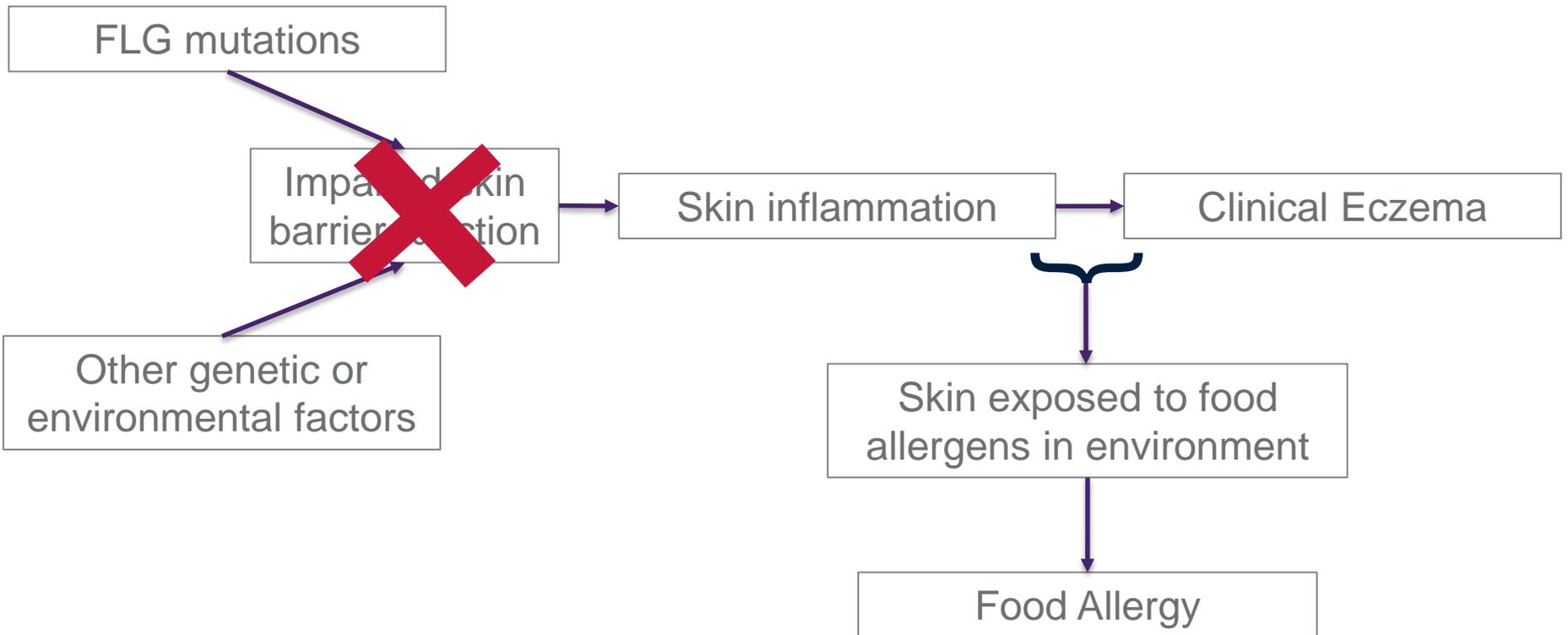
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- Infant skin care
- Milk feeding
- Microbial interventions

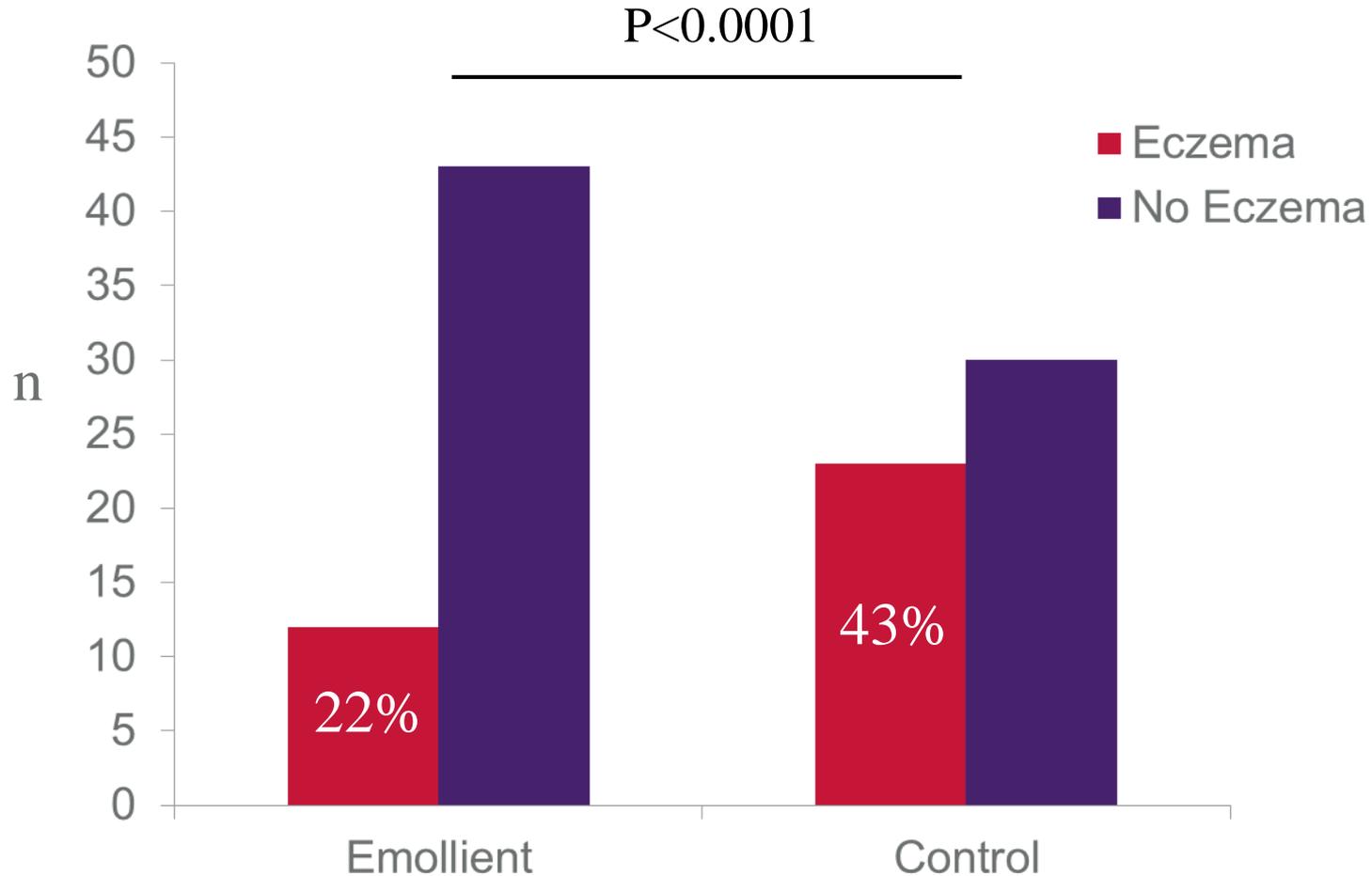
# Model for Development of Eczema



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# Daily emollient for preventing eczema: BEEP Pilot



# Eczema Prevention

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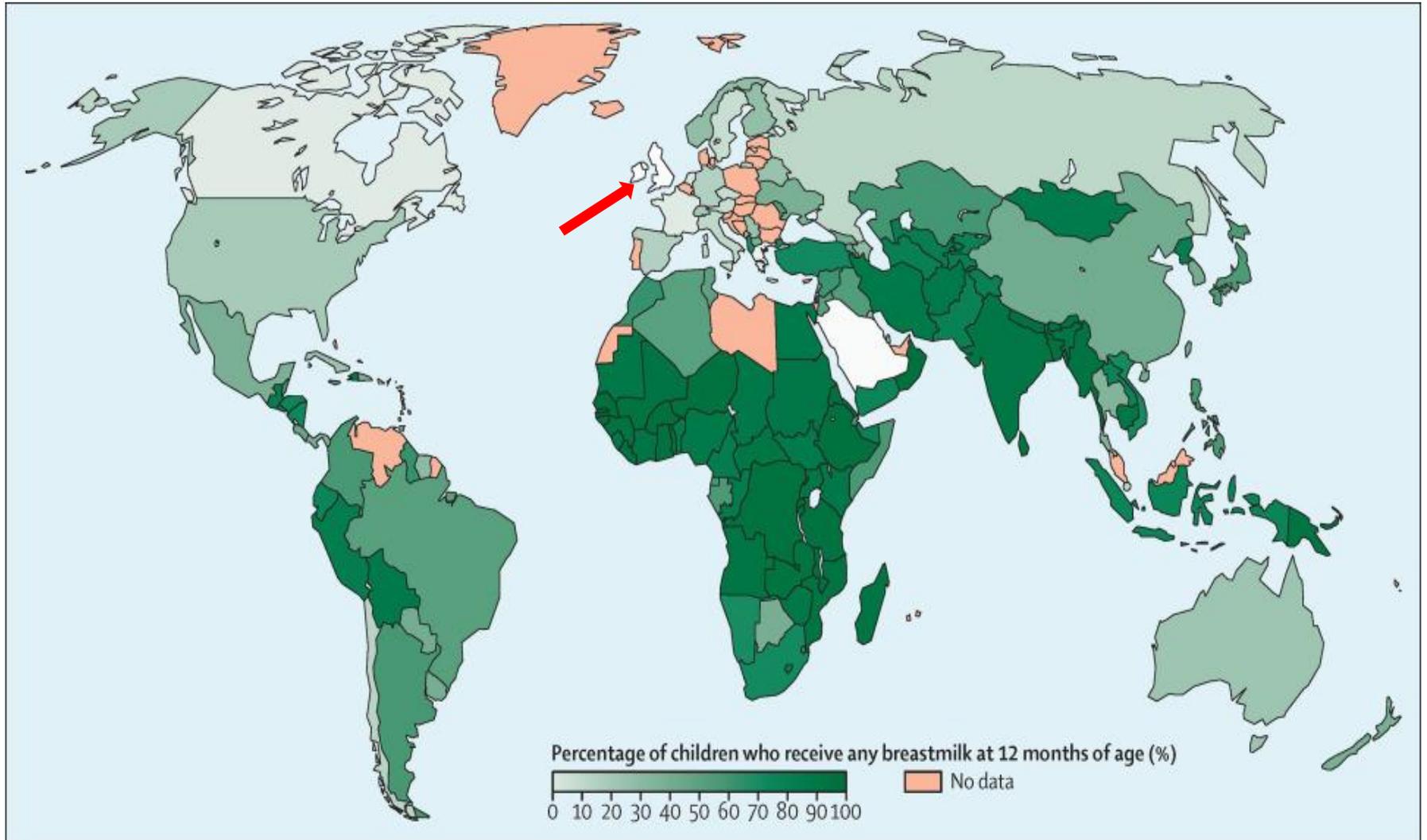
# How long does WHO recommend infants should be breastfed for ?

- 4-6 months
- At least 6 months
- 12 months
- At least 24 months

# World Health Organization Breastfeeding Guidance

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important implications for the health of mothers. Review of evidence has shown that, on a population basis, exclusive breastfeeding for 6 months is the optimal way of feeding infants. Thereafter infants should receive complementary foods with continued breastfeeding up to 2 years of age or beyond.

# Breastfeeding rates at age 1 year



# Formula milk and eczema

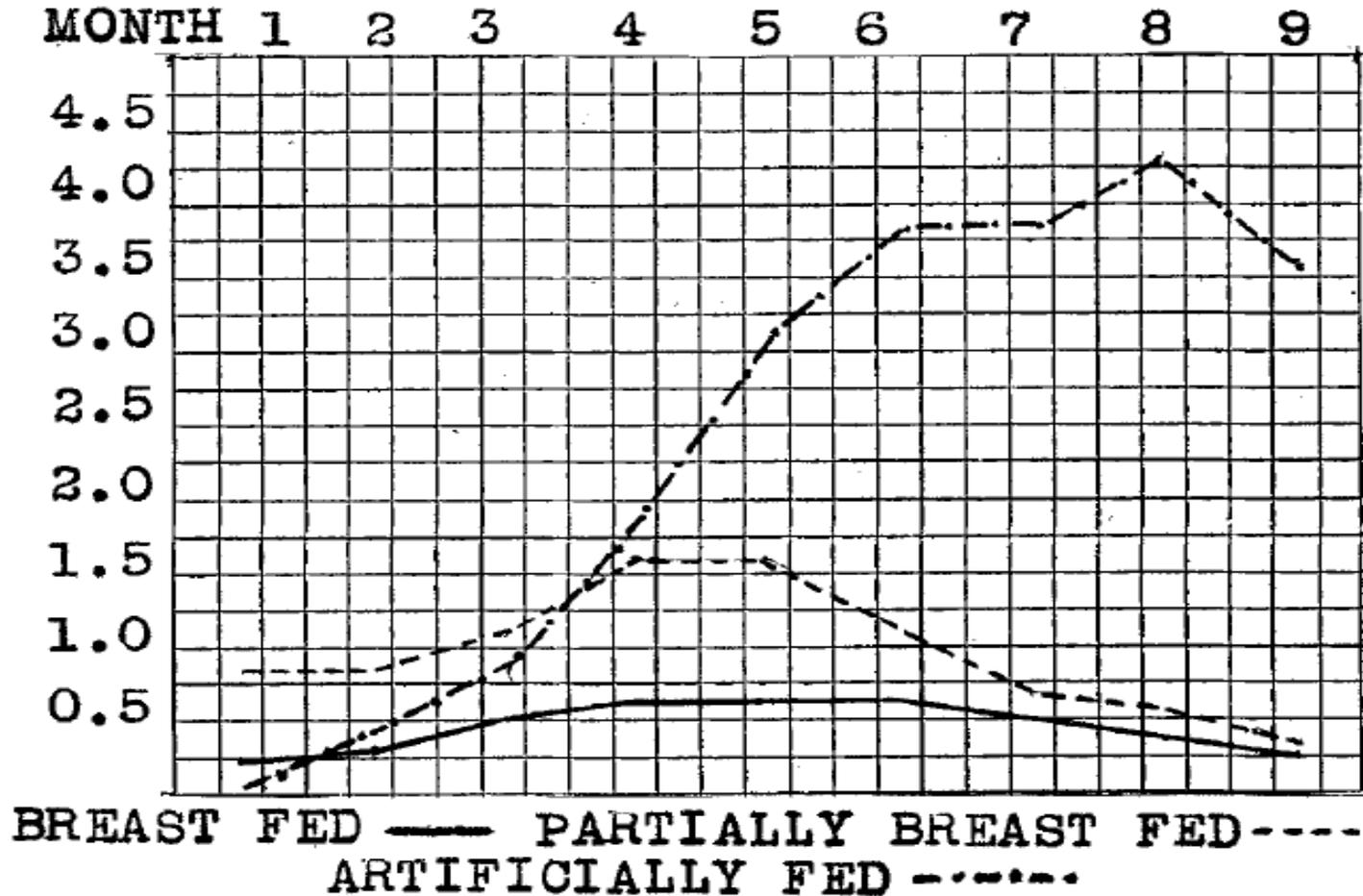


Chart 1.—Monthly incidence of infantile eczema.

# Intervention trial of breastfeeding promotion

Reduced eczema at 12 months OR 0.54 95% CI 0.31, 0.95

Unblinded paediatrician assessment, with poor agreement between sites

No reduction in eczema at 6-7 years

No reduction in wheezing

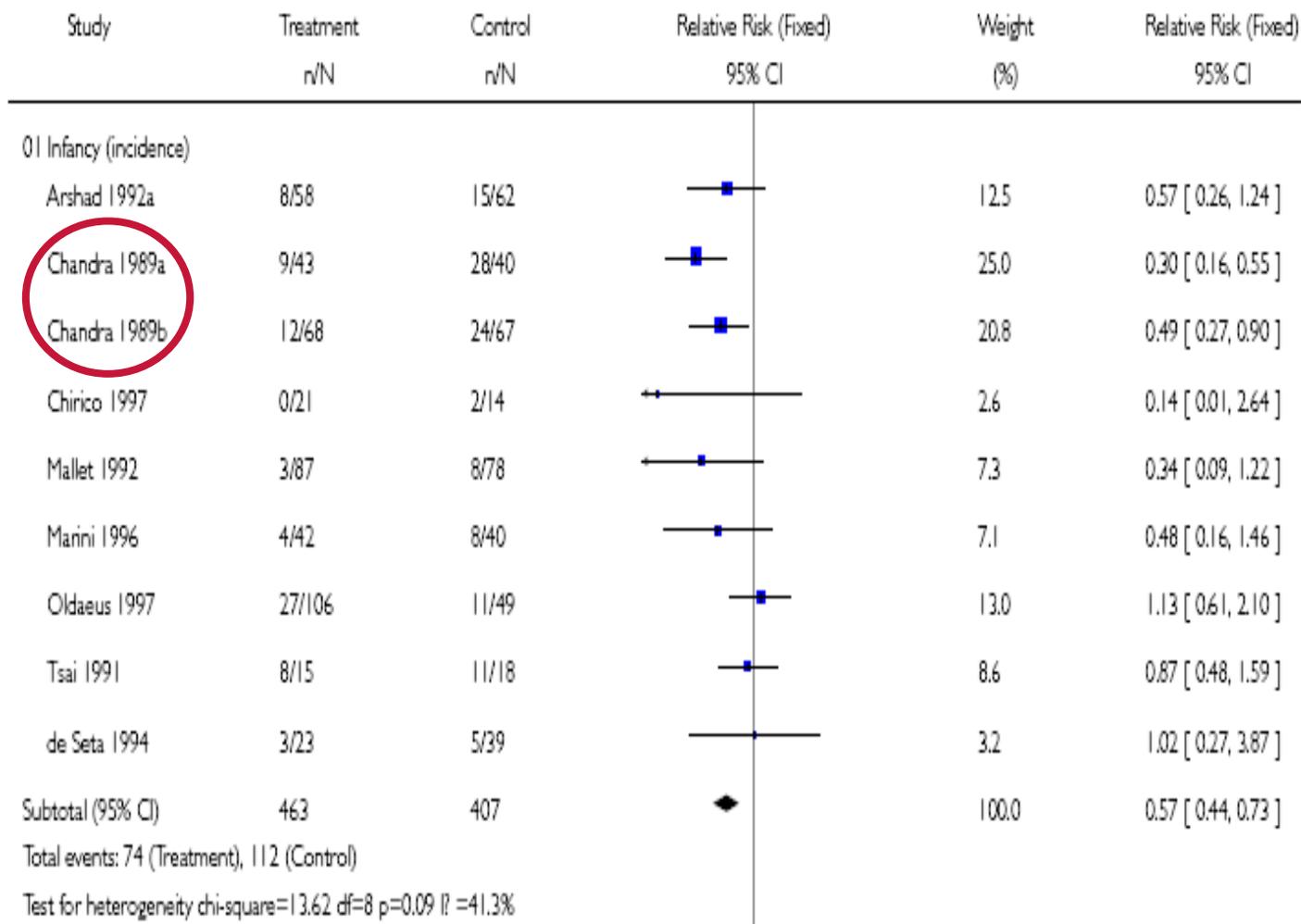
No reduction in atopy (positive skin prick test)

# Hydrolysed formula in guidelines

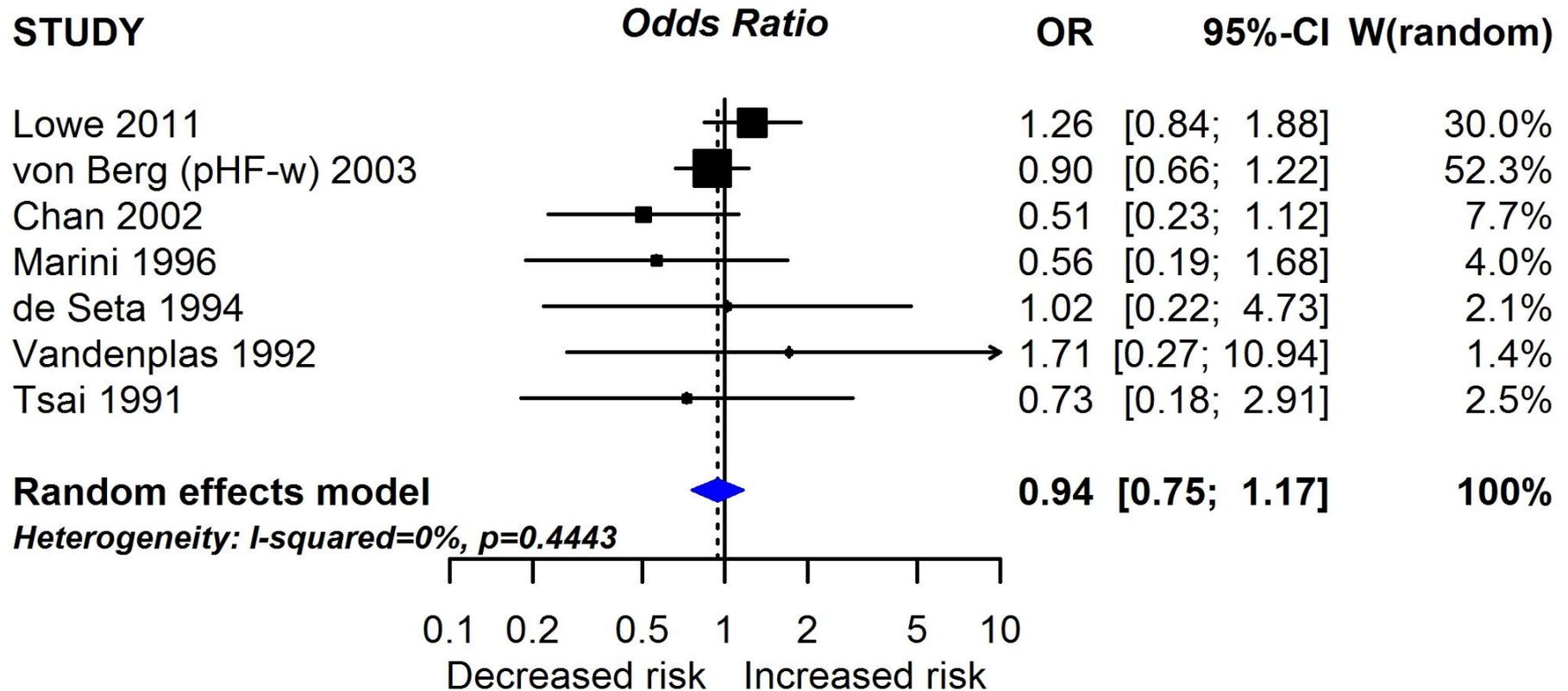
## 'Reduced risk of atopic dermatitis'

- American Academy of Pediatrics 2008
- Allergy Societies...
- AAAAI 2013, EAACI 2014
- Hong Kong 2016, Malaysia
- Gastroenterology ...
- ESPGHAN 2014
- FDA health claim approval 2011

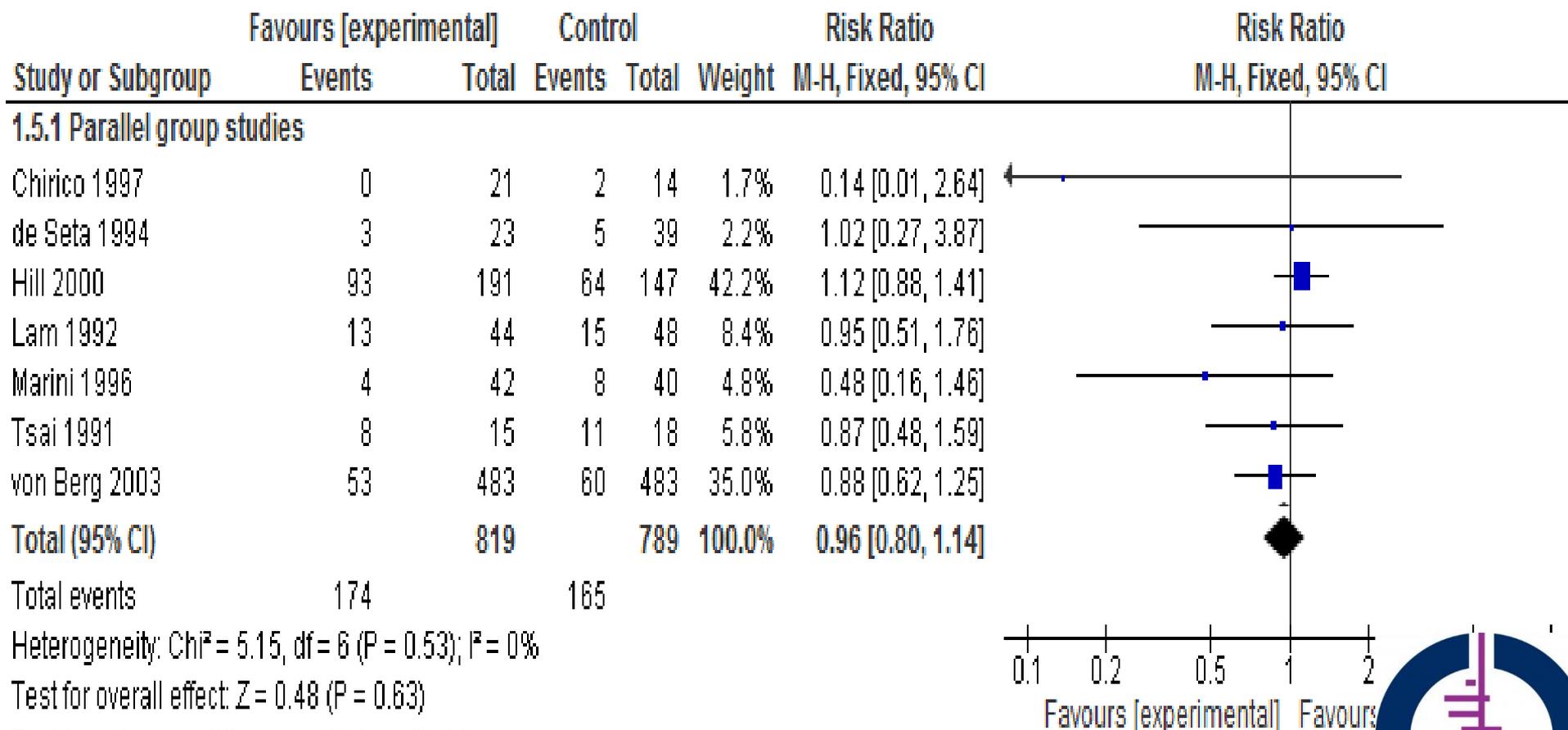
# Hydrolysed formula for preventing eczema



# Partially hydrolysed whey and eczema



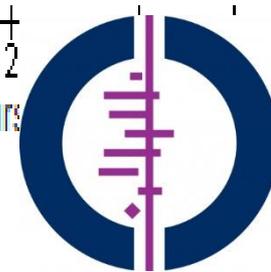
# Partially hydrolysed whey and eczema



Heterogeneity:  $\text{Chi}^2 = 5.15$ ,  $\text{df} = 6$  ( $P = 0.53$ );  $I^2 = 0\%$

Test for overall effect:  $Z = 0.48$  ( $P = 0.63$ )

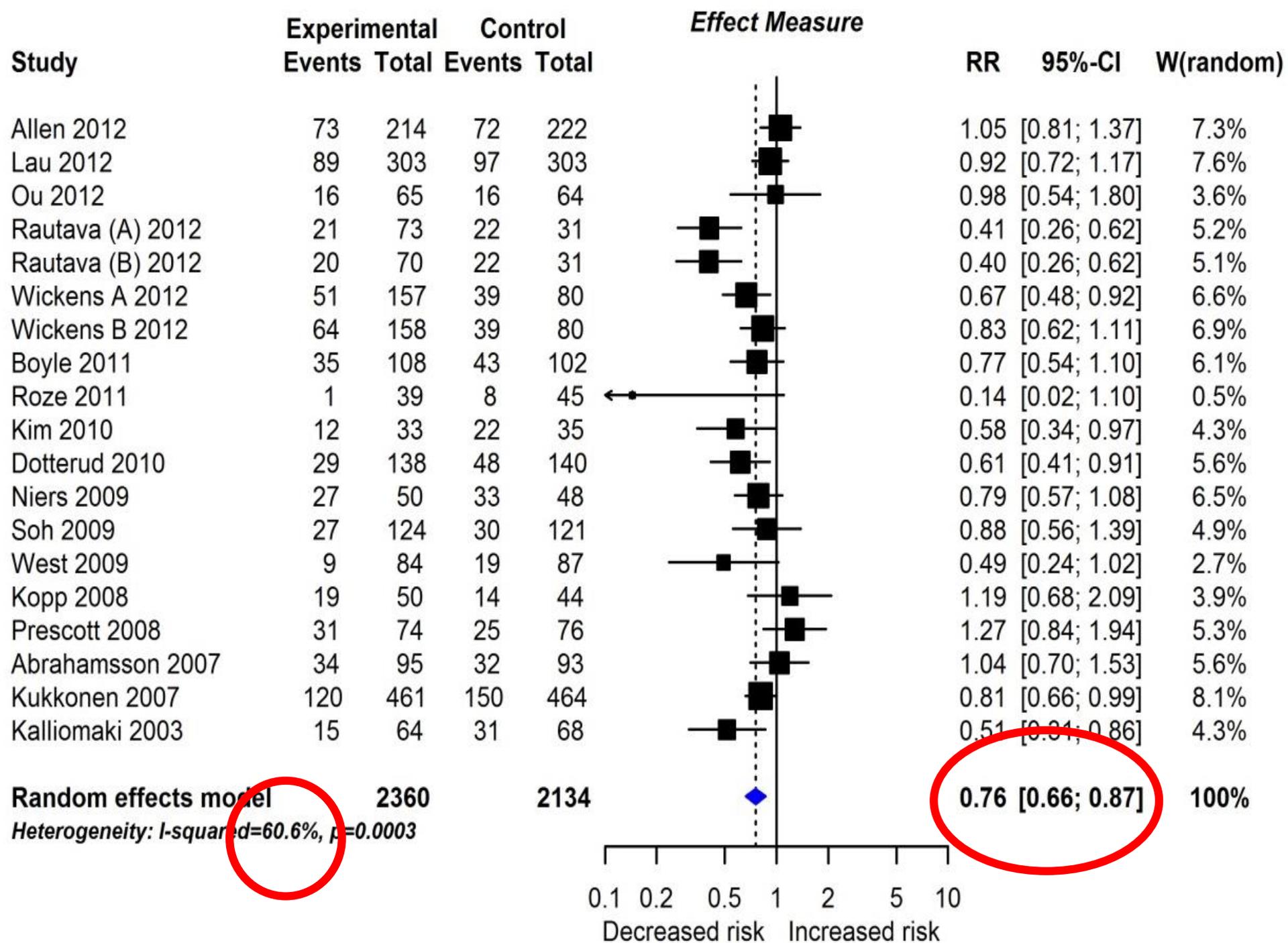
Test for subgroup differences: Not applicable



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# Albendazole in pregnancy & infant eczema

	<u>Events/100 person years</u>		HR	95% CI	P
	Albendazole N=1257	Placebo N=1258			
Eczema to 1 year	13.4	7.3	1.82	1.26, 2.64	0.002
Eczema to 5 years	5.7	3.6	1.58	1.15, 2.17	0.005

# Summary – eczema prevention

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- Breastfeeding promotion may reduce eczema in infancy
- Daily emollient for 6 months suppresses eczema during treatment – longer term effect unknown
- Maternal probiotic supplementation may reduce risk of eczema, but not infant supplementation

# Acknowledgements

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The University of  
**Nottingham**

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# Probiotics for preventing eczema

Probiotics to infants may not always be safe

Probiotics to mum during last 2-4 weeks pregnancy and during lactation seem to be most effective

Mechanism not understood

Common UK brands include:

BioGaia (used in one of the prevention trials)

Yakult (not used in any of the prevention trials)

Culturelle (used in several prevention trials, but less widely available)