

Asthma

CME Quiz

Question 1

The role of T helper 1 and 2 lymphocytes in early childhood infection and allergy is

- | | |
|---|------------|
| 1. caused by an imbalance between the two lymphocytes populations. | TRUE FALSE |
| 2. caused by the immature (fetal) immune system preferring to produce TH1 cells in response to viral infections. | TRUE FALSE |
| 3. mediated by TH2 lymphocytes that are responsive to intracellular infections, and initiating allergic responses through recruiting eosinophils and activating mast cells. | TRUE FALSE |
| 4. a well established mechanism for causing the increased rate of childhood asthma in western countries. | TRUE FALSE |

Question 2

Indicate the effect of each of the following childhood infections on the possible development of asthma in later childhood (tick the relevant column for each infection).

	Increase	Decrease	Uncertain
Wild measles			
Respiratory syncytial virus RSV			
Hepatitis A			
Mycobacterium tuberculosis			

Question 3

Findings in Quebec and Finland showed that children raised in a rural environment had lower rates of asthma. These findings led the authors to present two postulates related to environmental factors. List two other postulates that might account for the same findings.

First alternative postulate: _____

Second alternative postulate: _____

Question 4

The paper summarises the literature on the topic of hygiene hypothesis. There is no presentation on the quality of the papers used, thus leaving it to you, the reader, to assess the value of the findings, both for issues such as study quality and also for the value of findings for your clinical practice. In line with this need, and referring to the section on the effect of family size on allergy/asthma (page...), assess the evidence papers as presented in the section by completing the following table. Use the reference list at the back of the paper for further information.

Note:

- *Type of paper*: was it an editorial paper; a cohort study; case studies; etc?
- *Clinical significance*: was the magnitude of the difference presented (eg reduced rate of asthma by 10%)?
- *Statistical significance*: were the numbers presented statistically significant and not just due to random chance?

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Study	Type of paper	Clinical significance presented (Yes or No)	Statistical significance shown (Yes or No)
9 Von Mutius E, Clin Exp Allergy 1998			
1 Strachan DP, Br Med J 1989			
10 Strachan DP, Clin Exp Allergy 1997			
11 Svanes CJ, Allergy Clin Immunol 1999;103:415-420			
12 Ball TM, N Engl J Med 2000			
13 Wickens KL, Epidemiology 1999			

Question 5

The clinical significance and statistical significance of findings are important issues to consider when critically appraising a paper. What is another issue of importance to consider in your critical appraisal of this paper?

Issue: _____

Question 6

1. The Ball et al study demonstrated that for every additional older sibling, a child had a 20% reduction in their likelihood of having asthma. TRUE FALSE
2. These findings as presented in the paper were not statistically significant. TRUE FALSE

Question 7

The relationship between childhood exposure to household pets and the development of asthma has been demonstrated to be inverse, except in one circumstance. What is that circumstance?

SUMMARY

The topic is interesting and while it is full of confounding issues, this paper points to our current difficulties explaining our relative high rate of asthma in New Zealand and the need to further study the epidemiological issues.

There is a large amount of literature available on these topics. General practitioners wishing to further look at these issues would be well advised to study the original papers quoted and their related articles. Most of the abstracts can be accessed on Medline/pubmed.

The Royal New Zealand College of General Practitioners has approved this NZFP CME activity for 1 hour = 2 credits for Maintenance of Professional Standards (MOPS) and Advanced Vocational Education (AVE) programme purposes. To gain these credits, read the "Asthma, allergy and the hygiene hypothesis" article, answer the associated questions and submit to the College for appraisal.