

POSITION STATEMENT OF ALLERGY SOCIETY OF SOUTH AFRICA

INTERPRETATION OF SPECIFIC IgE CONCENTRATIONS AND SKIN-PRICK TESTING IN THE EVALUATION OF FOOD ALLERGY

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- Clinical history is paramount in the evaluation of food allergy.
- Skin-prick testing (SPT) and food-specific serum IgE concentrations (CAP RAST) may add important information to clinical history.
- Cut-off values (decision points) for SPT (Table I)¹ and specific IgE (Table II)² may be 90-100% predictive of a challenge positive result to the food allergen concerned but not necessarily for clinical sensitivity; although the cut-off values are extremely useful, about 50% of cases of food allergy react to food challenges at concentrations below these values. Many patients, in fact, are dangerously sensitive to food allergens at levels below the cut-off values – therefore it is inappropriate to state that levels below the cut-off values represent a 'NEGATIVE' result. Therefore, in patients with a strongly suggestive history of an IgE-mediated food allergic reaction, food challenge should be performed regardless of SPT result or food-specific IgE value.
- For diagnosis of food allergies elimination-challenge testing (blinded or open)

Table II. Predictive values for skin-prick test (decision points)

Positive challenges of wheal (90-100% of predictive value)		
	Over 2 years	Under 2 years
Cow's milk	> 8 mm	> 6 mm
Egg	> 7 mm	> 6 mm
Peanut	> 8 mm	> 4 mm

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remains the final arbiter as to whether a patient is truly allergic or not.

Decision points for children < 2 years may be lower (owing to the curves shown in Figure 1¹ being significantly shifted to the left), e.g. for infants, a concentration equal to and over 2 kU/l to egg and 5 kU/l to milk is 95% predictive of a reaction.

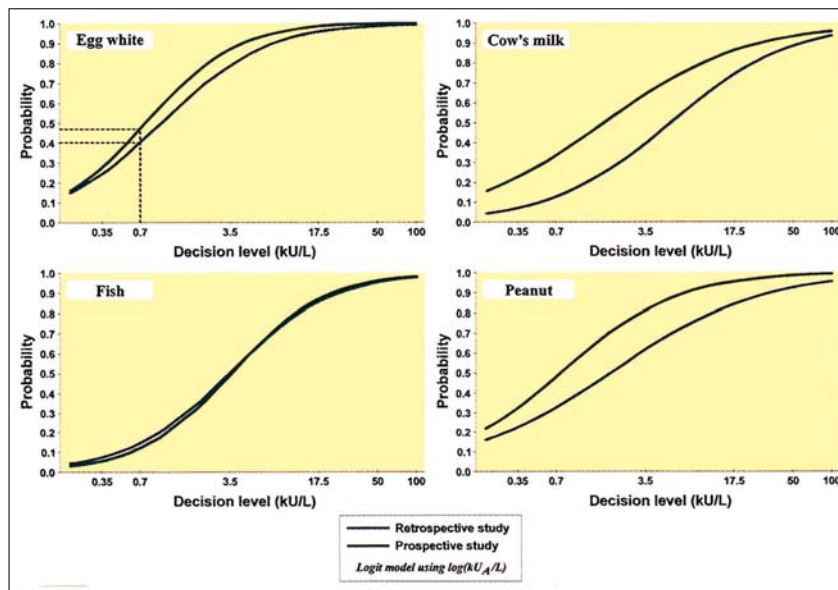


Fig. 1. Probability of reacting to a food at a given IgE value. (Reproduced with permission from Sampson HA.¹)

Table I. Food-specific IgE concentration (kU/l) clinical decision points

	Egg	Milk	Peanut	Fish	Soy	Wheat
Reactive if ≥ (no challenge needed)	7	15	14	20	65	80
Possibly reactive (physician challenge)	↓	↓	↓	↓	↓	↓
Unlikely reactive if < (home challenged)	0.35	0.35	0.35	0.35	0.35	0.35

Reproduced with permission from Sampson HA.¹

References

1. Sampson HA. Utility of food specific IgE concentrations in predicting symptomatic food allergy. *J Allergy Clin Immunol* 2001; **107**: 891-896.
2. Sporik R, Hill DJ, Hosking CS. Specificity of allergen skin prick testing in predicting positive open food challenges to milk, egg and peanut in children. *Clin Exp Allergy* 2000; **30**: 1540-1546.