

Balancing laissez-faire and paranoia in patients at risk of anaphylaxis

For my patients who are at risk of anaphylaxis, I recognize a spectrum of approaches that they adopt from laissez-faire to paranoia. Laissez-faire is obviously not an optimal approach but one I frequently see with adolescents who cannot remember ever having had an allergic reaction to their triggering allergen. Equally, paranoia is problematic with patient putting into action excessive avoidance strategies and being overanxious. This is described by Polloni and Muraro¹ in their review of this issue. This over-estimation of the risk of life-threatening anaphylaxis results in excess anxiety and a markedly impaired quality of life.^{2,3} The onus is on healthcare professionals to ensure that patients have an accurate view of their risk of life-threatening anaphylaxis. This should allow them to put into action appropriate strategies around avoidance and being prepared to manage an anaphylactic reaction.

Comberiati et al⁴ have examined the lung mechanical properties underlying children with severe persistent asthma with normal ($FEV_1 \geq 100\%$) and low lung function. Children with normal FEV_1 had normal airflow, greater lung volumes and lower airway resistance compared to those with reduced FEV_1 (Table 1). But they also had significantly reduced elastic recoil pressure and higher lung compliance than the low FEV_1 group. The authors propose that the loss of elastic recoil pressure in the normal lung function group is beneficial when patients are well as it results in larger airway diameter and therefore a normal FEV_1 . However in the face of the bronchospasm seen in an exacerbation, the loss of elastic recoil exacerbates the reduction in airway diameter because of uncoupling of the airway from the lung parenchyma. This may provide an explanation as to how patient with normal lung function can develop life-threatening exacerbations of asthma.

Versluis et al⁵ have looked at whether or not foods are reintroduced into the diet after a negative food challenge in adults. In a prospective study, 80 adult patients received standardized follow-up care after a negative food challenge with a reintroduction scheme and supportive telephone calls. Short-term (2 weeks after challenge) failures were seen in a fifth. This was mainly due to symptoms on reintroduction or there being no need to eat the food (Figure 1). At 5-12 months after the food challenge, failure was seen in two-fifths. Typical reasons were atypical symptoms after eating the food and concern about experiencing an allergic reaction. This study has important implications to practice. If food challenges are going to be used to de-label food allergy in adults, there needs to be careful patient selection to ensure that a negative challenge will lead to a change in their diet and support is required after negative challenge to support the successful reintroduction of the food.

Finally, the recent publication of the results from the BEEP⁶ (algorithm for food allergy diagnosis in this study was recently published in this journal⁷) and Preventall⁷ studies have provided a surprise. In both studies, daily emollients were not effective in preventing eczema in infancy. It is surprising because there was good pilot data suggesting that this may be an effective strategy. A close examination of the precise approaches in both these studies does reveal some important differences in the type, frequency and age of commencement of the intervention. Might these explain the negative result? For now though, we cannot recommend the use of regular emollients in infancy to prevent eczema. We need to wait a little longer for the food allergy results from the Preventall study. Please keep safe in the midst of the COVID-19 pandemic.^{8,9}

TABLE 1 Lung mechanic measurement children with asthma who have normal and low lung function

	High FEV_1 (n = 13)	Low FEV_1 (n = 14)	Control (n = 10)	P-value
Coefficient of retraction (cm H ₂ O/L)	0.31 ± 0.1	0.54 ± 0.24	0.49 ± 0.23	.012
Compliance (L/cm H ₂ O)	0.21 ± 0.14	0.09 ± 0.05	0.09 ± 0.04	.002
Specific compliance/total lung capacity (L/cm H ₂ O)/L	0.04 ± 0.02	0.02 ± 0.01	0.016 ± 0.01	.0006
Upstream, resistance (cm H ₂ O/[L/s])	2.7 ± 1.6	8.9 ± 9.5	2.6 ± 0.14	.02
Airway resistance (cm H ₂ O/[L/s]) % of predicted	101.9 ± 42.6	199.9 ± 106.9	123.4 ± 50.2	.005
Specific airway conductance (L/s/cm H ₂ O/L) % of predicted	87.3 ± 30.2	53.4 ± 18.5	88.4 ± 41.1	.01

Note: Lung mechanics for children with persistent asthma with high and low lung function compared with normal children. For more details, see table 3, Comberiati et al (pages 453 to 462).

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The cover image is based on the Original Article Lung mechanical properties distinguish children with asthma with normal and diminished lung function by Comberiati P et al., <https://doi.org/10.1111/cea.13573>.

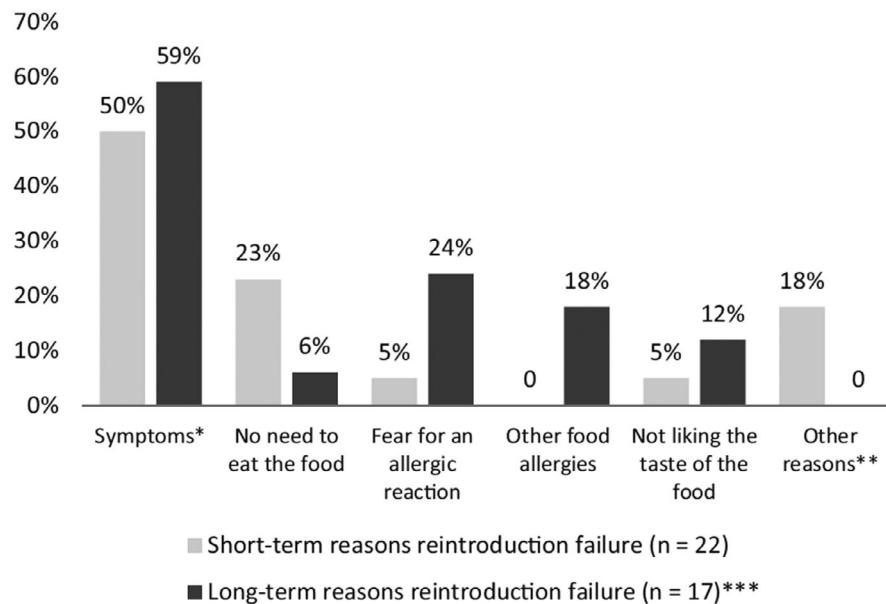


FIGURE 1 Patient-reported reasons for reintroduction failure after a negative food challenge. Patient-reported reasons for reintroduction failure. For more details, see figure 2, Versluis et al (pages 479 to 486)

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