

# FOOD ALLERGIES – SHOULD WE BE GOING PEANUT-FREE IN SOUTH AFRICAN SCHOOLS?

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## INTRODUCTION

**P**eanut allergies (PAs) have increased tremendously in some countries in the past few years, with the United Kingdom showing a doubling in PA prevalence over the past few decades.<sup>1</sup> Data in South Africa suggest a PA prevalence of 1–2% of the childhood population,<sup>2</sup> which means that up to 1 in 50 children has a PA. In reality, in most average-sized schools, with three–four classes per grade, this equates to 1–2 children per grade.

There are many other causes of food allergy, including cow's milk, egg, seafood and wheat, but PA in particular has caught the public's attention because of the reported severity of reactions.

There are several reasons why PA is of particular concern:

- PA has increased at a rate which has been difficult to explain.
- There is a spectrum of severity of PA but peanut is the most common food causing serious adverse effects and anaphylaxis in children.<sup>3</sup>
- Although a small percentage of children outgrow their PA, the allergy is usually lifelong.
- Peanut is a commonly consumed and nutritious snack that is frequently used as a sandwich filler.
- Peanut is a 'sticky' allergen: it can stick to surfaces, toys and computer keyboards for a long time.<sup>4</sup>

## ALLERGIES IN SCHOOLS

Going to school is an extremely stressful time for food-allergic children and their families, as they move from a controlled to a relatively uncontrolled environment. Understandably, many parents tend to be over-anxious or overprotective during this transition.

More and more schools are starting to understand the severity of allergies, yet there are frequently instances of pushback from staff and other parents when it comes to allergen safety: this is an international problem, not one confined only to South Africa. Essentially, it can become a battle between the right to eat peanut butter, a nutritious

and convenient snack, and the right to stay safe or even alive for those with severe allergies. While the majority recognise that parents want to keep their children safe, the minority sometimes make a real fuss. Unfortunately, the minority view can lead to ostracism or even the bullying of children with allergies.

*It is a child's right to stay safe during eating time and to be socially included.* With this in mind, what is the best approach to nut allergy in schools?

## IS A TOTAL BAN OF NUTS IN SCHOOLS THE ANSWER?

A total ban of nuts is an option, but not necessarily the answer for all schools. Further research is needed regarding the pros and cons of a total nut ban in schools. Potential disadvantages of a total nut ban include:<sup>5,6</sup>

- A false sense of security. In reality, an allergic child and their teachers should always be prepared for a reaction and should not let their guard down.
- A total nut ban is not representative of the 'real' world and the child may not be equipped to deal with the reality of allergens outside the school environment, on outings, at birthday parties, etc.
- It may make the school lax about other protective measures – for example, hand-washing – which may become an issue if there is a 'lapse' in the nut-free status or a child is given a nut-containing sandwich by a caregiver in error, and no further nut-reduction techniques may be in place if the school is 'nut free'.
- A nut-free school may discount other food allergies – for example, egg and milk allergies – that may be just as severe, but this may not be recognised if the school is considered to be 'allergen free'.

A recently published study from the United States provided the first large dataset (over 2 000 schools over a five-year period) exploring the effects of school peanut-free policies on clinical outcomes. Interestingly, this study identified higher rates of adrenaline usage in schools with peanut-free policies compared to schools without such policies.<sup>7</sup>

**TABLE I: RESPONDING TO ALLERGIC REACTIONS<sup>8</sup>**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
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| 1. Assess whether the reaction is either mild or moderate/severe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2. If any uncertainty exists, treat it as a severe reaction.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 3. Severe reactions (involvement of breathing, throat, cardiac or abdominal systems): <ol style="list-style-type: none"> <li>Administer adrenaline via auto-injector (Epipen<sup>®</sup>):<br/>Remove the blue safety cap.<br/>Hold the pen in the fist with the orange end pointing towards the child's outer thigh.<br/>Holding the leg firmly, place the orange end of the pen on the mid-outer thigh and push firmly until a click is heard.<br/>Maintain the pressure for five seconds to ensure the medication is released. Remove the pen and massage the injection area for ten seconds.</li> <li>If wheezing or chest tightness is present, administer reliever medication (via an asthma pump):<br/>Administer one puff at a time using a spacer device and allowing ten breaths to breathe it in.<br/>Repeat this ten times over ten minutes.</li> <li>Give antihistamine as per the emergency action plan.</li> <li>Transfer to hospital even if symptoms resolve promptly. Do not allow the child to stand suddenly as this can lower their blood pressure.</li> </ol> |
| 4. Mild reactions (involvement of the skin only, without any other systems involved) <ol style="list-style-type: none"> <li>Administer antihistamine as per the emergency treatment plan.</li> <li>Locate the adrenaline auto-injector and assess the child for any escalation to severe reaction. If their reaction is uncertain, treat as a severe reaction.</li> <li>Children with mild reactions may not need to be sent home, but parents must be notified of events. Review the avoidance and preparedness measures.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## SO WHAT ARE OUR OTHER OPTIONS?

Both the Allergy Society of South Africa and the Allergy Foundation of South Africa advocate that schools should be 'allergen aware' and 'allergen safe' rather than necessarily being totally allergen-free.<sup>8</sup> Going nut-free is a major, and commendable, step that some schools have chosen to take, and they deserve kudos for doing this. Alternative options do exist, however, and these include:

- Nut-free classrooms or zones for those children in a class with a nut allergy, particularly if it is a severe allergy.
- A nut-free table or protected eating area, which is cleaned regularly.
- An integrated eating area, but a strict policy of no lunchbox sharing.
- Close supervision of eating times if there is an allergic child in the class.
- Strict handwashing after meal times to minimise the transmission of allergens to work surfaces.

The school should decide on which allergy-aware options they will adopt and make specific plans accordingly.

## WHAT OTHER MEASURES NEED TO BE TAKEN?

Under all circumstances, whether allergen free or allergen safe, the following steps need to be taken if there are food-allergic children in a school:

- Make a point of becoming aware of children's allergies. Each school should have a form for capturing details of medical conditions, including allergies and chronic

medications, to be completed by parents/guardians at the beginning of each year. This information should be verified by a doctor in the form of an official chronic-care plan. The form should clearly indicate confirmed food allergies and their severity. Details of the food allergy should be recorded in the learner's profile.

- Elicit the support of co-learners, their families and school staff to limit the presence of specified food allergens on the school premises, in tuckshops, and at after-class activities, parties, trips and school events. In the case of a severely allergic child, a letter written by the child's doctor/allergologist to the parents/caregivers in the class explaining the need for allergen awareness will go a long way towards educating learners and parents, and towards gaining their support.
- Avoid the use of common food allergens in classroom projects or activities, as rewards or incentives, if there is a food-allergic child in the class. Suitable 'safe treat' alternatives can be identified, discussed with the child's parents or doctor and kept at hand for allergic children.
- Be vigilant around meal times and introduce a designated routine for them.
- Do not allow any lunchbox sharing with an allergic child.
- Instil a general habit that children wash their hands before and after meal times to reduce the carriage of allergen.
- Put in place an official emergency treatment plan for allergic children in case of accidental ingestion of allergens; this includes identifying a reaction and knowing what the appropriate response should be. The emergency treatment plan should document which medications the school personnel are mandated to administer and when they should be administered, and should be signed by the child's doctor as well as the parents/legal guardians. This action plan be kept in the child's classroom as well as in the school secretary's office; it should include a photograph of the child and should state where the child's emergency kit is kept.
- Ensure that emergency medications available, accessible and up to date. The child should have an emergency kit which includes the action plan, to be kept in a safe place (either in the child's bag or accessible in the secretary's office, or both).
- Ensure that staff are well trained in recognising a reaction and using emergency medication. Schools must maintain a record of all the medications used in an emergency, notify parents immediately and document the circumstances of the incident.
- Reassure staff that no legal action will be taken if they give the emergency medications, if deemed necessary.
- Consider keeping a generic 'emergency box' with allergy medications such as antihistamines and an adrenaline auto-injector (Epipen<sup>®</sup>) for use with children

with previously undiagnosed allergies, or for those who, for whatever reason, do not have an emergency kit at hand. Recent legislation in the United Kingdom allows schools to obtain an adrenaline auto-injector (Epipen®), without a named prescription, to be kept on campus for emergencies.<sup>9</sup>

- Each child with a suspected food allergy should be seen by an allergologist to confirm the diagnosis and to grade the severity of their reactions. This can help to put the risk into perspective. For example, the school strategy for someone with mild oral itching in response to nuts may be very different from that for someone with a severe life-threatening reaction.
- Treat allergy-related teasing or bullying seriously and, if necessary, implement the school's anti-bullying policies.

## ALLERGY TRAINING IN SCHOOLS

Schools should form a small body of teachers who comprise the 'allergy action committee', ideally incorporated into the school-based support team. These particular teachers need up-to-date training on allergy-avoidance measures, recognition of reactions and administration of emergency treatment. This committee should be aware of all the food-allergic children in the school, should know exactly where the emergency medications are kept, and should be the 'go-to' people in the case of an allergy emergency. They should all undergo online training such as that provided by the Allergy Foundation of South Africa, at [www.allergyfoundation.co.za](http://www.allergyfoundation.co.za).

In addition:

- All teachers, sports coaches, secretaries, cafeteria staff and other staff should be trained in allergy

**TABLE II: EXAMPLE OF A PARENTS'/DOCTOR'S APPROVAL FORM FOR ADMINISTERING MEDICATION BY SCHOOL TEACHER(S)<sup>8</sup>**

Parents/guardians/caregivers please note: The school can refuse to administer medication to your child if the form below is not completed by both you and your medical doctor and the requirements below are not met. Medication must be supplied in the original container. Ask the pharmacist to supply medication in two fully labelled containers, one for home use and one for school use. Only medication authorised by a medical practitioner may be administered by school personnel. It is the parents' responsibility to notify the school when there is a change in medication. It is the parents' responsibility to provide all supplies, medication and/or equipment necessary for administering any medication(s), and to collect from the school any medication not used during the specified period.

Learner's name: ..... Grade: .....

Condition for which medication is required: .....

### MEDICAL PRACTITIONER

Name of medical practitioner: .....

Contact number: .....

Name of dispensing pharmacist: .....

Contact number: .....

Brand name of medication: .....

Method of administering: .....

Frequency and time of administration: .....

For how long will your child be taking this medication? .....

Special precautions/instructions (eg storage): .....

Possible side-effects: .....

Is the medication to be self-administered?

Signed: ..... Date: .....

### PARENT/GUARDIAN

Name: .....

Contact number (in event of emergency): .....

Relationship to learner: .....

I hereby request ..... (Name of school) to administer the abovementioned medication(s) to my child as detailed above. I agree to the requirements of this guideline document. I understand that the school has the right to refuse to administer the medication if these requirements are not met. I understand that this request is valid for only one year, and will need to be renewed annually.

awareness. All members of staff should know their roles in the case of emergencies. They should all know where emergency medication is kept.

- Teachers and cafeteria staff should be trained in basic food-handling and cleaning procedures to prevent cross-contamination from hands, surfaces and utensils if foods containing the known allergen are prepared and/or served in the classroom of a food-allergic child.
- Education for learners regarding allergies can be built into school curricula, for example Health, Science or Life Skills programmes.

## CONCLUSION

In conclusion, providing a safe school environment for students with life-threatening food allergies is essential to allowing children to achieve their full potential in a healthy and safe learning environment. Going 'allergen-free' – for example, nut-free – may be an option for some schools, but is not the only approach and it is not without its potential disadvantages. We strongly advocate taking the steps outlined in this document to create 'allergy awareness' and an 'allergen-safe' learning environment.

## DECLARATION OF CONFLICT OF INTEREST

The authors declare no conflict of interest.

This article has been peer reviewed.

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