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Are Teachers Prepared

for Students with Peanut Allergies?



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When There Is
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Are Teachers Prepared
for Students with Peanut Allergies?

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Abstract

Peanut allergies account for the majority of severe food-related allergic reactions and affect 1% of Americans today. Therefore, food allergies among students are one of the most common healthcare conditions that must be addressed in the school setting. With the lack of full-time school nurses, teachers feel overwhelmed when the responsibility is placed upon them to care for these students. This article will discuss the prevalence of peanut allergies in schools and acknowledge the difficulties faced by teachers when dealing with a student with a peanut allergy. It is imperative that teachers receive a comprehensive educational program on peanut allergies when no school nurse is available. Ultimately, we want teachers and school staff responsible for student supervision to recognize quickly what symptoms might indicate anaphylaxis and know how and when to get help. This knowledge would increase their awareness of their own role in preventing allergy-related deaths.



Why Schools Need a Plan for Students with Peanut Allergies

Teachers often feel overwhelmed with meeting the medical needs of students, especially when the student has a healthcare condition such as food allergy. Some feel that it is not appropriate for teachers to take responsibility for a student's well-being in the event of an acute allergic reaction (Clegg & Ritchie, 2001). However, many schools do not have full-time school nurses serving their schools on a daily basis. The National Association of School Nurses recommends a school nurse to student ratio of 1: 750 for the general population (National Association of School Nurses [NASN], 2006). North Carolina has a statewide school nurse to student ratio of 1:2,198 (Healthy Carolinians, 2009). Therefore, it is paramount that the teaching staff be knowledgeable and willing to care for a student with a food allergy.

By acknowledging the growing number of students attending public schools today with known food allergies, school health nurses know it is necessary to educate the teaching staff so they will feel more comfortable in recognizing the signs and symptoms of an allergic reaction, as well as be aware of the risks their classroom environment presents in order to care for the students with a peanut allergy. School teachers often lack the background knowl-

edge to provide a safe environment for a student with a peanut allergy without such an educational program. The program would consist of a variety of teaching strategies, providing for all learning styles, including listening, PowerPoint™, handouts, video, case studies and question/answer sessions. This versatile combination would be used to promote retention of information on peanut allergies. A program of this sort has the potential to greatly reduce the incidence of reactions, obtain treatment in a timely manner in the event of a reaction, and prevent needless deaths.

Explaining to Teachers About Peanut Allergies

A peanut allergy is defined as a type of food allergy, distinct from nut allergies; a hypersensitivity to dietary substances from peanuts causing an overreaction of the immune system which may lead to severe physical symptoms (Peanut Allergy, 2008). Peanut allergies generally develop early in childhood and account for the majority of fatal and near-fatal anaphylactic reactions. Signs and symptoms of an adverse reaction to peanuts involve the following systems: skin, gastrointestinal, respiratory, cardiovascular and neurological (see Table 1). Diagnosis of a peanut allergy is usually initiated when a parent reports a suspected reaction after ingestion, but is generally confirmed by an allergy specialist with one or more of the following tests: skin-prick test, radio-allergosorbent test (RAST), and possible oral food challenges.

TABLE 1: TYPICAL ALLERGY SYMPTOMS

Skin

- Hives
- Swelling
- Itchy red rash
- Eczema flare

Gastrointestinal

- Cramps
- Nausea
- Vomiting
- Diarrhea
- Flatulence

Cardiovascular

- Reduced blood pressure
- Increased heart rate
- Shock

Neurological

- Feeling of impending doom
- Weakness

Respiratory

- Itchy, watery eyes
- Runny nose
- Stuffy nose
- Sneezing
- Cough
- Itching or swelling of the lips, tongue, throat
- Change in voice
- Difficulty swallowing
- Tightness in chest
- Wheezing
- Shortness of breath
- Repetitive throat clearing

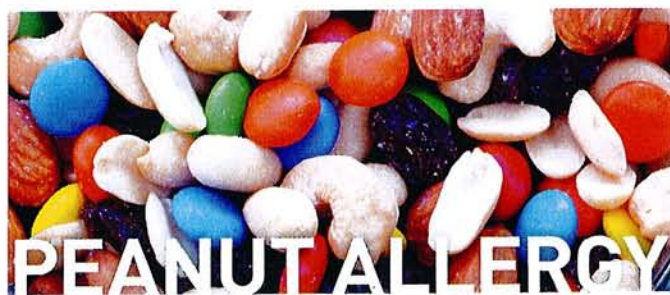
(Jackson, 2002)

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Jackson (2002) concludes that peanut allergy is an increasing problem in the United States; therefore, early recognition of adverse effects of peanut and other food allergies is paramount to survival from anaphylaxis.

Peanut allergy accounts for the majority of severe food allergy (Al-Muhsen, Clarke, & Kagan, 2003) and is the most severe of food allergies, is life-threatening, and has no cure (Condliffe, 2007). Many of the allergic reactions to peanuts in school are caused by foods used in class projects or celebrations (Weiss, Munoz-Furlong, Furlong, & Arbit, 2004). Peanuts and tree nuts cause more than 80% of the 30,000 food-induced anaphylactic reactions seen each year in emergency departments (Putman, 2002). Some schools have eliminated peanut products from being served in the cafeterias and classrooms, while others still allow peanuts or peanut-containing products throughout the school (Masia, Mullen, & Scotti, 1998).



Some Still Doubt Its Significance

Peanut allergy has become a national concern (Masia, Mullen, & Scotti, 1998), and a growing concern for school nurses around the country. The need for more staff training and how to deal with each child individually, with the specific teacher, has also impacted the relationship between teachers and school nurses. School nurses often feel that the responsibility of ensuring the safety of children with food allergies is burdensome and can worsen when the responsibility is delegated to teachers (Weiss, Munoz-Furlong, Furlong, & Arbit, 2004). It has been determined that school staff often do not receive adequate training on how to care for a child in an emergency (Clegg & Ritchie, 2001). The primary goal of dealing with peanut allergies or any potentially life-threatening food allergy is to prevent fatalities (Litarowsky, Murphy, & Canham, 2004). As early as 1992, researchers demonstrated an association between a delay in treatment and fatal outcomes in school. The inability of teachers/school staff to recognize symptoms and to follow emergency plans is a source of delay (Litarowsky, Murphy, & Canham, 2004).

Barriers for Teachers

One of the most common barriers for teachers is that some parents do not completely understand how to deal with the diagnosis of a peanut allergy. If the parents do not provide teachers with details and the school lacks a full-time nurse, that is a disastrous combination. The lack of information/education provided can cause anxiety for school staff when the children enter into the school setting (Mandell, Curtis, Gold, & Hardie, 2005). Other barriers for teachers are listed in Table 2.

TABLE 2: BARRIERS FOR TEACHERS

- Teachers overwhelmed with mandates
- Teachers' current responsibilities
- Lack of school nurses
- Class parties/celebrations/cafeteria
- Lack of training and education provided to school staff

(Clegg & Ritchie, 2001)

(Weiss, Munoz-Furlong, Furlong, & Arbit, 2004)

Another issue is that many schools lack a comprehensive educational module for teaching unlicensed staff how to recognize an allergic reaction. In 2001, the Asthma and Allergy Foundation of America/New England Chapter, Massachusetts Department of Education, Massachusetts Department of Public Health, Massachusetts Schools Nurse Organization, parents and other professional organizations worked together and identified the lack of guidelines for assisting students with food allergies in Massachusetts schools. This multidisciplinary team developed a plan to assist school personnel by providing education on food allergies and anaphylaxis, recommended individualized medical plans for children with food allergies, and provided guidance on ways to prevent accidental exposure and how to handle emergency situations if accidental exposure occurred. The team was certain of the need to establish these guidelines for school personnel and after implementing the user-friendly document, the feedback was positive. These guidelines were felt to mark the beginning of improved well-being for thousands of students attending Massachusetts schools with food and other life-threatening allergies (Sheetz et al., 2004).

A Model Program — Union County Public Schools

Initially, letters were written to the Deputy Superintendent/Assistant Superintendent for Curriculum and Instruction and to one of the elementary school principals explaining the proposed plan to survey the teachers on their knowledge base of peanut allergies. Upon obtaining permission from both, a letter was placed in the mail boxes of 30 elementary school teachers. Information was requested on ability to recognize the signs and symptoms of an allergic reaction, knowledge of how to administer an Epi-Pen®, knowledge base of peanut allergies and the knowledge of when to administer medications during an allergic reaction. One additional question was added to the questionnaire, to determine the number of years of teaching experience the teachers had at the time of the survey. This was added simply to determine if there was a relationship between the number of years of teaching and knowledge of peanut allergies.

Of the 30 questionnaires that were distributed, 26 were returned. Of the 26 questionnaires, one failed to indicate the number of years of teaching experience. The results were initially calculated with the entire questionnaire results. Based on the results from the entire group, there was not an overwhelming need (or lack of need) for additional education — basically neutral for the entire

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group. However, when analyzed based on years of teaching experience, the need for this educational program became more evident for the group of teachers with 11 or more years of experience. The survey and literature review provide the validation necessary to establish the need for the education program on peanut allergies.

The education program on peanut allergies for elementary school teachers was designed to be held at the beginning of each school year, when other mandatory health information is provided. With this captive audience, a PowerPoint™ presentation would be given, as well as time for questions and discussion. The PowerPoint™ presentation would discuss the problem and significance of peanut allergies, and the various types of food allergies; a heavy emphasis would be placed on prevention, and that all individuals play a role in prevention to keep the child safe at school and classroom. Cafeteria and field trip considerations would also be examined. The entire presentation, with question and answer session would last no longer than 30 minutes.

The next part of the educational program would shift from prevention to understanding the typical allergic response seen with a food allergy. Detailed information would include how the entire body can be affected by the allergic response, including the skin, gastrointestinal tract, respiratory system, cardiovascular system and neurological system, as presented in Table 1. Clarifying pictures would be included to help determine the allergic response from other conditions in hopes of increasing the awareness and ability to recognize symptoms at their onset.

Two case studies would be presented to the teachers to encourage discussion and to determine possible solutions. The group would be allowed to examine the differences and similarities of the two cases and why their treatment options might differ. The goal of the case studies is to prove that most individuals have various opinions; however, recognizing the signs and symptoms of the allergic reaction and obtaining early treatment provides better outcomes.

A five-minute video on the Epi-Pen® would be shown in order to reiterate the signs and symptoms of anaphylaxis as well as to provide the fundamentals of administration of the Epi-Pen®. Epi-Pen® trainers would also be used to demonstrate the techniques necessary for safe administration and would give teachers the opportunity to become more comfortable with their skills.

Before the conclusion of the presentation, a review of the current individualized health plan used by the School Health Program is dis-

cussed. The goal is to inform the teachers on how to use the health plan quickly and where to keep it in case of an allergic reaction at school. The educational program would conclude with a debriefing time for feelings to be shared and a question/answer session.

Innovative ways need to continue to engage school nurses in learning new material and in studying the effectiveness of their practices. Partnerships such as this one described are useful in reaching large numbers of school nurses with one program. 🐼

REFERENCES

- Al-Muhsen, S., Clarke, A. E., & Kagan, R. S. (2003, May 13). Peanut allergy: an overview. *Canadian Medical Association Journal*, 168(10), 1279-1285.
- Clegg, S. K., & Ritchie, J. M. (2001). 'EpiPen' training: a survey of the provision for parents and teachers in West Lothian. *Ambulatory Child Health*, 7, 169-175.
- Condliffe, C. (2007, September). Peanut allergy -- a public health concern. *Journal of Community Health*, 21(9), 8-16.
- Healthy Carolinians (2009). *School Nurses*. Retrieved June 15, 2009, from <http://www.healthycarolinians.org/2010objs/schlnurses.htm>
- Jackson, P. L. (2002, September-October). Peanut allergy: An increasing health risk for children. *Pediatric Nursing*, 28(5), 496-504.
- Litarowsky, J. A., Murphy, S. O., & Canham, D. L. (2004, October). Evaluation of an anaphylaxis training program for unlicensed assistive personnel. *Journal of School Nursing*, 20(5), 279-284.
- Mandell, D., Curtis, R., Gold, M., & Hardie, S. (2005). Anaphylaxis: how do you live with it? *Health & Social Work*, 30(4), 325-335.
- Masia, C. L., Mullen, K. B., & Scotti, J. R. (1998). Peanut allergy in children: Psychological issues and clinical consideration. *Education & Treatment of Children*, 21(4), 514-532.
- National Association of School Nurses (2006). *Position Statement*. Retrieved June 15, 2009, from <http://www.nasn.org/Default.aspx?tabid=209>
- Peanut Allergy. (2008). *Wikipedia*. Retrieved from http://en.wikipedia.org/wiki/Peanut_allergy
- Sampson, H. A. (2003, June). Anaphylaxis and emergency treatment. *Pediatrics*, 111(6), 1601-1608.
- Sheetz, A. H., Goldman, P. G., Millett, K., Franks, J. C., McIntyre, C. L., & Carroll, C. R. et al. (2004, May). Guidelines for managing life-threatening food allergies in Massachusetts schools. *Journal of School Health*, 74(5), 155-160.
- Weiss, C., Munoz-Furlong, A., Furlong, T. J., & Arbit, J. (2004, October). Impact of food allergies on school nursing practice. *The Journal of School Nursing*, 20(5), 268-278.

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