



Food Allergy – A Rising Global Health Problem

World Allergy Week 2013

8-14 April 2013

www.worldallergyweek.org



A World Federation of Allergy, Asthma
& Clinical Immunology Societies

Welcome to World Allergy Week 2013



Ruby Pawankar, MD, PhD
President, World Allergy Organization

The World Allergy Organization welcomes all of you to join us and all of the educators, healthcare practitioners, policymakers, parents, patients, advocates and media professionals around the world to mark the third consecutive year of World Allergy Week by organizing and participating in activities that bring attention to the rising global prevalence of food allergies and ways to address them.



Motohiro Ebisawa, MD, PhD
Chair, Communications Council

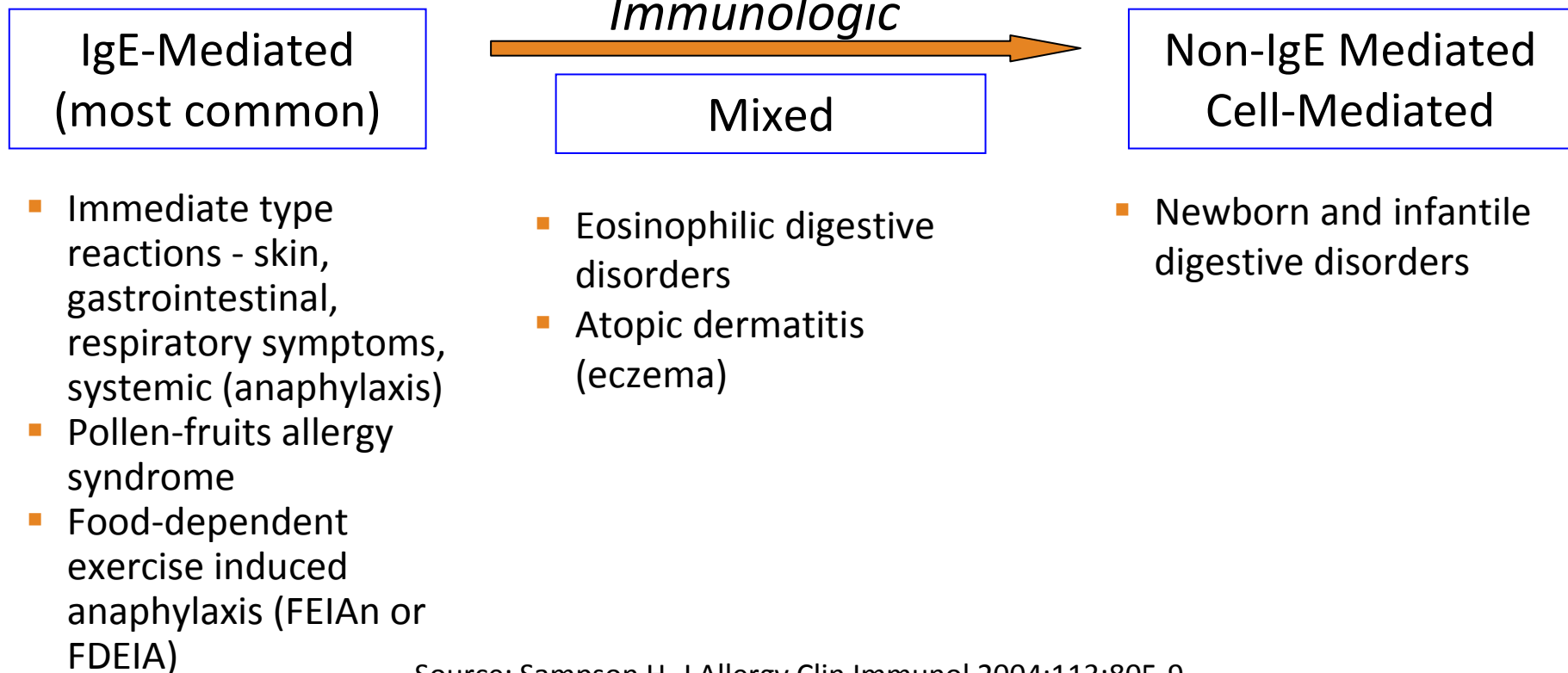
In keeping with the World Allergy Week tradition of bringing attention to a specific allergic disease each year, the World Allergy Organization has selected **Food Allergy – A Rising Global Health Problem**, emphasizing the great need for increased awareness, training, and resources that lead to improved safety and quality of life.



Food Allergy – A Rising Global Health Problem

- Food allergies are increasing in both developed and developing countries, especially in children.
- The severity and complexity of food allergy is also increasing.
- Food allergies are complicated by other allergic diseases such as asthma and atopic eczema.
- Food allergy can be fatal, and appropriate diagnosis is essential.
- There is a need for food labeling worldwide.
- There is a need for more clinical knowledge as well as resources to treat food allergy, including the availability of life-saving medications such as epinephrine (adrenaline).

Adverse Food Reactions



Source: Sampson H. J Allergy Clin Immunol 2004;113:805-9,
Chapman J et al. Ann Allergy Asthma & Immunol 2006;96:S51-68.

Food Allergy Symptoms

IgE-mediated reactions tend to occur immediately or within one to two hours of ingestion of a food, whereas non-IgE-mediated reactions present later.

- **Skin manifestations:** itching, hives or welts, flush and swelling
- **Gastrointestinal manifestations:** mouth and lip itching, abdominal pain, vomiting and diarrhea
- **Respiratory manifestations:** runny nose, sneezing, cough, wheezing, tightness in throat and dyspnea
- **Generalized manifestations:** anaphylaxis – may be the most severe manifestation of food allergy
- **Cardiovascular:** shock

Source: Fiocchi A, Sampson HA, et al. “Food Allergy”, Section 2.5, in *WAO White Book on Allergy*, Pawankar R, Canonica GW, Holgate ST, and Lockey RF, editors (Milwaukee, Wisconsin: World Allergy Organization, 2011), pp 47-53.



The Growing Food Allergy Problem

- Globally, 220-250 million people may suffer from food allergy.*
- Food allergy has a significant socio-economic impact.
- Food allergy significantly affects the quality of life of sufferers (mainly children).
- The incidence of food allergy (often life-threatening) is commonly estimated to be greater in children (5-8%) than in adults (1-2%).

*Extrapolated from European population statistics in: Mills EN, Mackie AR, Burny P, Beyer K, Frewer L et al. The prevalence, cost and basis of food allergy across Europe. *Allergy* 2007; 62:717-722.

Source: Fiocchi A, Sampson HA. "Food Allergy", Section 2.5, in *WAO White Book on Allergy*, Pawankar R, Canonica GW, Holgate ST, and Lockey RF, editors (Milwaukee, Wisconsin: World Allergy Organization, 2011), pp 47-53.

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The Burden of Food Allergy Is Rising in Most Countries

As reported in a survey underway of the Member Societies of the World Allergy Organization:

- The vast majority of countries surveyed so far have reported an increase in food allergy
- No countries have reported a decline in food allergies over the past 10 years
- The burden is rising in both **developed** and **developing** countries: Many of the countries surveyed have reported a *lack of reliable data* and the need for more studies.

WAO-WUN Survey on Food Allergy 2013, in progress, contact WAO President

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Increasing Challenges of Food Allergy Need to Be Addressed

- The disease of food allergy results in exclusion of children from school canteens and prevents their full participation in school life and society.
- Given the current and future public health, social and economic consequences, the prevention and treatment of allergic reactions to foods is a major challenge that must be addressed.
- Stakeholders must be prepared to meet the needs of patients by enhancing the diagnostic process, the traceability of responsible foods, and the availability of substitute foods, assisting hospitalized patients, and preventing mortality.
- Large areas in the world lack legislation on food labeling.

Source: Fiocchi A, Sampson HA et al. "Food Allergy", Section 2.5, in *WAO White Book on Allergy*, Pawankar R, Canonica GW, Holgate ST, and Lockey RF, editors (Milwaukee, Wisconsin: World Allergy Organization, 2011), pp 47-53.

Causes of Food-induced Anaphylaxis in Children

| Study | Country | Publication year | Caused by food-induced anaphylaxis | | | Cases (n) | Ref. |
|---------------------|-----------|------------------|------------------------------------|--------------------|--------------|-----------|------------------------------|
| | | | 1st | 2nd | 3rd | | |
| Järvinen KM et al. | USA | 2008 | Peanuts | Cow's milk | Nuts | 95 | J Allergy Clin Immunol. |
| Rudders SA et al. | USA | 2010 | Peanuts | Cow's milk | Nuts | 846 | J Allergy Clin Immunol. |
| Russell S et al. | USA | 2010 | Peanuts | shellfish | Cow's milk | 124 | Pediatr Emerg Care. |
| Braganza SC et al. | Australia | 2006 | Dairy | Egg | Peanuts | 57 | Arch Dis Child. |
| de Silva IL et al. | Australia | 2008 | Peanuts | cashew nut | Cow milk | 104 | Allergy |
| D. L. M. Goh et al. | Singapore | 1999 | Bird's nest | Crustacean seafood | Egg and milk | 124 | Allergy |
| Piromrat K et al. | Thailand | 2008 | Prawn | | | | Asian Pac J Allergy Immunol. |
| Imai T | Japan* | 2004 | Hen's egg | Cow's milk | Wheat | 408 | Arerugi |

*Infant only

Food-induced Anaphylaxis

A case of anaphylaxis during wheat oral food challenge: A boy, 4 years old, developed skin flush with wheezing and dyspnea.



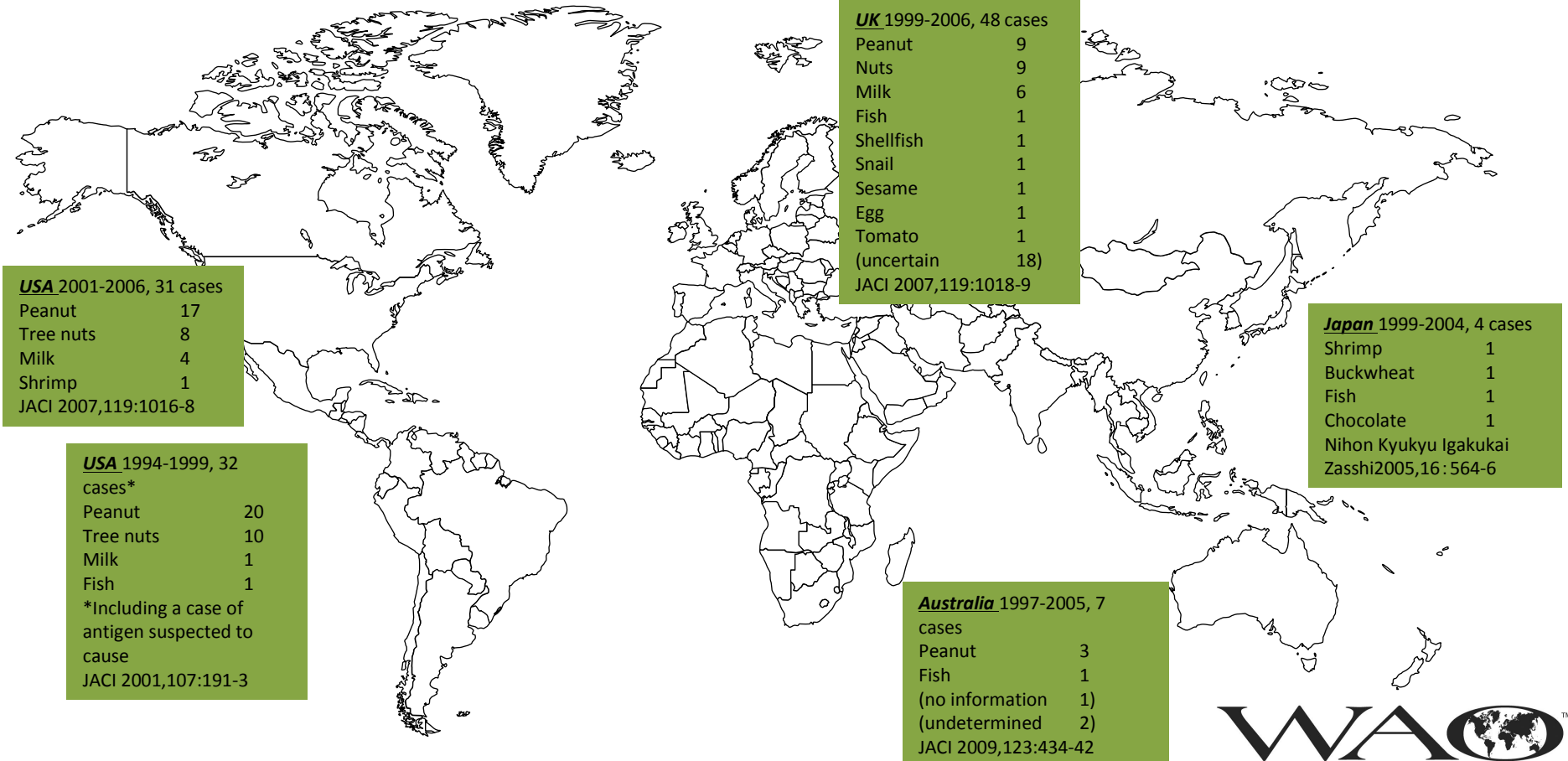
Source: Ebisawa M, "Food-induced anaphylaxis and food associated exercise-induced anaphylaxis," in Food Allergy, James J, Burks W, and Eigenmann P, editors (Elsevier, 2012), pp 113-128.



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Worldwide Cases of Fatal Food-induced Anaphylaxis



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Food Allergy Management and Anaphylaxis Plans

Challenges:

- In many regions autoinjectors are expensive and not subsidized (especially in countries in Asia, South America, Middle East, Eastern Europe and Africa).
- Some countries have standardized action plans but no ready access to autoinjectors; others have autoinjectors but no standardized action plans.



Recommendations:

- Implement standardized national 'anaphylaxis action plans' for food allergy in countries where they still are needed.
- Improve access to adrenaline autoinjectors in countries where it is limited.

Based on WAO-WUN Survey on Food Allergy 2013, in progress, contact WAO President



To view or download the
WAO White Book on Allergy
visit:

www.worldallergy.org/definingthespecialty/white_book.php

More resources and information about
World Allergy Week 2013
are online at:

www.worldallergyweek.org

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About the World Allergy Organization

The World Allergy Organization is an international alliance of 93 regional and national allergy, asthma and immunology societies. Through collaboration with its Member Societies WAO provides a wide range of educational and outreach programs, symposia and lectureships to allergists/immunologists around the world and conducts initiatives related to clinical practice, service provision, and physical training in order to better understand and address the challenges facing allergists/immunologists worldwide.

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