İnek sütü alerjisi artıyor mu?

Prof Dr Esen Demir

EÜTF Çocuk Alerji ve Klinik İmmunoloji BD

Çocuk Göğüs hastalıkları BD

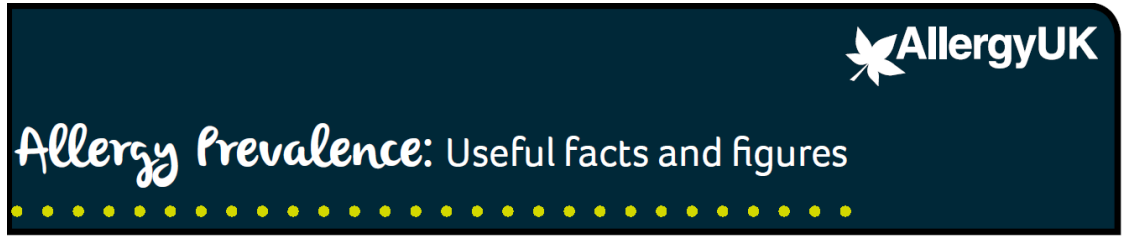
WAO 2013

- Alerji prevalansı %10-40
- Gelişmiş ülkelerin çoğunda prevalans >%20

EAACI 2016

- Avrupa'da en sık kronik hastalık
- >150 milyon kronik alerjik hastalık(2025 ⟶ %50)
- >%20 hasta ⟶ astım atak, anafilaktik şok, ölüm
- 2005-2015 ⟶ Hastane başvurusu ⟶ 5 kat fazla ↑
- Yıllık maliyet ⟶ 55-151 milyar Euro

(Pawankar R. 2013, Nwaru BI 2014)



İngiltere

- %20 tekli veya çoklu alerjik hastalık
- Erişkinlerin %44 de alerjisi var giderek artıyor
- 20 yılda hastane anafilaksi başvuruları %615 ↑
- Son 30 yılda çocuklarda AR ve AD 3 kat artmış

(M.L Levy 2004, Turner PJ 2015, Gupta R 2007)

RESEARCH

Paediatric food allergy trends in a community-based specialist allergy practice, 1995–2006

Raymond J Mullins

MJA 2007; 186: 618–621

- 1995-2006
- Avustralya hastane kayıtları retrospektif
- 0-5 yaş, n:1489
- AR, AD artmamış
- Astım sıklığı azalmış(%33.7, %12.5)
- N:697(%47) gıda alerjisi(%25 anafilaksi)
- 4kat ↑

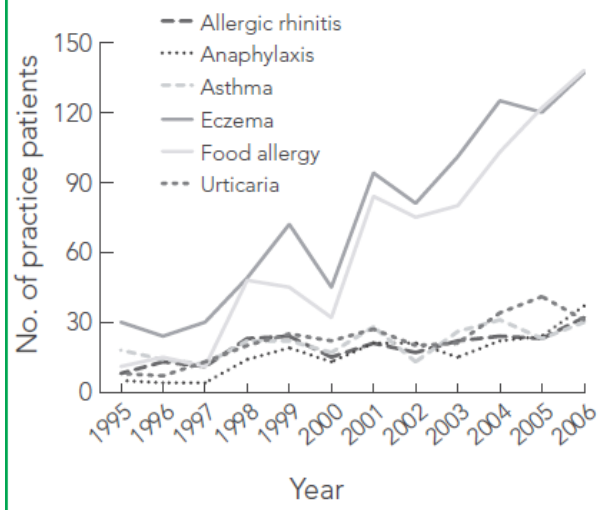
RESEARCH

Paediatric food allergy trends in a community-based specialist allergy practice, 1995–2006

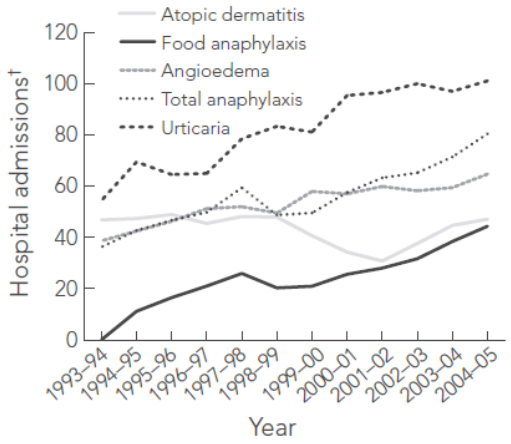
Raymond J Mullins

MJA 2007; 186: 618–621

1 Time trends in allergy-related disorders in children aged 0–5 years referred to an Australian Capital Territory private practice

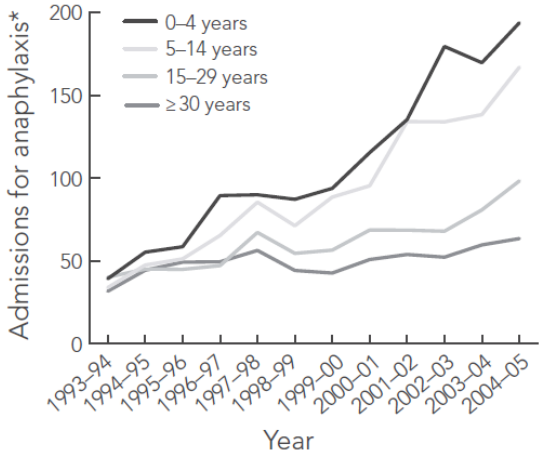


2 Trends in hospital admission rates for selected allergy-related disorders in the financial years 1993–94 to 2004–05*



* From Australian national hospital morbidity data.[9] † Rate per million population. ◆

3 Age-adjusted Australian hospital admission rates for anaphylaxis in the financial years 1993–94 to 2004–05



* Rate per million population. ◆

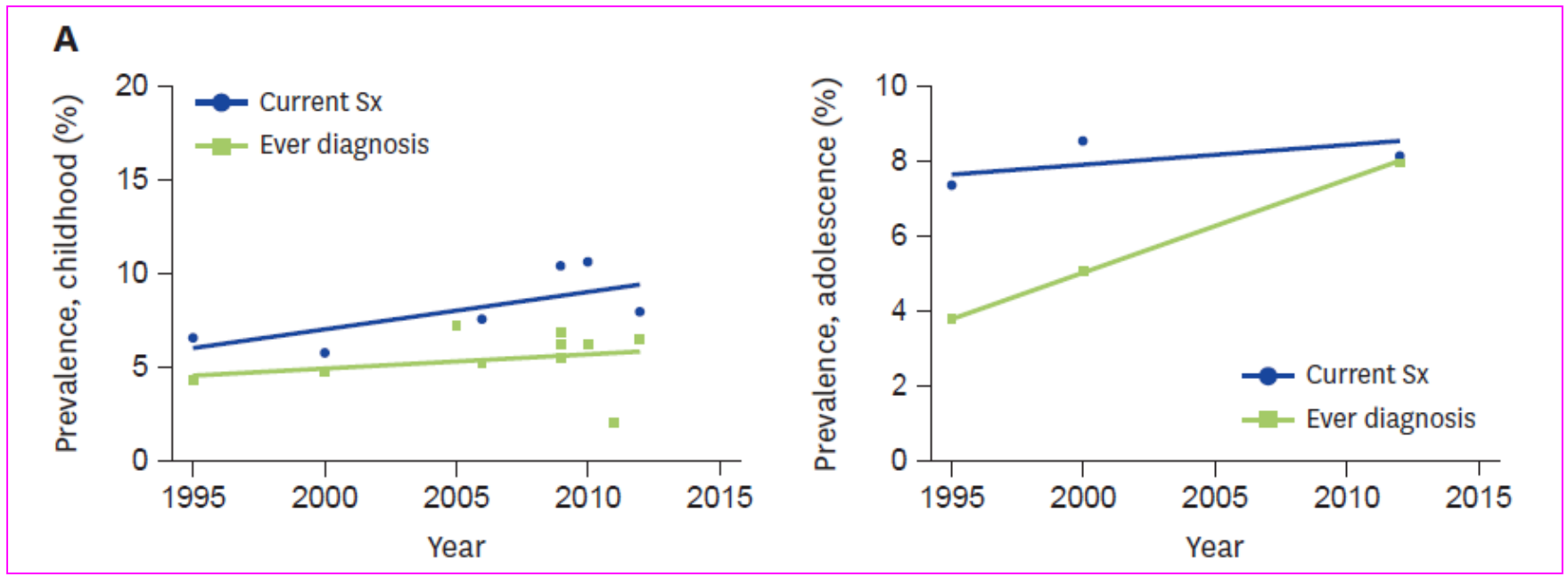
Asia Pac Allergy. 2018 Jan;8(1):e8
https://doi.org/10.5415/apallergy.2018.8.e8
pISSN 2233-8276·eISSN 2233-8268

Asia Pacific allergy

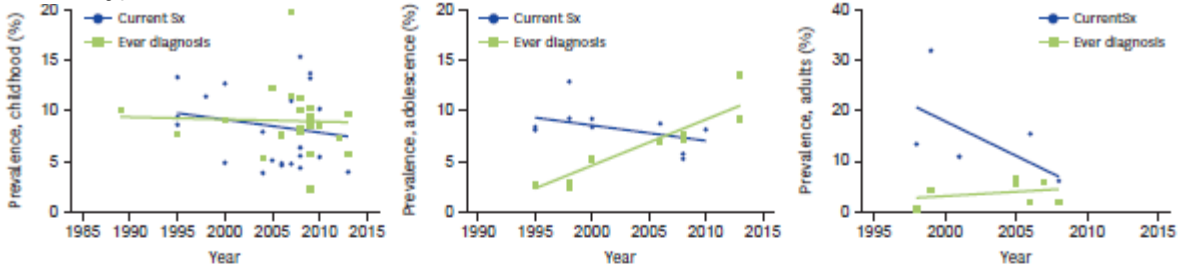
Current Review

Time trends of the prevalence of allergic diseases in Korea: A systematic literature review

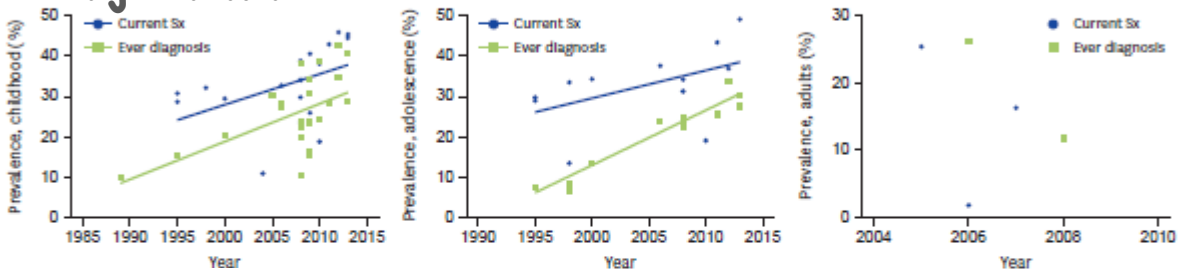
Sung-Yoon Kang,[1,2] Woo-Jung Song,[1,2] Sang-Heon Cho,[1,2] and Yoon-Seok Chang [1,2,3,*]



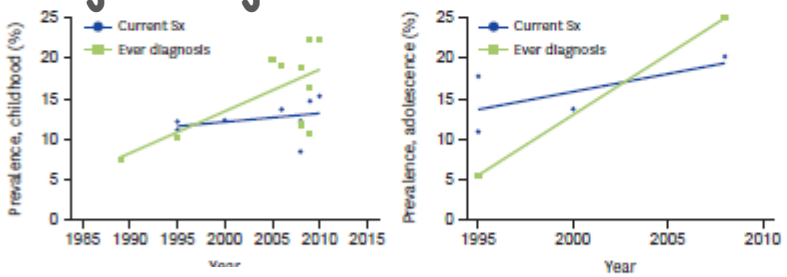
Astım



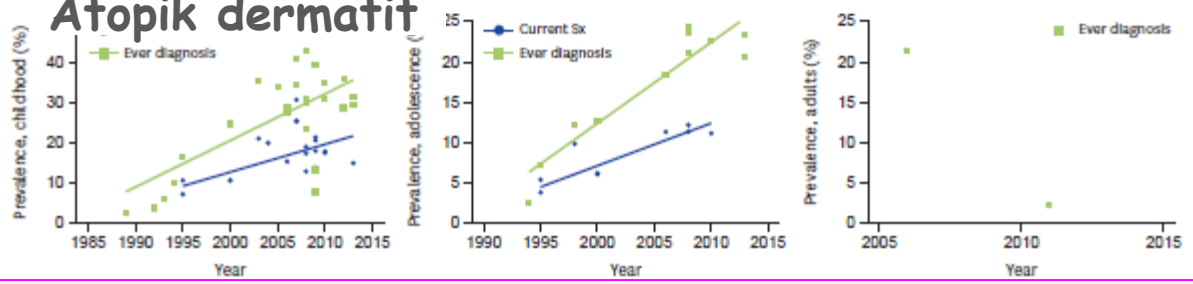
Alerjik rinit



Alerjik konjonktivit



Atopik dermatit



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Asia Pacific allergy

Current Review

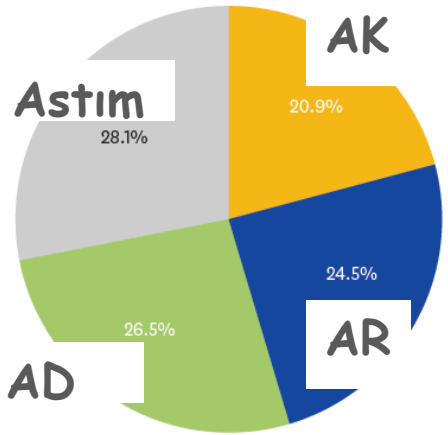
Check for updates

Time trends of the prevalence of allergic diseases in Korea: A systematic literature review

Sung-Yoon Kang,[1,2] Woo-Jung Song,[1,2] Sang-Heon Cho,[1,2] and Yoon-Seok Chang[1,2,3,*]

3346 makale

92 makale



AllergyUK

Allergy Prevalence: Useful facts and figures

- **Gıda alerjisi %10**
- Gıda reaksiyonu %20
- 11-26 milyon Avrupalı gıda alerjisi(tahmin)
- 240-550 milyon kişi alerjik/dünya
- Hayatı tehdit eden alerji çocuk(%5-8) >erişkin(%1-2)
- Gelişmiş ülkelerde gıda alerjisi çocuk %3-6
- Anne sütü alan bebeklerde %7.1
- 1/40 yerfıstığı, 1/20 yumurta alerjisi

Prescott et al. World Allergy Organization Journal 2013, 6:21
http://www.waojournal.org/content/6/1/21

WAO journal
WORLD ALLERGY ORGANIZATION

REVIEW Open Access

A global survey of changing patterns of food allergy burden in children

Susan L Prescott[1,2,3,13*], Ruby Pawankar[1,2,4], Katrina J Allen[1,2,5], Dianne E Campbell[2,6], John KH Sinn[2,7], Alessandro Fiocchi[8], Motohiro Ebisawa[9], Hugh A Sampson[10], Kirsten Beyer[11] and Bee-Wah Lee[12]

N:83 ülke

Europe / Nordic (n=34)

UK, Germany, Switzerland, Greece, Poland, Netherlands, Belgium, France, Austria, Spain, Portugal, Italy, Czech R, Russia, Bulgaria, Albania, Ukraine, Moldova, Denmark, Norway, Iceland, Sweden, Finland, Turkey, Lithuania, Slovenia, Estonia, Croatia, Romania, Hungary, Serbia, Georgia, Latvia, Belarus

Asia / Oceania (n=18)

Australia, New Zealand, China, Thailand, Taiwan, Korea, Japan, Hong Kong, Singapore, Philippines, Indonesia, Malaysia, Burma, Bangladesh, Sri Lanka, Vietnam, India, Mongolia

Americas (n=15)

Canada, USA, Colombia, Mexico, Panama, Honduras, Argentina, Uruguay, Brazil, Chile, Cuba, Peru, Venezuela, Ecuador, Paraguay

Africa (n=12)

Ghana #, Mosambique #, Tanzania #, South Africa, Morocco, Kenya, Congo #, Nigeria, Zimbabwe, Tunisia, Botswana #, Algeria

Middle East (n=10)

Israel, United Arab Emirates #, Lebanon, Iran, Egypt, Jordan, Kuwait, Azerbaijan, Afghanistan, Pakistan

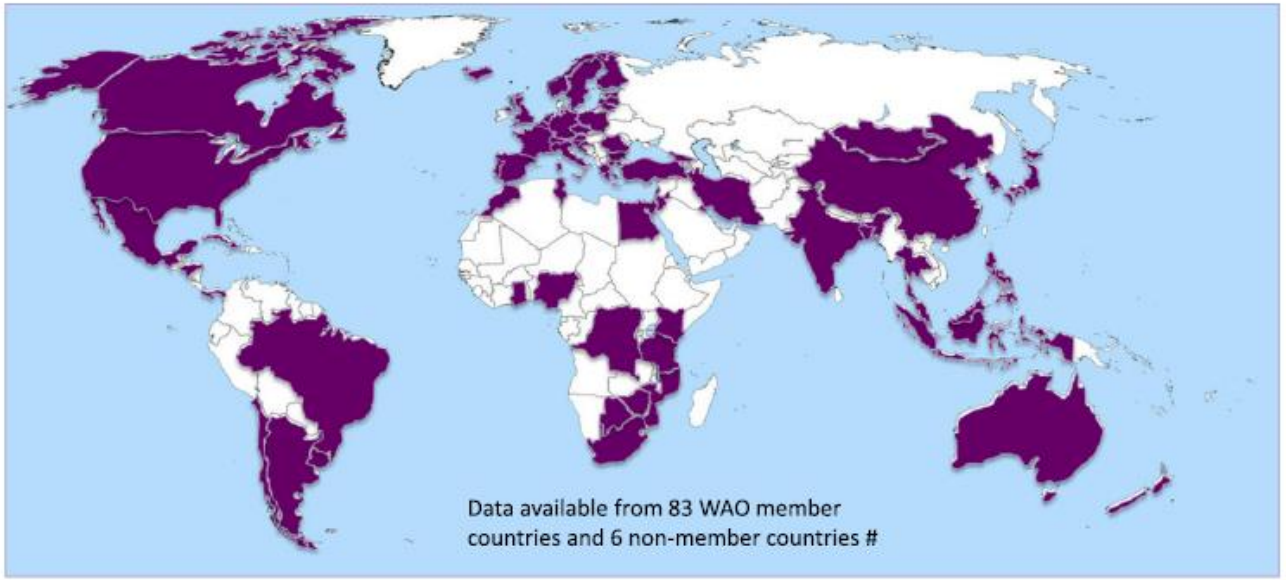
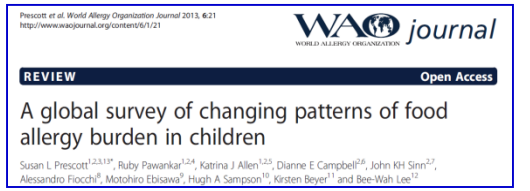


Figure 1 List and distribution of countries who participated in the survey or which had published data available on food allergy prevalence.

Yaşlara göre farklı alerjen

- <5yaş:İS, yumurta,fıstık ve deniz ürünleri en sık
- >5yaş:yerfıstığı, ağaç fıstıkları, deniz ürünleri, yumurta ve süt



Farklı bölgelerde farklı sıklıkta

- Avustralya, Yeni Zelanda ve Asya: yumurta alerjisi sık
- Amerika ve Ortadoğu ülkeleri:ISA sık
- ISA: Avrupa ülkelerinde (Yunanistan(%0) <İtalya(%0.3) <İngiltere(%1.24))

Farklı bölgelerde patogenez farklı?

- K.Amerika, Batı Avrupa, Avustralya ve Orta Doğuda IgE bağımlı
- Doğu Avrupa:Non-IgE
- Asya (Çin, Japonya, Hong Kong, Singapur) ve Doğu Avrupa: Mİxt

NCHS Data Brief ▪ No. 10 ▪ October 2008

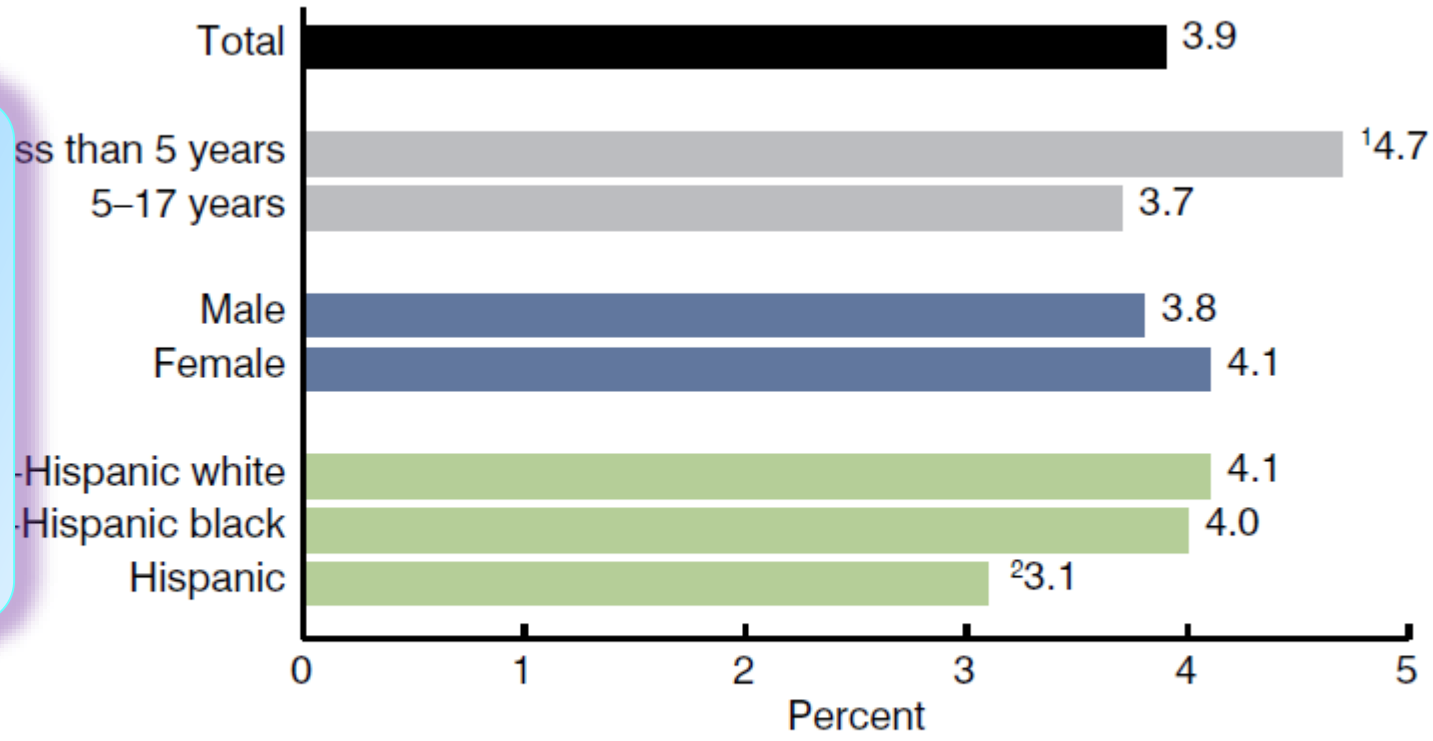
Food Allergy Among U.S. Children: Trends in Prevalence and Hospitalizations

Amy M. Branum, M.S.P.H. and Susan L. Lukacs, D.O., M.S.P.H.

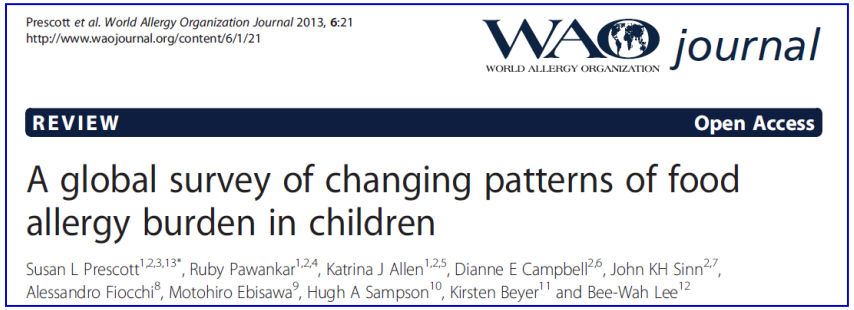
Yaş

Cins

Irk



[1]Significantly different from children aged 5–17 years.
[2]Significantly different from non-Hispanic white and non-Hispanic black children.
SOURCE: CDC/NCHS, National Health Interview Survey.



Prescott et al. World Allergy Organization Journal 2013, 6:21
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WAO journal
WORLD ALLERGY ORGANIZATION

REVIEW Open Access

A global survey of changing patterns of food allergy burden in children

Susan L Prescott[1,2,3,13*], Ruby Pawankar[1,2,4], Katrina J Allen[1,2,5], Dianne E Campbell[2,6], John KH Sinn[2,7], Alessandro Fiocchi[8], Motohiro Ebisawa[9], Hugh A Sampson[10], Kirsten Beyer[11] and Bee-Wah Lee[12]

- **Sıklık artışı farklı**
- 45 ülke(Avustralya, Çin, USA, Japonya, Kore ve Norveç)⟶ sıklık artıyor
- 9 ülke(UK, Finlandiya, Kanada)⟶ stabil
- Sıklık azalıyor diyen ülke yok

Yeni endüstrileşen ülkelerde artıyor

Temporal Trends and Racial/Ethnic Disparity in Self-reported Pediatric Food Allergy in the US

Corinne A. Keet, MD, MS [Assistant Professor],
Johns Hopkins University School of Medicine, Division of Pediatric Allergy and Immunology, and Graduate Student, Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, Baltimore, MD

Jessica H. Savage, MD, MHS [Instructor],
Brigham and Women's Hospital, Division of Rheumatology, Immunology, and Allergy, Boston, MA

Shannon Seopaul, BS [Research Assistant],

Ann Allergy Asthma Immunol. 2014 March ; 112(3): 222–229.

- n:10 090 makale, n:452 237 çocuk
- 1988-2011
-
-
- %1.2 Hispanik
- %1.0 Non-Hispanik beyaz

Gıda alerjisi ABD de en fazla non-hispanik siyahlarda artıyor

Temporal Trends and Racial/Ethnic Disparity in Self-reported Pediatric Food Allergy in the US

Corinne A. Keet, MD, MS [Assistant Professor],
Johns Hopkins University School of Medicine, Division of Pediatric Allergy and Immunology, and Graduate Student, Johns Hopkins Bloomberg School of Public Health, Department of Epidemiology, Baltimore, MD

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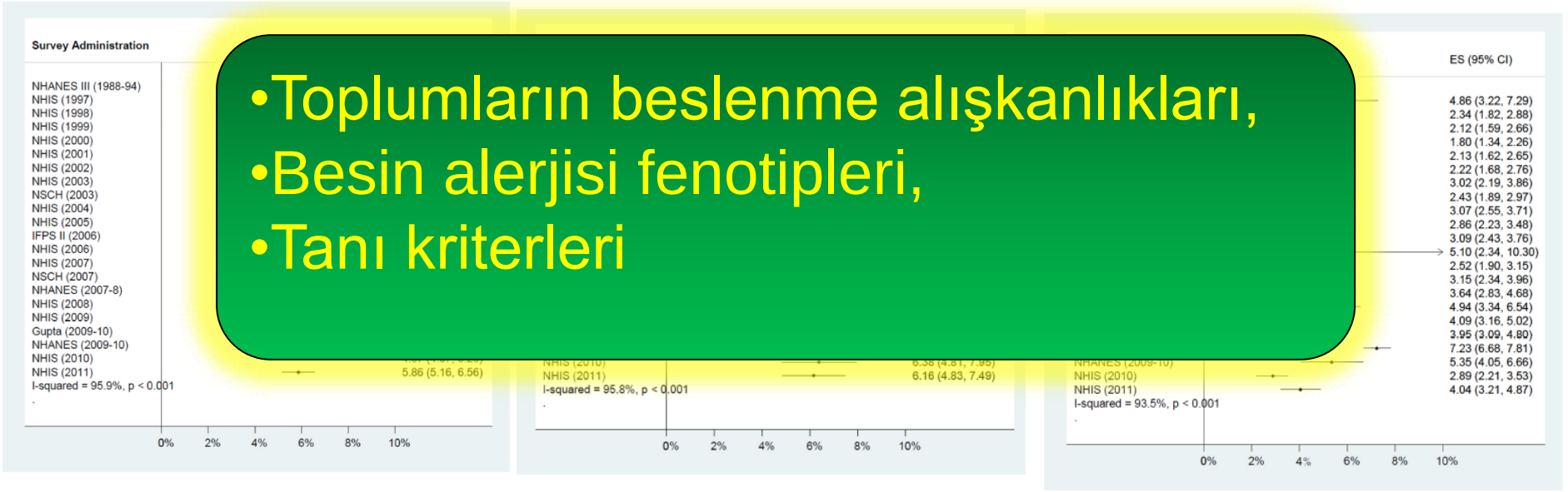
Shannon Seopaul, BS [Research Assistant],

Ann Allergy Asthma Immunol. 2014 March ; 112(3): 222–229.

Beyaz

Siyah

Hispanik



- Toplumların beslenme alışkanlıkları,
- Besin alerjisi fenotipleri,
- Tanı kriterleri

NCHS Data Brief ▪ No. 10 ▪ October 2008

Food Allergy Among U.S. Children: Trends in Prevalence and Hospitalizations

Amy M. Branum, M.S.P.H. and Susan L. Lukacs, D.O., M.S.P.H.

- Sıklıkta artış her yaş grubunda

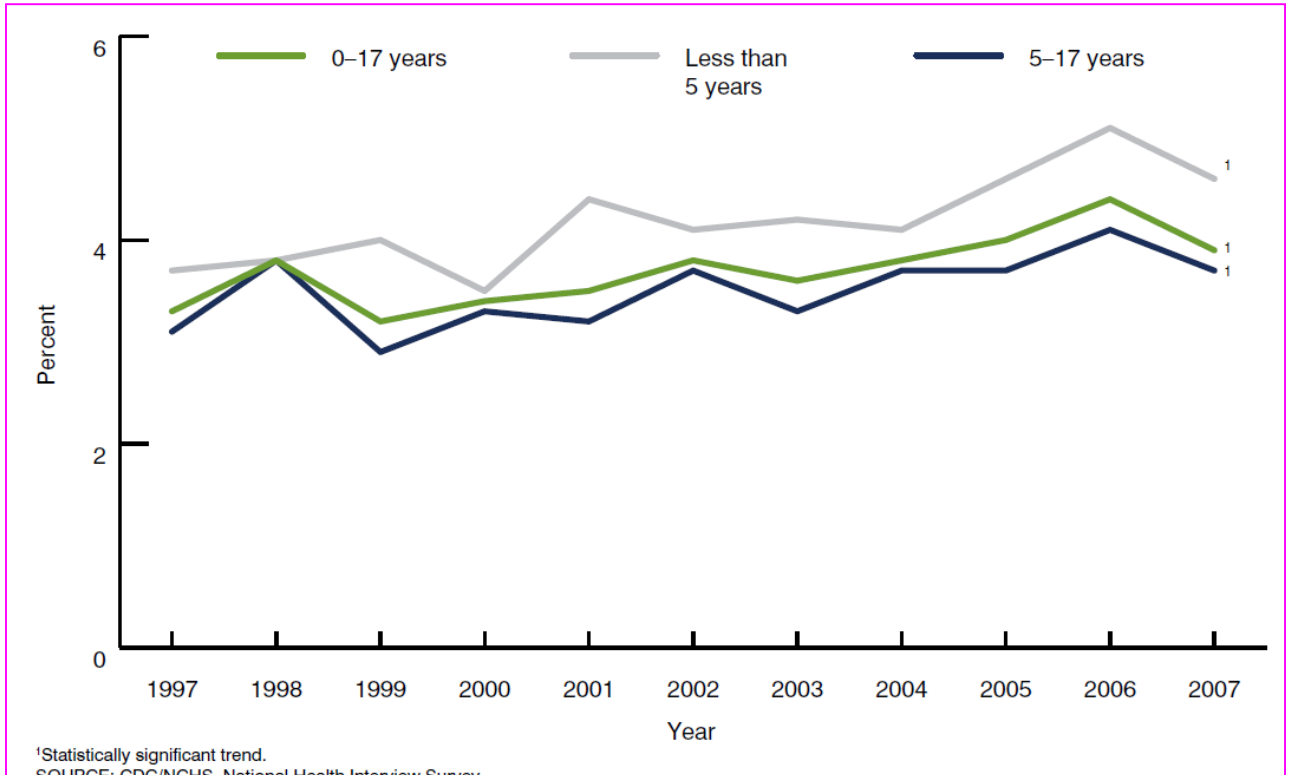


Figure 2. Percentage of children under age 18 years who had a reported food or digestive allergy in the past 12 months, by age group: United States, 1997–2007

REGULAR ARTICLE

Stability of parent-reported food allergy in six and 7-year-old children: the first 5 years of the Finnish allergy programme

Johanna Järvenpää[1], Marita Paassilta[2], Susanna Salmivesi[2], Tuire Sannisto[3], Siina Niitty[3], Matti Korppi (matti.korppi@uta.fi)[1]

1.Centre for Child Health Research, Tampere University and University Hospital, Tampere, Finland
2.Allergy Centre, Tampere University Hospital, Tampere, Finland
3.Health Services for Children and Youth,Tampere, Finland

- **2009**
- 1542 okul çocuğu(6-7
- T diya
- T leri %
- F2:>0.35: %2-9
- DPT:%0.2-2.5

- **Süt**
- **Yumurta**
- **Balık**
- **Tahıl**
- **Soya**

- **2013**
- N:1563, okul çocuğu(6-7yaş)
- Tampere, Finlandiya
- Besin alerjisi: %6.1
- Temel gıda maddeleri:%2.5

Parent-reported food allergy requiring an avoidance diet in children starting elementary school

P Kallio[1], S Salmivesi[2], H Kainulainen[3], M Paassilta[2], M Korppi (matti.korppi@uta.fi)[1]

1.Paediatric Research Centre, Tampere University and University Hospital, Tampere, Finland
2.Allergy Centre, Tampere University Hospital, Tampere, Finland
3.Tampere Department of Public Health Sciences, University of Tampere, Tampere, Finland

Table 1 Food allergies by gender in the 1542 children starting elementary school

Allergen /allergies	Boys, N = 777 (%)	Girls, N = 765 (%)	All (N = 1542)
Cow milk	14 (1.8)	9 (1.2)	23 (1.5) [0.9–2.1]**
Eggs	7 (0.9)	10 (1.3)	17 (1.1) [0.6–1.6]
Grains	7 (0.9)	8 (1.0)	15 (1.0) [0.5–1.5]
Wheat†	6 (0.8)	5 (0.7)	11 (0.7) [0.3–1.1]
Rye†	7 (0.9)	6 (0.8)	13 (0.8) [0.4–1.3]
Barley†	5 (0.6)	7 (0.9)	12 (0.8) [0.3–1.2]
Oat†	4 (0.5)	3 (0.4)	7 (0.5) [0.1–0.8]
Multi-allergy‡	3 (0.4)	2 (0.3)	5 (0.3) [0.04–0.6]
Basic food allergies§	18 (2.3)	23 (3.0)	41 (2.7) [1.9–3.5]
Soy	5 (0.6)	4 (0.5)	9 (0.6) [0.2–1.0]
Fish	8 (1.0)	5 (0.7)	13 (0.8) [0.4–1.3]
Legumes	12 (1.5)	11 (1.4)	23 (1.5) [0.9–2.1]
Nuts	20 (2.6)	28 (3.7)	48 (3.1) [2.2–4.0]
Spices¶	3 (0.4)	10 (1.3)*	13 (0.8) [0.4–1.3]
Fruits and vegetables§	49 (6.3)	41 (5.4)	90 (5.8) [4.7–7.0]

REGULAR ARTICLE

Stability of parent-reported food allergy in six and 7-year-old children: the first 5 years of the Finnish allergy programme

Johanna Järvenpää[1], Marita Paassilta[2], Susanna Salmivesi[2], Tuire Sannisto[3], Siina Niitty[3], Matti Korppi (matti.korppi@uta.fi)[1]

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3.Health Services for Children and Youth,Tampere, Finland

Acta Pædiatrica ISSN 0803-5253

Table 1 Food allergies in 2013 by gender in the 1653 children starting elementary school

Allergen/allergies	Boys n = 830 (%)	Girls n = 823 (%)	All n = 1653 (%)
Cows' milk	8 (1.0)	14 (1.7)	22 (1.3) [0.9–2.0]**
Eggs	12 (1.4)	12 (1.5)	24 (1.5) [1.0–2.1]
Grains	6 (0.7)	10 (1.2)	16 (1.0) [0.6–1.6]
Wheat	5 (0.6)	7 (0.9)	12 (0.7) [0.4–1.3]
Rye	4 (0.5)	8 (1.0)	12 (0,7) [0.4–1.3]
Barley	5 (0.6)	8 (1.0)	13 (0.8) [0.5–1.4]
Oat	3 (0.4)	3 (0.4)	6 (0.4) [0.2–0.8]
Multi-allergy	2 (0.2)	3 (0.4)	5 (0.3) [0.1–0.7]
Basic food allergies	17 (2.0)	25 (3.0)	42 (2.5) [1.9–3.4]
Soya	1 (0.1)	7 (0.9)*	8 (0.5) [0.2–1.0]
Fish	7 (0.8)	5 (0.6)	12 (0.7) [0.4–1.3]
Legumes	6 (0.7)	8 (1.0)	14 (0.8) [0.5–1.4]
Nuts	14 (1.7)	16 (1.9)	30 (1.8) [1.3–2.6]
Spices	5 (0.6)	4 (0.5)	9 (0.5) [0.3–1.0]
Fruits and vegetables	29 (3.5)	24 (2.9)	53 (3.2) [2.5–4.2]

*p = 0.038; no other significant differences between boys and girls.
**95% confidence interval.

Prevalence of self-reported food allergy in U.S. adults: 2001, 2006, and 2010

Linda Verrill, Ph.D.,[1] Richard Bruns, Ph.D.,[2] and Stefano Luccioli, M.D.[3]

Allergy Asthma Proc 36:458–467, 2015;

Gıda alerjisi

- 2001 → %9.1 (anket) → %6.5
- 2006 → %14.9(anket) → %7.6
- 2010 → %13 (anket) → %5.3
- Kadın,erkek, non-Hispanik beyaz ve siyah ırk
- 2001 ve 2010 süt, deniz ürünleri ve meyve en sık alerjen
- %15 hastane başvurusu ve %8.4 epinefrin tedavisi

İnek sütü alerjisi

- Anketle sık(Kesin tanı1/3)
- 1yaş → %1.8-7.5(tahmin)
- %2-3
- AS alıyorsa → %0.5(IgE bağımlı)
- Besin ilişkili anafilaksilerin %10-19 ISA(3. sıklıkta)

(Lifschitz C 2015, Kattan 2011)

Cow's Milk Allergy: Where have we Come from and where are we Going?

Arne Høst* and Susanne Halken

Endocrine, Metabolic & Immune Disorders - Drug Targets, 2014, *14*, 2-8

- 1970 İSA sıkl 994)
- Anne sütü ala %0.5
- n:3623 bebek 6-12ay ara ile anket : Norveç prevelans,
- 12 ay:%7.5
- 24ay:%5
- Kümülatif insidans: %11.6

Sıklık yaşlara göre değişiyor

REGULAR ARTICLE

Stability of parent-reported food allergy in six and 7-year-old children: the first 5 years of the Finnish allergy programme

Johanna Järvenpää[1], Marita Paassilta[2], Susanna Salmivesi[2], Tuire Sannisto[3], Siina Niitty[3], Matti Korppi (matti.korppi@uta.fi)[1]

1.Centre for Child Health Research, Tampere University and University Hospital, Tampere, Finland
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3.Health Services for Children and Youth,Tampere, Finland

- **2009**
- 1542 okul çocuğu(6-7yaş)
- Tampere, Finlandiya
- Temel gıda maddeleri %2.7
- F2:>0.35: %2-9
- DPT:%0.2-2.5

- **2013**
- N:1563, okul çocuğu(6-7yaş)
- Tampere, Finlandiya
- Besin alerjisi: %6.1
- Temel gıda maddeleri:%2.5

Parent-reported food allergy requiring an avoidance diet in children starting elementary school

P Kallio[1], S Salmivesi[2], H Kainulainen[3], M Paassilta[2], M Korppi (matti.korppi@uta.fi)[1]

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Grains	7 (0.9)	8 (1.0)	15 (1.0) [0.5–1.5]
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Soy	5 (0.6)	4 (0.5)	9 (0.6) [0.2–1.0]
Fish	8 (1.0)	5 (0.7)	13 (0.8) [0.4–1.3]
Legumes	12 (1.5)	11 (1.4)	23 (1.5) [0.9–2.1]
Nuts	20 (2.6)	28 (3.7)	48 (3.1) [2.2–4.0]
Spices¶	3 (0.4)	10 (1.3)*	13 (0.8) [0.4–1.3]
Fruits and vegetables§	49 (6.3)	41 (5.4)	90 (5.8) [4.7–7.0]

REGULAR ARTICLE

Stability of parent-reported food allergy in six and 7-year-old children: the first 5 years of the Finnish allergy programme

Johanna Järvenpää[1], Marita Paassilta[2], Susanna Salmivesi[2], Tuire Sannisto[3], Siina Niitty[3], Matti Korppi (matti.korppi@uta.fi)[1]

1.Centre for Child Health Research, Tampere University and University Hospital, Tampere, Finland
2.Allergy Centre, Tampere University Hospital, Tampere, Finland
3.Health Services for Children and Youth,Tampere, Finland

Acta Pædiatrica IS[illegible]803-5253

Table 1 Food allergies in 2013 by gender in the 1653 children starting [illegible]entary school

Allergen/allergies	Boys n = 830 (%)	Girls n = 823 (%)	All n = 1653 (%)
Cows' milk	8 (1.0)	14 (1.7)	22 (1.3) [0.9–2.0]**
Eggs	12 (1.4)	12 (1.5)	24 (1.5) [1.0–2.1]
Grains	6 (0.7)	10 (1.2)	16 (1.0) [0.6–1.6]
Wheat	5 (0.6)	7 (0.9)	12 (0.7) [0.4–1.3]
Rye	4 (0.5)	8 (1.0)	12 (0,7) [0.4–1.3]
Barley	5 (0.6)	8 (1.0)	13 (0.8) [0.5–1.4]
Oat	3 (0.4)	3 (0.4)	6 (0.4) [0.2–0.8]
Multi-allergy	2 (0.2)	3 (0.4)	5 (0.3) [0.1–0.7]
Basic food allergies	17 (2.0)	25 (3.0)	42 (2.5) [1.9–3.4]
Soya	1 (0.1)	7 (0.9)*	8 (0.5) [0.2–1.0]
Fish	7 (0.8)	5 (0.6)	12 (0.7) [0.4–1.3]
Legumes	6 (0.7)	8 (1.0)	14 (0.8) [0.5–1.4]
Nuts	14 (1.7)	16 (1.9)	30 (1.8) [1.3–2.6]
Spices	5 (0.6)	4 (0.5)	9 (0.5) [0.3–1.0]
Fruits and vegetables	29 (3.5)	24 (2.9)	53 (3.2) [2.5–4.2]

*p = 0.038; no other significant differences between boys and girls.
**95% confidence interval.

- Danimarka, Odensa doğum-kohort
- 1985 ve 1999
- 1985 :%2.2
- 1999:%1.0

Pediatr. Allergy Immunol, **16**, 567-573.

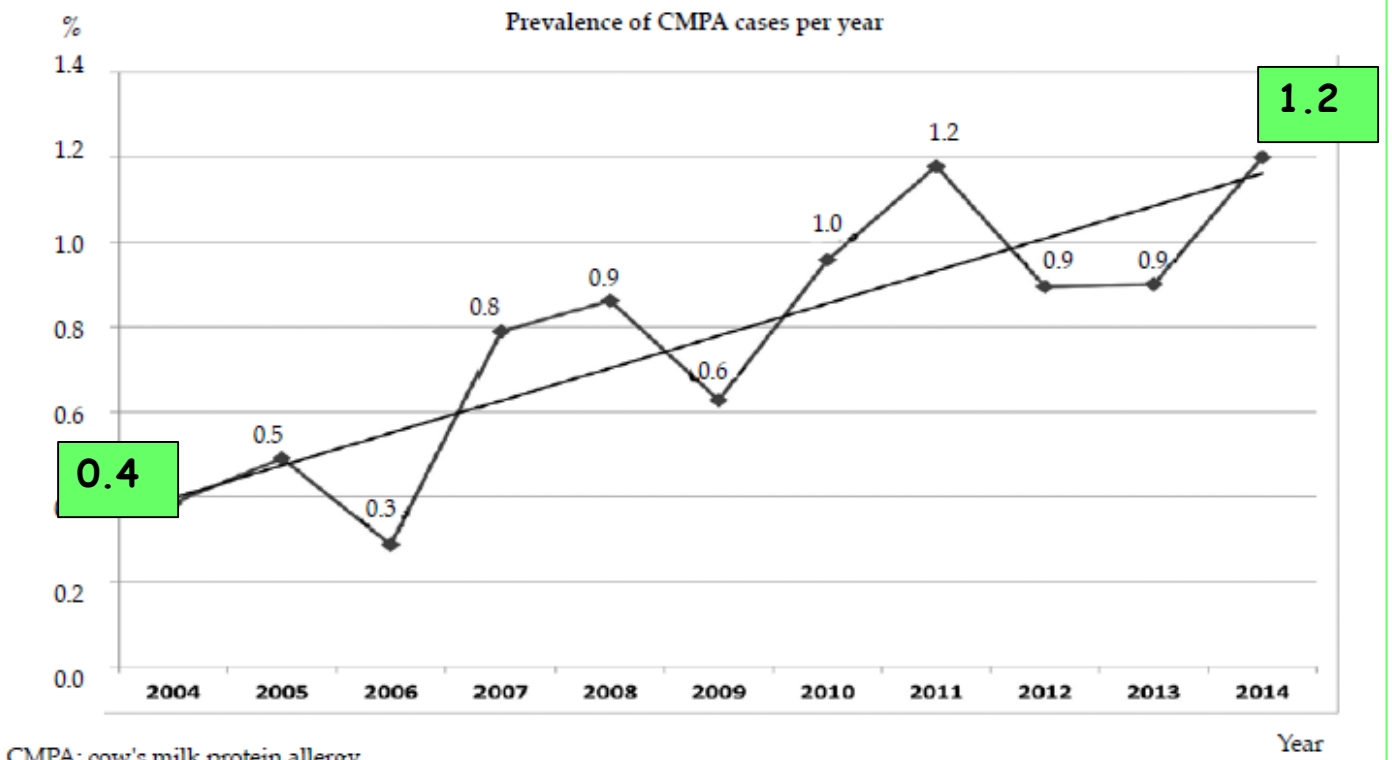
İSA
sıklığı azalmış

Prevalence of cow's milk protein allergy among children in a university community hospital

Romina Mehaudy, M.D.[a,b], Claudio A. S. Parisi, M.D.[c,b,f], Natalia Petriz, M.D.[c,b], Alfredo Eymann, M.D.[d], María B. Jaureguie, B.S.[b] and Marina Orsi, M.D.[a,b]

- 2004-2014, 14710 doğan bebek, 116 İSA(%0.8)

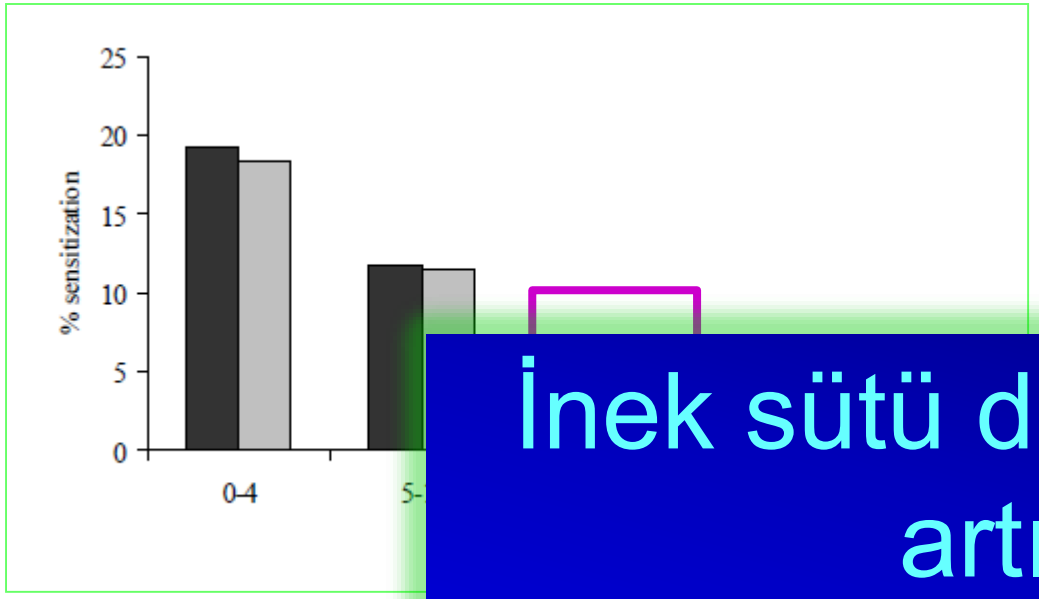
FIGURE 1. *Prevalence of cow's milk protein allergy between 2007 and 2014*



CMPA: cow's milk protein allergy.

Arch Argent Pediatr 2018;116(3):216-223

Serum bankası, süt-spIgE



rivm
National Institute for Public Health and the Environment

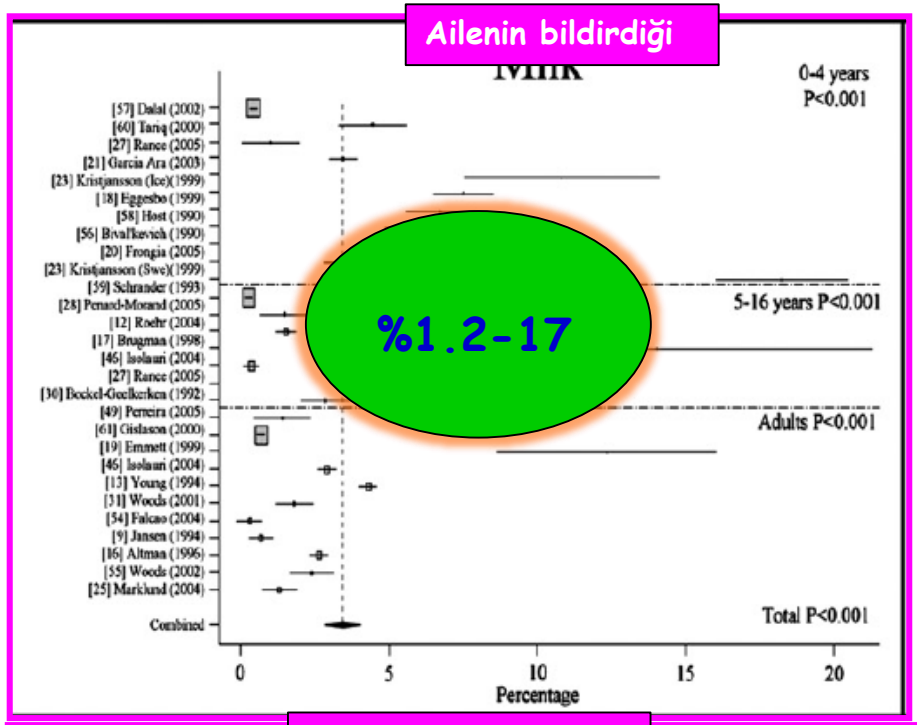
Report 340350003/2009
J. Ezendam | F.R. van der Klis | H. van Loveren

Time trends in prevalence of sensitization to milk, egg and peanut in the Netherlands

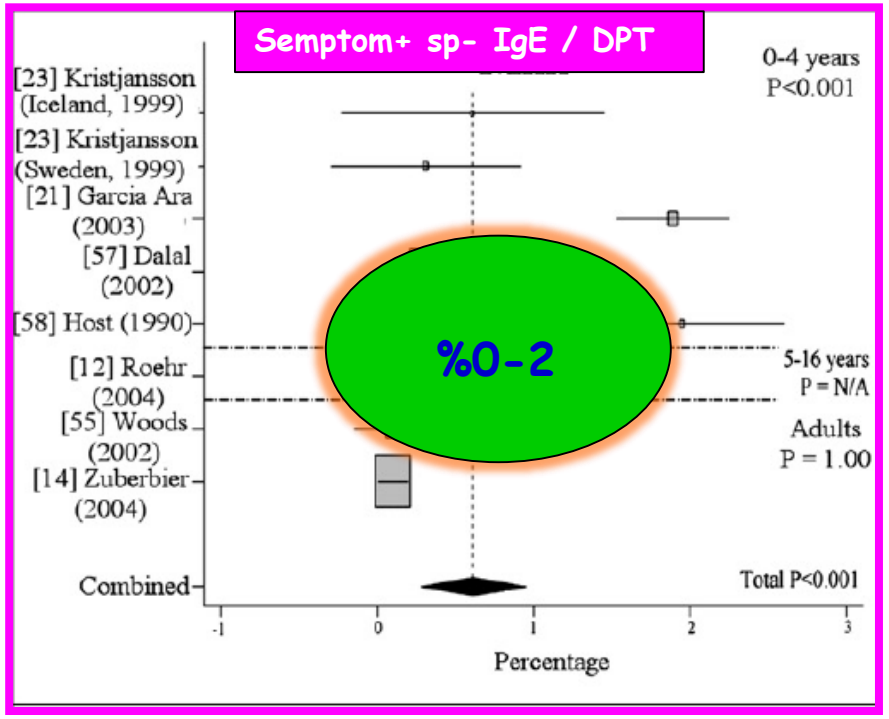
İnek sütü duyarlılığında artış yok

Age group	Cut-off (IU/ml IgE)	Period 1 (1995/1996) %	Period 1 (1995/1996) n§	Period 2 (2006/2007) %	Period 2 (2006/2007) n§
0 – 4 years	≥ 0.35	19.2%	45/235	18.4%	40/217
	≥ 1.2	3.8%	9/235	3.7%	8/217
5 – 18 years	≥ 0.35	11.8%	52/440	11.5%	47/627
	≥ 1.2	2.3%	10/440	1.3%	8/627
19 – 40 years	≥ 0.35	4.0%	22/556	4.7%	44/937
	≥ 1.2	1.3%	19/556	0.21%*	2/937
41 – 79 years	≥ 0.35	5.4%	54/1009	4.8%	31/997
	≥ 1.2	1.1%	11/1009	1.6%	16/997

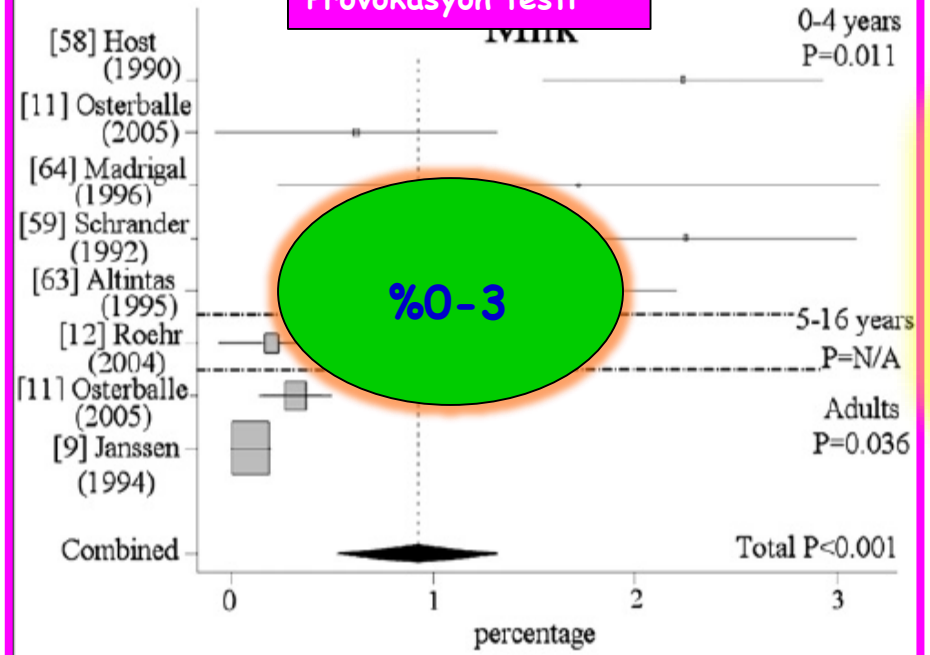
Ailenin bildirdiği



Semptom+ sp- IgE / DPT



Provokasyon testi

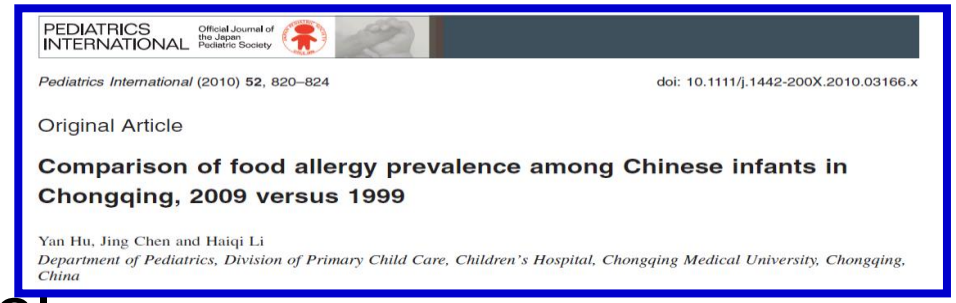


1990-2005 yılları arasında

- Sıklık farklı
- Artış yok

The prevalence of food allergy: A meta-analysis

Roberto J. Rona, FFPH,[a] Thomas Keil, MD,[b] Colin Summers, BSc,[c] David Gislason, MD,[d] Laurian Zuidmeer, PhD,[e] Eva Sodergren, PhD,[f] Sigurveig T. Sigurdardottir, MD,[g] Titia Lindner, MD,[h] Klaus Goldhahn,[b] Jorgen Dahlstrom, PhD,[f] Doreen McBride, MBA,[b] and Charlotte Madsen, DVM[i] *London and Manchester, United Kingdom, Berlin, Germany, Reykjavik and Hringbraut, Iceland, Amsterdam and Utrecht, The Netherlands, Uppsala, Sweden, and Lyngby, Denmark*



PEDIATRICS INTERNATIONAL Official Journal of the Japan Pediatric Society

Pediatrics International (2010) **52**, 820–824 doi: 10.1111/j.1442-200X.2010.03166.x

Original Article

Comparison of food allergy prevalence among Chinese infants in Chongqing, 2009 versus 1999

Yan Hu, Jing Chen and Haiqi Li
Department of Pediatrics, Division of Primary Child Care, Children's Hospital, Chongqing Medical University, Chongqing, China

- Çin,1999-2009, kesitsel
- Duyarlaşma ve OPT
- 0-24 ay
- Gıda duyarlılığı %9.9→
- Gıda alerjisi(+OPT) %3.5 →%7.7
- Süt ve yumurta sık, yer fıstığı ender

İnek sütü alerjisinde artış anlamlı değil

Table 5 Time trend of prevalence of parent-reported FA, positive SPT response and FA

	1999 study ($n = 314$)		2009 study ($n = 401$)		*P*-value
	Positive number (n)	%	Positive number (n)	%	
Reported FA	43	13.7%	67	16.7%	0.268
SPT	31	9.9%	72	18.0%	0.002
FA	11	3.5%	31	7.7%	0.017
Cow's milk allergy	5	1.6%	14	3.5%	0.117
Egg allergy	9	2.9%	20	5.0%	0.154
Multi-FA	4	1.3%	3	0.7%	0.041

FA, food allergy; SPT, skin prick tests.

J Allergy Clin Immunol 2018;141:76-8.

Prevalence of self-reported food allergy in U.S. adults: 2001, 2006, and 2010

Linda Verrill, Ph.D.,[1] Richard Bruns, Ph.D.,[2] and Stefano Luccioli, M.D.[3]

FA	srFA			Self-Reported ddFA		
	No.	Percentage of Those with Allergic Reaction (n = 574)*	Prevalence (%) in the Total Sample (N = 4568)*	No.	Percentage of Those with Allergic Reaction (n = 323)*	Prevalence (%) in total sample (N = 4568)*
Any major food allergens#	436	75	9.8	255	76	4.6
Milk and/or dairy	177	31	4.1	96	32	2
Eggs	54	8	1	36	9	0.5
Fish	50	13	1.7	41	13	0.8
Shellfish	161	28	3.6	109	26	1.6
Tree nuts	52	10	1.3	33	12	0.7
Peanuts	46	6	0.9	28	10	0.6
Wheat and/or gluten	95	10	1.3	60	14	0.9
Soy	10	1	0.1	8	2	0.1
Other foods§						
Fruit and/or vegetable	148	21	2.7	88	27	1.6
Chocolate	11	1	0.1	7	1	0.1
Food additive	11	2	0.2	7	2	0.2

Allergy Asthma Proc 36:458–467, 2015;

İSA ASTIM İÇİN RİSK Mİ?

Early life risk factors for adult asthma: ...irth cohort study of subjects at risk

..., MB ChB,[a] Richard Sporik, MD,[a] Peter Thomas, PhD,[b] ...ligate, MD,[c] and Jeremy J. Cogswell, MD[a] *Poole, Bournemouth, and ...mpton, United Kingdom*

TABLE II. Early wheeze, skin sensitization, and eczema as predictors of adult asthma

Predictors of adult asthma	Percentage with adult asthma (95% CI)	OR (95% CI)	*P* value*
Wheeze before second birthday			
No (n = 43)	30 (17-46)	–	
Yes (n = 17)	12 (1-36)	0.3 (0.03-1.7)	.19
Wheeze between second and fifth birthday			
No (n = 39)	21 (9-36)	–	
Yes (n = 17)	41 (18-67)	2.7 (0.6-11.1)	.19
Wheeze between 10th and 11th birthday			
No (n = 38)	13 (4-28)	–	
Yes (n = 17)	39 (33-82)	9.4 (2.1-43.5)	.001
Positive skin prick test response to egg, milk, or both at 3 mo, 6 mo, or 1 y			
No (n = 46)	13 (5-26)	–	
Yes (n = 13)	62 (32-86)	10.7 (2.1-55.1)	.001
Positive skin prick test response to aeroallergens at 3 mo, 6 mo, 1 y, or 2 y			
No (n = 38)	11 (3-25)	–	
Yes (n = 20)	45 (23-68)	7.0 (1.5-35.9)	.006
Eczema at <2 y			
No (n = 30)	23 (10-42)	–	
Yes (n = 30)	27 (12-46)	1.2 (0.3-4.6)	1.00

J Allergy Clin Immunol 2001;108:720-5.

NCHS Data Brief ▪ No. 10 ▪ October 2008

Food Allergy Among U.S. Children: Trends in Prevalence and Hospitalizations

Amy M. Branum, M.S.P.H. and Susan L. Lukacs, D.O., M.S.P.H.

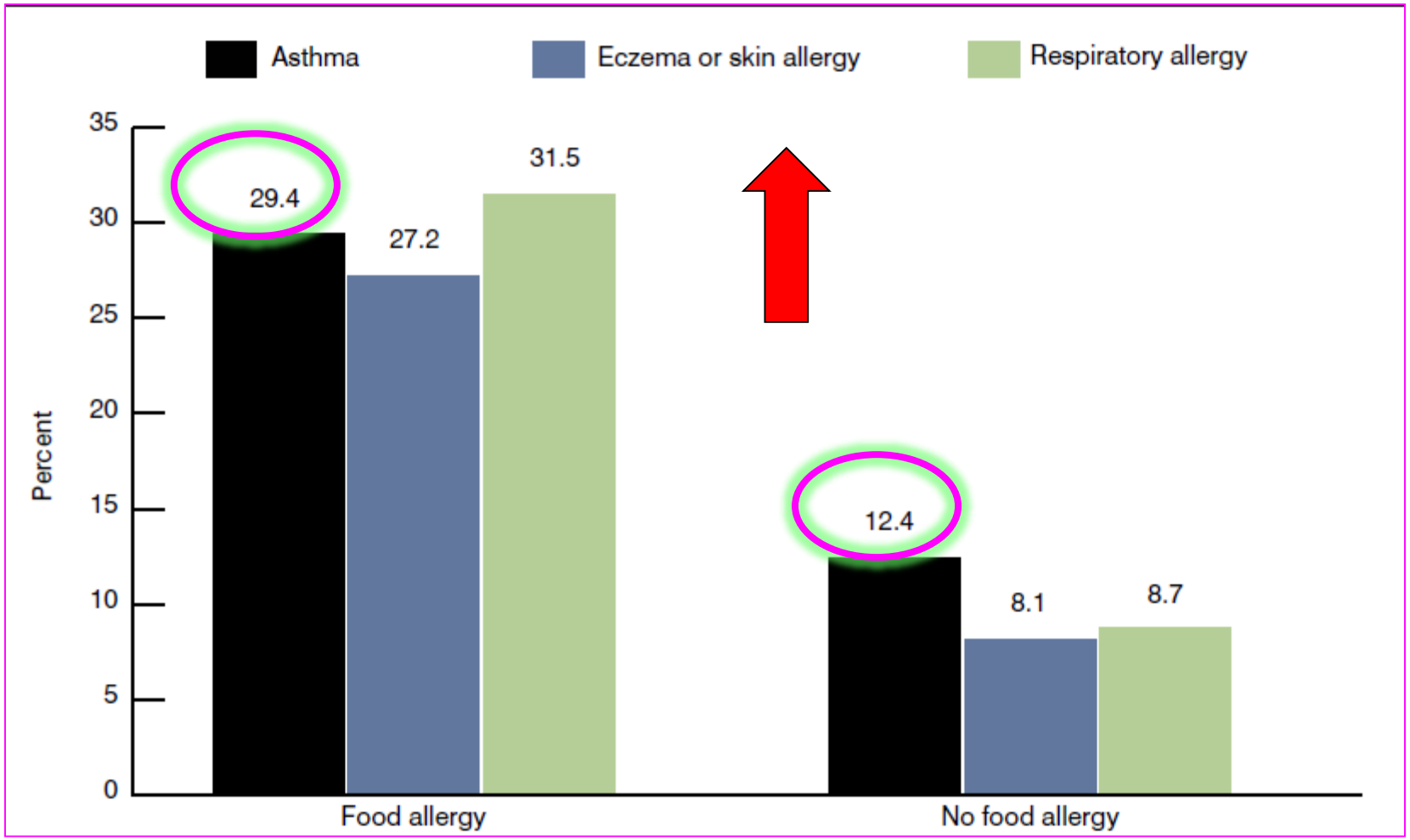
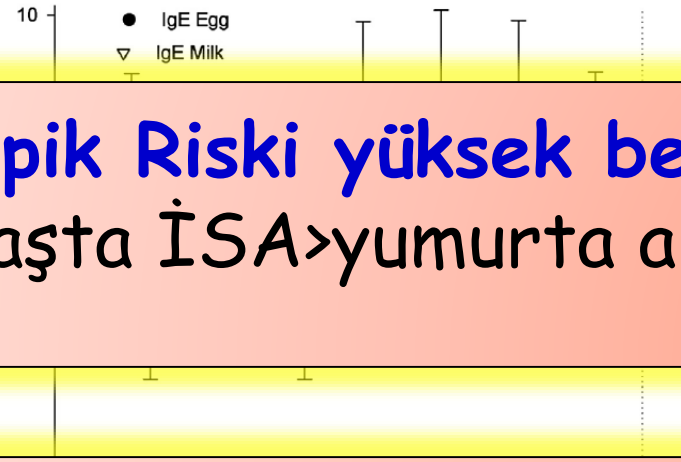


Figure 3. Percentage of children under age 18 years with asthma or other reported allergic conditions in the previous 12 months, by reported food allergy status: United States, 2007

Hen's egg, not cow's milk, sensitization in infancy is associated with asthma: 10-year follow-up of the PIAMA birth cohort

J ALLERGY CLIN IMMUNOL DECEMBER 2013



- **Atopik Riski yüksek bebekler**
- 1. yaşta İSA>yumurta alerjisi

- **İSA varlığı astım için risk değil**
- **Yumurta alerjisi;**
- ****Alerjik astımı(OR:4.8) ve**
- ****BHR(OR:2.8) arttırır**

	gen sensitization 8 y
Prevalence, n (%)	0 (39.4)
Hen's egg sensitizati	1 **(1.6-2.8)**
Cow's milk sensitiz	1 (0.8-1.4)
Atopy 1 y, OR (95%	3 (1.0-1.7)

Food allergy is an independent risk factor for decreased lung function in children with asthma

Michael G Sherenian MD , Anne M Singh MD ,
Lester Arguelles PhD , Lauren Balmert PhD , Deanna Caruso MS ,
Xiaobin Wang MD, MPH, Sc.D , Jacqueline Pongracic MD ,
Rajesh Kumar MD, MS

- n:1068, Chicago Food Allergy Study
- n:403(%38) gıda alerjisi
- n:240 tek, n:163 çoklu gıda alerjisi
- n:417(%39) astım

Food allergy is an independent risk factor for decreased lung function in children with asthma

Michael G Sherenian MD , Anne M Singh MD , Lester Arguelles PhD , Lauren Balmert PhD , Deanna Caruso MS , Xiaobin Wang MD, MPH, Sc.D , Jacqueline Pongracic MD , Rajesh Kumar MD, MS

	No Food Allergy (n=665)	1 Food (n=240)	2+ Foods (n=163)	P-value
Age (yrs) Mean ± SD	10.0 ± 3.3	9.8 ± 3.4	9.9 ± 3.2	0.5103
Total IgE Mean ± SD	153.6 ± 361.6	430.0 ± 473.0	845.1 ± 1416.4	<0.0001
Asthma n(%)				
Yes	174 (26.2)	122 (50.8)	121 (74.2)	<0.0001
No	489 (73.5)	117 (48.9)	42 (25.8)	
Missing	2 (0.3)	1 (0.4)	0 (0.0)	
Length of asthma (months) median (IQR)	0.0 (0.0, 3.0)	0.0 (0.0, 30.0)	24.0 (0.0, 48.0)	<0.0001
Smoke exposure n(%)				
Yes	134 (20.2)	29 (12.1)	19 (11.7)	0.0007
No	531 (79.9)	211 (87.9)	144 (88.3)	
Parental asthma n(%)				
Yes	177 (26.6)	72 (30.0)	58 (35.6)	0.0275
No	488 (73.4)	168 (70.0)	105 (64.4)	
Aeroallergen Sensitization	130 (19.6)	54 (22.5)	26 (16.0)	<0.0001
Yes	213 (32.0)	14 (5.8)	12 (7.4)	
No	322 (48.4)	172 (71.7)	125 (76.7)	
Missing				

Annals of Allergy, Asthma Immunology

Food Allergy (number)	FEV_1 %-predicted		FVC %-predicted		FEV_1/FVC		FEF_{25-75} %-predicted	
	Estimate (SE)	P-value	Estimate (SE)	P-value	Estimate (SE)	P-value	Estimate (SE)	P-value
None	Ref		Ref		Ref		Ref	
1	-0.4383 (2.0799)	0.8339	-0.4938 (2.0360)	0.8093	-0.3952 (2.0705)	0.8494	-1.3284 (3.4482)	0.7016
2+	-0.5623 (2.1540)	0.7951	-3.4295 (2.1094)	0.1099	-0.5544 (2.1443)	0.7970	-7.4551 (3.5707)	0.0416

İnek sütü alerjisi ve yumurta alerjisi olan bebekler

Astım gelişmeden önce

- FEV1 ↓
- BHR ↑

ORIGINAL ARTICLE

AIRWAY DISEASES

Multiple atopy phenotypes … associations with asthma: similar findings fr… h cohorts

N. Lazic[1,*], G. Roberts[2,3,*], A. Custovic[4,*], D. … ishop[1], J. Winn[1], J. A. Curtin[4], S. Hasan Arshad[2,5,†] & A. Simpson[4,†]

Ağır ISA duyarlılığı astım için risktir

spIgE

Allergy 2013; **68**: 764–770.

CLINICAL PERSPECTIVES

Food allergy: is prevalence increasing?

Mimi L. K. Tang[1,2,3] and Raymond J. Mullins[4,5]

[1]Allergy and Immune Disorders, Murdoch Children's Research Institute, [2]Department of Paediatrics, University of Melbourne, and [3]Department of Allergy and Immunology, Royal Children's Hospital, Melbourne, Victoria, and [4]John James Medical Centre, and [5]ANU Medical School, Australian National University, Canberra, Australian Capital Territory, Australia

- 2007, **ABD**, food allergy+an
- Direkt maliyet→225 mily
- İndirekt maliyet →115 mi
- İlave maliyet → 4184$
- **Avrupa**
- Çocuk →3961€
- Adölesan → 4792 €(anafilaksi varsa↑↑)

21.8 milyar $

CLINICAL PERSPECTIVES

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- Avustralya

Gıda alerjisi mali yükü fazla

Hospital an
$4.6 milli
Adrenaline
Internati
those with more severe disease.
$4.67 million private purchase†
Infant hypoallergenic formulae
$12.3 million: ~44 000 prescriptions
Other costs (no Australian data available)
Emergency rooms costs
Other medication and comorbidity
General practitioner/specialist visits

Economic cost of food allergy/anaphylaxis in Australia 2015.

CLINICAL PERSPECTIVES

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- Uluslararası Alerji **önleme rehberi**
- ABD, Kanada, UK, Avrupa ve Avustralya

➢ Yumurta ve yerfıstığı dahil alerjenik gıdalar 4-6 ay arasında tattırılmalı(AS alsa bile)

➢ En az 6ay anne sütü

➢ AS yoksa hidrolize mama vermeye gerek yok (ASCIA rehberi)

CLINICAL PERSPECTIVES

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- IgE-bağımlı gıda alerjisi için uzun süreli, güvenli etkili bir tedavi?
- **Oral immunoterapi?**
- Desensitizasyon?Tolerans?
- Tolerans %30
- İmmun modifiye edici adjuvanların eklenmesi
- Yerfıstığı OIT Probiotik etkisi (PPOIT)
- %82 tolerans

CLINICAL PERSPECTIVES

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- OIT yan etki (%10-15 anafilaksi, %3eozinofilik özefajit)
- İmmun modülatuvar eklenmesi (Omalizumab ve Ketotifen) yan etki azaltır
- Epikutan İT etki iyi, doz düşük


Ne diyo?
Ölüm, firavunun huzurunu bozan herkesi kanatlarıyla yokedecektir...
Bu piramitten 10 tane yapıp arkadaşlarına göndermezsen, sonsuza kadar lanetleneceksin.
Erdil Yaşaroğlu
KOMİKAZE.NET

- Geçen 20-30 yılda bildirilen astım ve alerjik rinit ve diğer alerjik hastalıklardaki sıklık artışı
- Dünyada gıda alerjisi prevalansındaki yansıması ‘’**alerji epidemisinin ikinci dalgası**’’ olarak isimlendiriliyor
- **Gözlemler ile doğru ama gerçek sıklık ne?**
- İnek sütü alerjisi yeni bilinmeye başlanmış bir alerjik hastalık
- Bilimsel çalışmalar 1930’lu yıllardan sonra birikmeye başlamıştır.

- 20. yy başlarında inek sütü ile ilişkilendirilen yan etkiler çoğunlukla *diyare ve gelişme geriliği* olarak tanımlanırken daha sonra süt protein sindiriminde zorluk olduğu şeklinde yorumlanmış
- 1905 yılında inek sütüne bağlı bir anafilaksi olgusu yayımlanmıştır.,
- 1907 yılında başarılı bir desensitizasyon olgusu tanımlanırken,
- 1921 yılında süt ile ilişkilendirilen ürtiker saptanmıştır.

- 1930-1940 yılları arasında nadir bir hastalık olarak bildirilirken
- ***Anne sütünün alımının azalması***
- ***Kutu mamaların bebek beslenmesine girmesi sorumlu*** tutulmuş
- Stokholmde 1948 yılında inek sütü alerjisi sıklığı 1/7500 → 1979 yılında 1/200 oranı ile **belirgin artışa** işaret edilmiştir.
- 1957-1979 yılları arasında yayınlanan ilk çalışmalarda sağlıklı bebeklerde sıklık %0.5-1.9 olarak bildirilmiştir.

- 1950 yıllarında önce İSA tanısı nadiren akla gelirken
- 1970'li yıllardan sonra tanısal kriterlerin belirlenmesi ve bu konudaki çalışmaların artması ile sıklık %1-7.5 gibi geniş bir aralıkta bildirilmiştir.
- Daha sonra diğer gıda alerjilerinde olduğu gibi süt alerjisinde de farklı ülkeler ve bölgelerden sıklık çalışmaları yapılmıştır.

- İnek sütü alerjisindeki sıklık artışına 1981 de Savilahti B. tekrar dikkat çekmiş daha sonra farklı ülkelerde sıklık artış çalışmaları artmıştır
- Son yıllarda yeni tanı ve tedavi yöntemleri İSA'nin bilinirliğini daha arttırmıştır.
- İnek sütü ile ilişkili beklenmeyen etkilerin **alerjik veya non-alerjik** olarak sınıflandırılması, alerjik olanların **IgE bağımlı ve non-IgE bağımlı** olarak sınıflandırılması önemli çalışmaları çeşitlendirmiş

- Çalışmaların çoğunda bildirilen sıklık oranları oldukça farklı
- **Farklı ülkelerden, farklı yaş gruplarında, farklı yöntemlerle yapılan çalışmalar bu değişkenliğin nedenidir**
- Küçük çocuklarda büyüklere göre ve Kuzey Avrupa ülkelerinde diğer bölgelere göre sıklığın yüksek olduğu bildirilmiştir.
- **Yöntem** de önemli; Ankete dayalı çalışmalarda sıklık yüksek (%6-8)
- Laboratuvar testleri ile duyarlaşma ve gıda yükleme testleri ve klinik bulgular ile yapılmasında oranlar düşüyor(%0.5-2)

- İnek sütü alerjisi genellikle 0-6 ayda başlayan ve **tolerans** gelişimi yüksek bir gıda alerjisi olduğundan yaş gruplarına göre de sıklık çalışmalarının karşılaştırılması gerekir.
- Ülkeler ve çoğrafi bölgelerde sıklık açısından belirgin farklılıklar göstermektedir.
- Yumurta ile benzer şekilde İngiltere, ABD ve Avustralya inek sütü alerjisinin en sık olduğu ülkelerdir. Asya'da(ortadoğu) da oranlar yüksektir.
- Kuzey Amerika, Batı Avrupa ve Orta Doğu ülkelerinde Ig-E bağımlı, Doğu Avrupa ülkelerinde IgE mixt ve Uzakdoğu Asya ve Doğu Avrupa ülkelerinde IgE bağımlı olmayan gıda alerjileri sıktır.

- Avustralya, Çin, ABD, Japonya, Kore ve Norveç' te yıllar içinde inek sütü alerjisinin arttığı belirtilirken,
- İngiltere, Finlandiya, Kanada çalışmalarında sıklığın sabit kaldığı
- bazı küçük çalışmalarda da düşme olduğu vurgulanmıştır.

- İnek sütü alerjisi gibi yaşlara, ülkelere, bölgeler ve ırklara göre sıklığı değişebilen bir hastalıkta sıklığın her ne kadar arttığı düşünülse bile
- ISAAC gibi, aynı yöntemle, aynı yaşlarda, farklı bölgelerde yapılan eş zamanlı çalışmalar bize bu sorunun yanıtını tam olarak verebilecektir.

teşekkürler