



XXX CONGRESSO NAZIONALE

SIAAIC

Società Italiana di Allergologia,
Asma ed Immunologia Clinica



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Update su anti-istaminici : efficacia e profili di tollerabilità

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Fatal consequence of allergic rhinitis

To the Editor:

Although it is accepted that allergic rhinitis significantly affects quality of life, it can also have tragic consequences. Our patient was a 43-year-old woman who was referred for allergy evaluation. Eight months before the consult, she had a sneezing episode with closing of her eyes while driving at 40 miles per hour with her daughter and crashed into another vehicle, killing the other driver. She sustained ankle and foot fractures.

In this case the patient had unrecognized and untreated allergic rhinitis confirmed by mean of skin testing. In our area many allergists have anecdotal reports of accidents or near accidents caused by sneezing while driving. We are reporting this case to highlight the need to recognize and warn patients of potentially very serious consequences of uncontrolled allergic rhinitis.

Sheldon L. Spector, MD^{a,b}

Ricardo A. Tan, MD^a

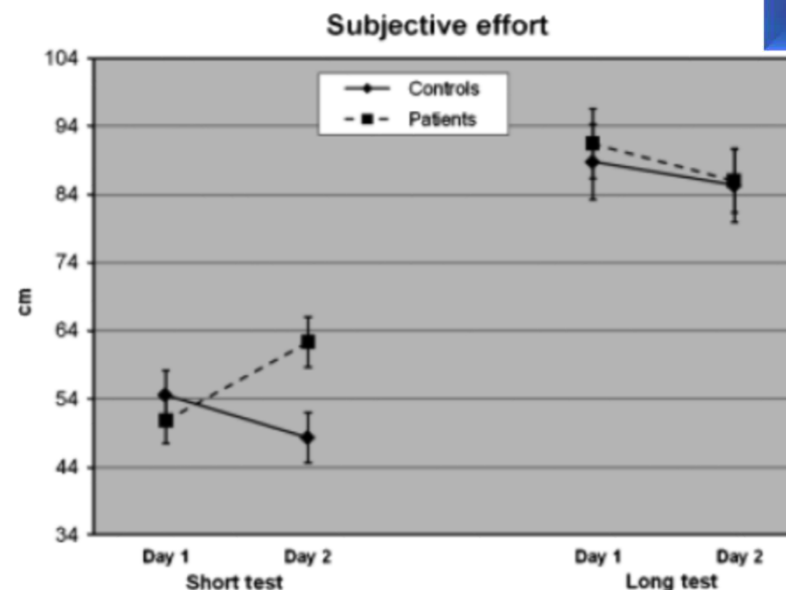
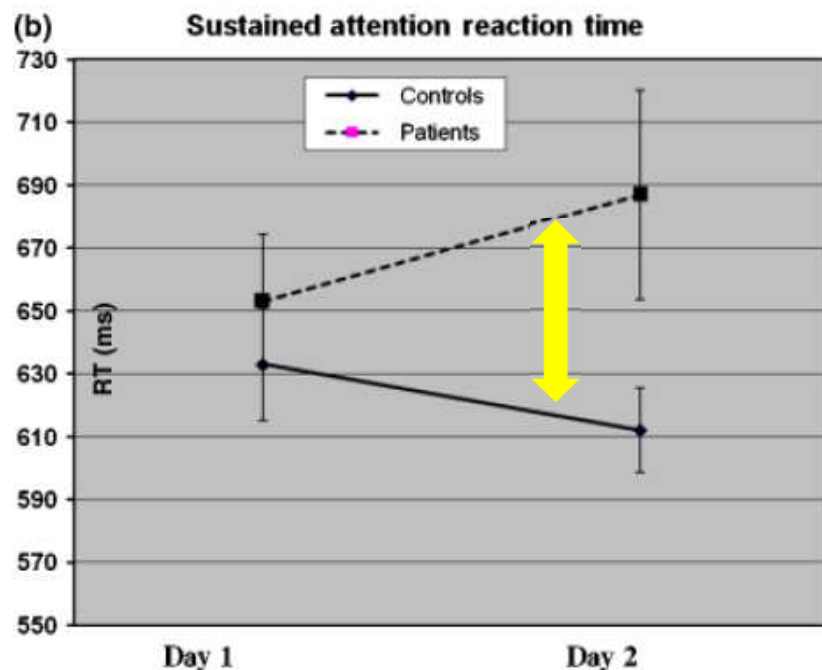
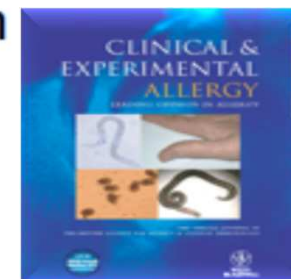


2010

Disturbed cognitive functions after nasal provocation in patients with seasonal allergic rhinitis

I. Hartgerink-Lutgens*, A. Vermeeren†, E. Vuurman†‡ and B. Kremer*

2009

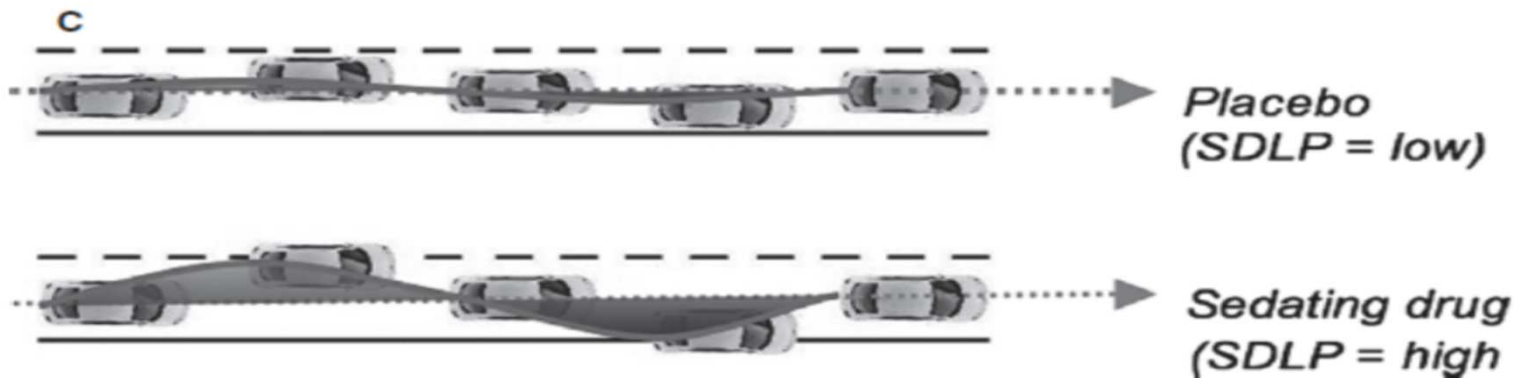
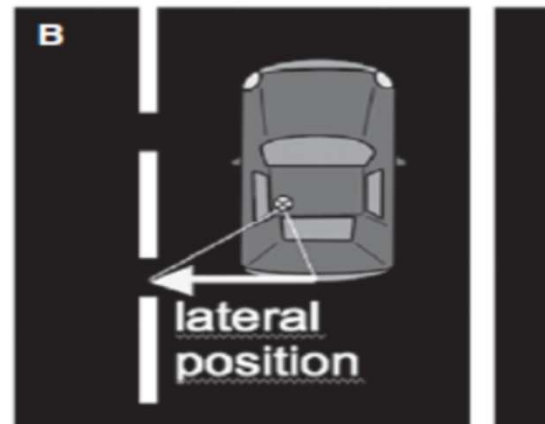


Results Sustained but not short cognitive performance was impaired in patients after NP. Patients showed an increased effort on short cognitive tests.

Conclusion SAR patients suffer from cognitive performance decrements that can be compensated by additional mental effort for short tasks only.

Allergic rhinitis is a risk factor for traffic safety

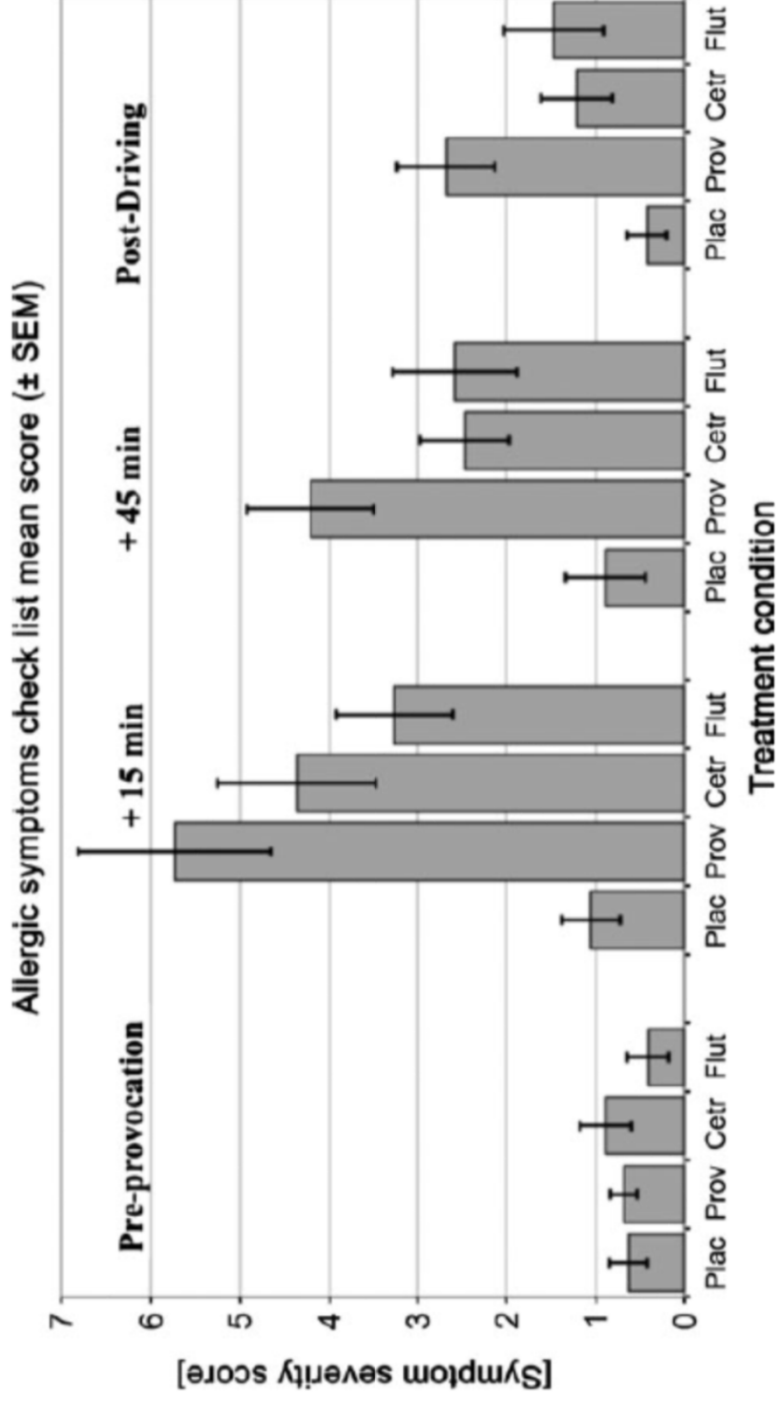
E. F. P. M. Vuurman¹, L. L. Vuurman², I. Lutgens³ & B. Kremer⁴



2015

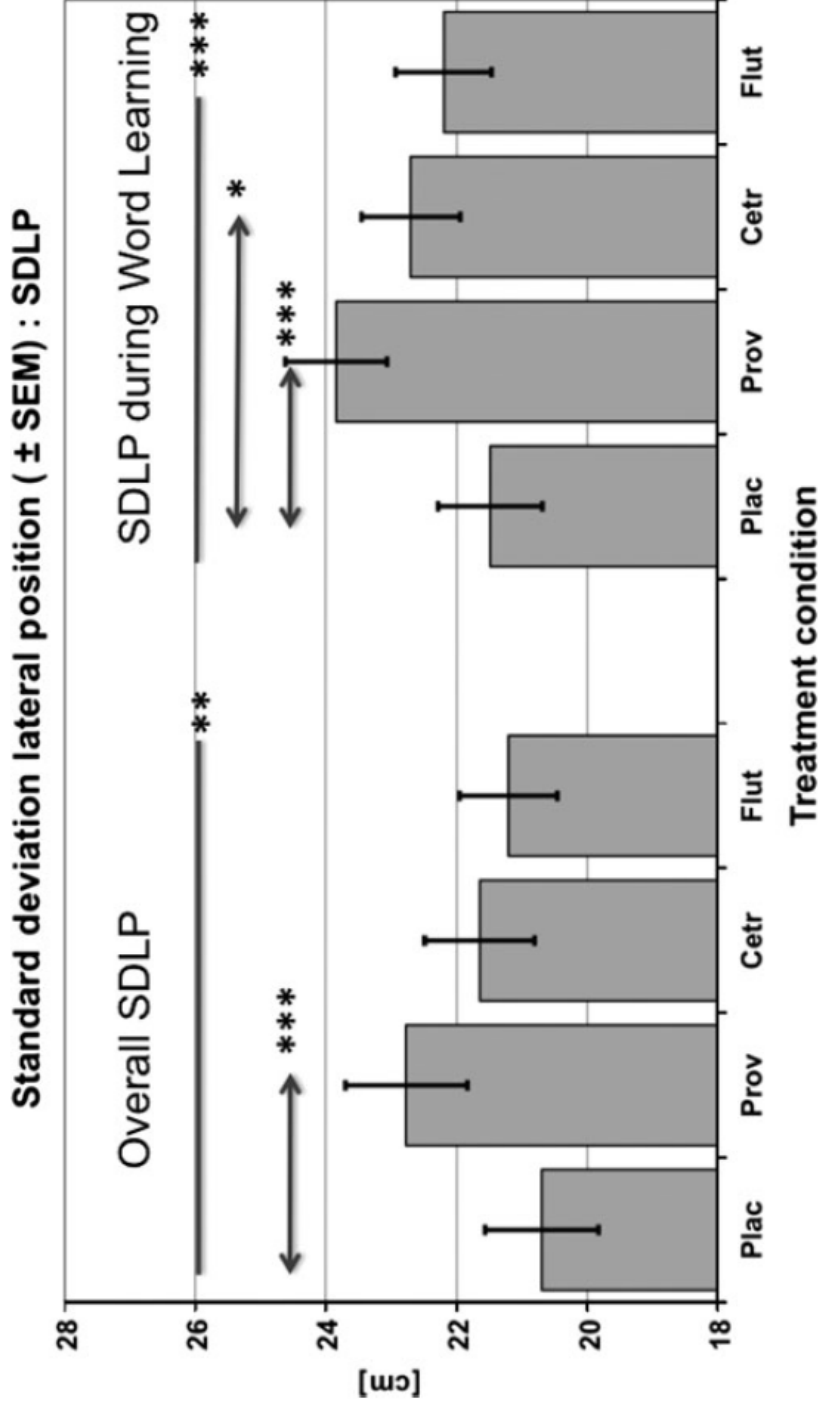
Allergic rhinitis is a risk factor for traffic safety

E. F. P. M. Vuurman¹, L. L. Vuurman², J. Lutgens³ & B. Kremer⁴



Allergic rhinitis is a risk factor for traffic safety

E. F. P. M. Vuurman¹, L. L. Vuurman², J. Lutgens³ & B. Kremer⁴



Allergic Rhinitis Increases the Risk of Driving Accidents

- ✓ 3.600 subjects with AR were evaluated, with EPWOTRH and KSS score in a GP setting
- ✓ 30.3% of subjects had moderate or severe drowsiness
- ✓ 24.4% were at high risk of having an accident
- ✓ Patient in the cluster with more severe disease described that AR impaired their driving ability in 85% of cases
- ✓ In this cluster 26% had no the right reflex in some situation and 12.4% made unusual driving error and 15% failed asleep for a fraction of a second
- ✓ 23.7% had needed to stop on the edge of the road



Demoli et al, in press

The prevalence of drugs and alcohol found in road traffic fatalities. A comparative study of victims
 Elliot et al. Science Justice 2009; 54 : 342

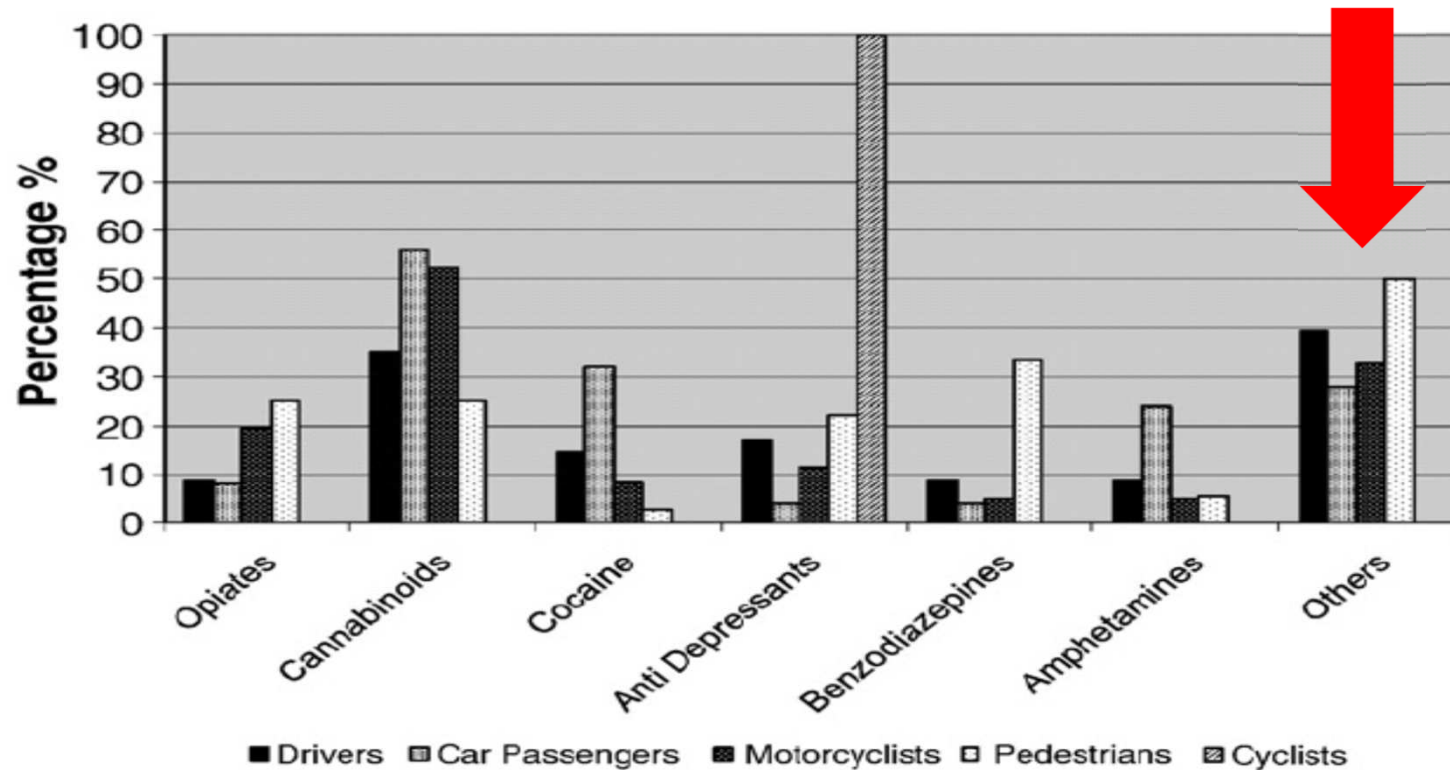


Fig. 2. Percentage frequency of drug types detected in the victim groups.



Disease severity impairs sleep quality in allergic rhinitis (The SOMNIAAR study)

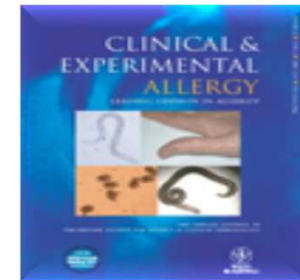
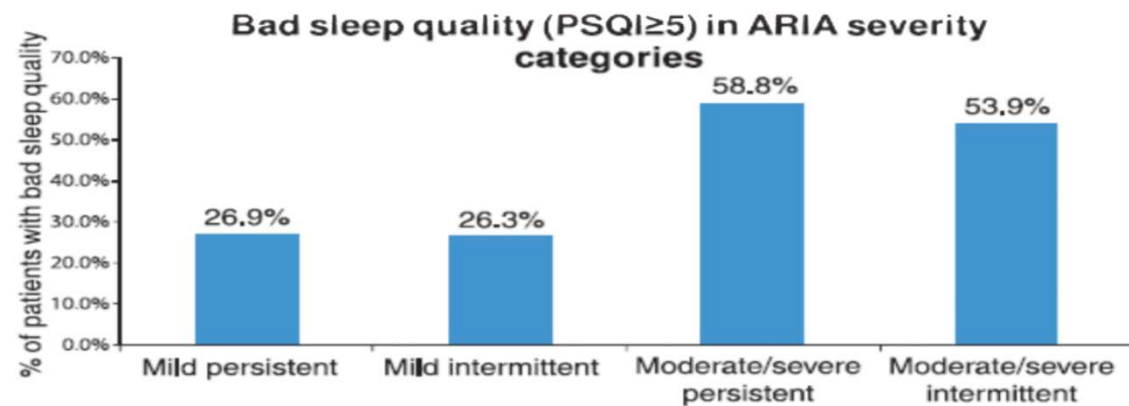
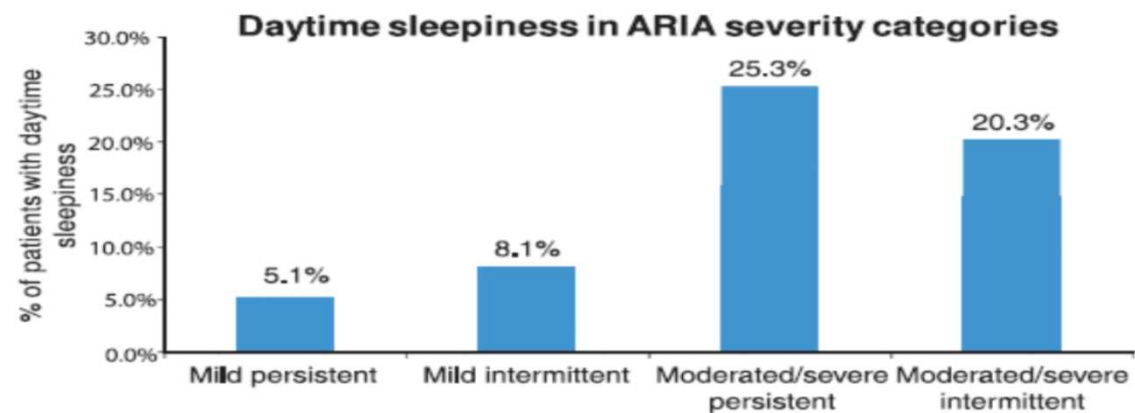


Fig. 2. Bad sleep quality (PSQI \geq 5) in ARIA severity categories.

Colas et al, 2012





In collaboration with the World Health Organisation
Aggiornamento Italia 2009

Evolution of Oral Antihistamines: Timeline

First antihistamine compound reported by Bovet (*N.P. 1957*)
Pasteur Institute, Paris 1930s
First antihistamine used in man patented in France in 1941
by Rhone Poulenc company

First-generation

Second-generation

Newer agents

<1970

Hydroxyzine
Diphenhydramine
Chlorpheniramine

Terfenadine
1979

1980s

Cetirizine
1987

Loratadine
1987

Ebastine
1992

1990s

Fexofenadine
1995

Desloratadine
2002

Levocetirizine
2002

Rupatadine
2007

2000+

Bilastina
2010

Evolution of Oral Antihistamines: Timeline

First-generation

Second-generation

Newer agents



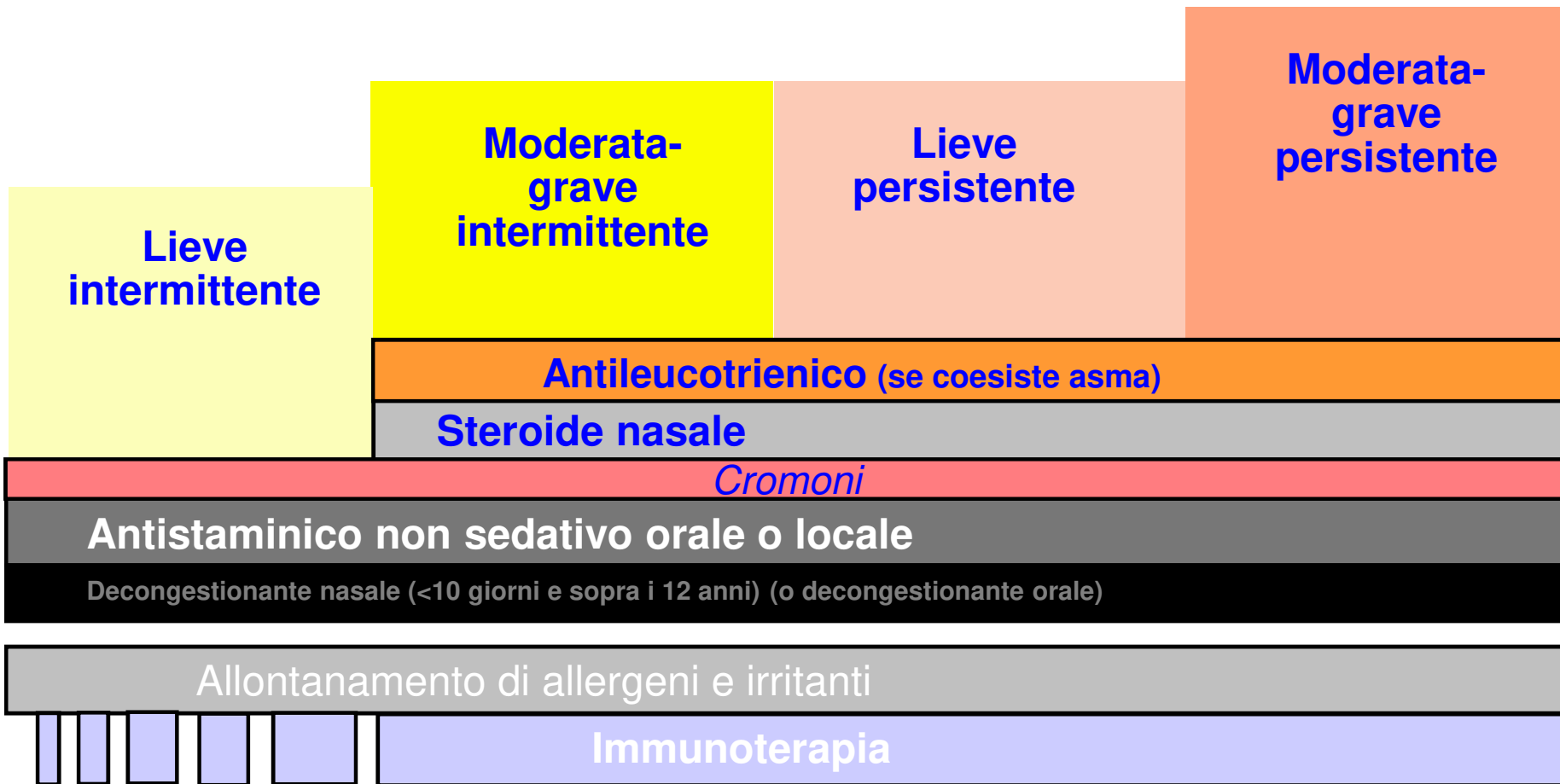
SAFETY



EFFICACY

Trattamento della rinite allergica

ARIA -Allergic Rhinitis and its Impact on Asthma



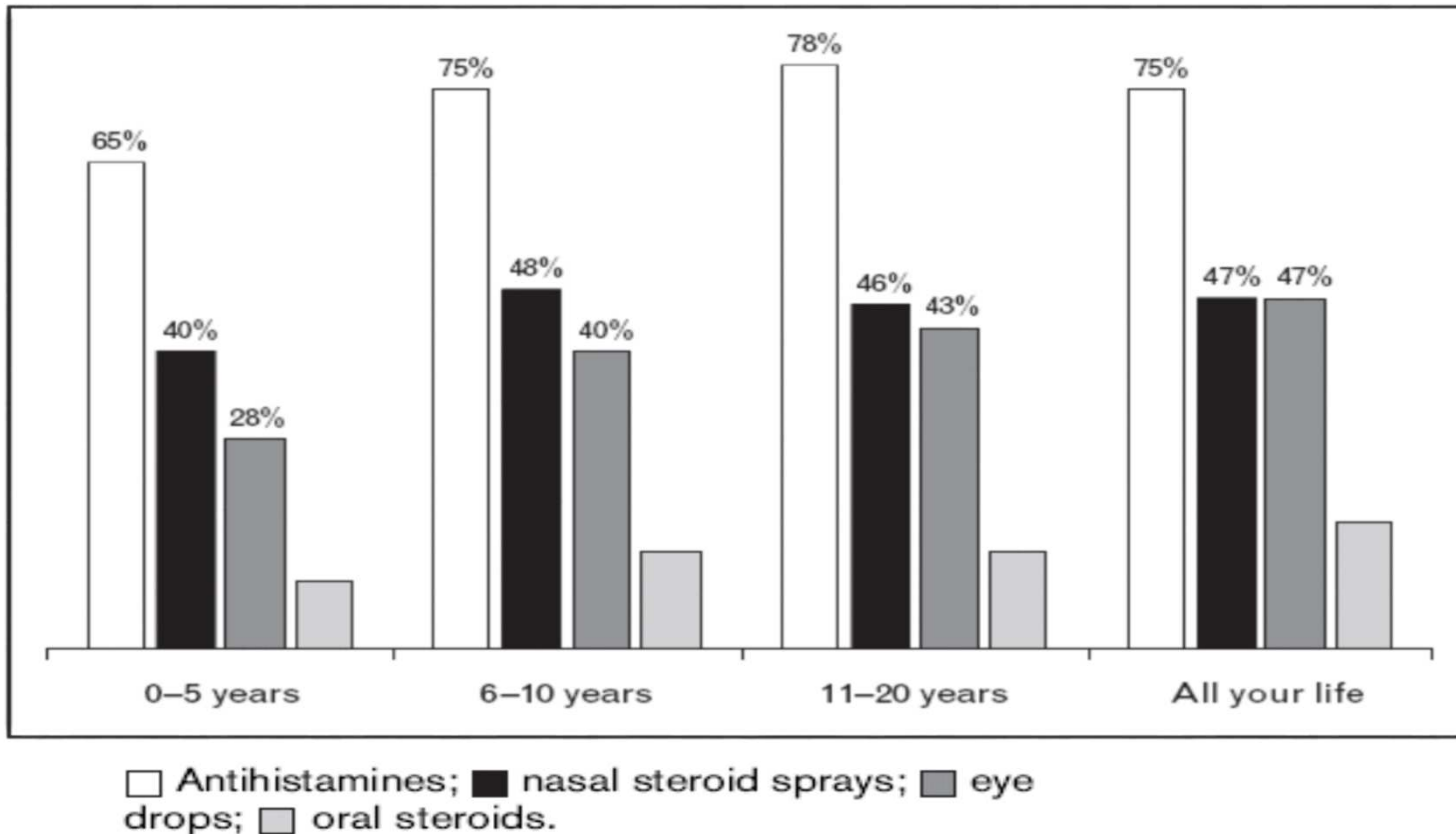


Country	Estimated allergic rhinitis sufferers (million)
Belgium	1.7
Czech Republic	1.7
Finland	1.4
France	17.0
Germany	14.8
Greece	1.7
Italy	8.0
Netherlands	2.5
Spain	5.5
Switzerland	0.8
UK	14.7
Total	69.7



The voice of patients : allergic rhinitis is not a trivial disease

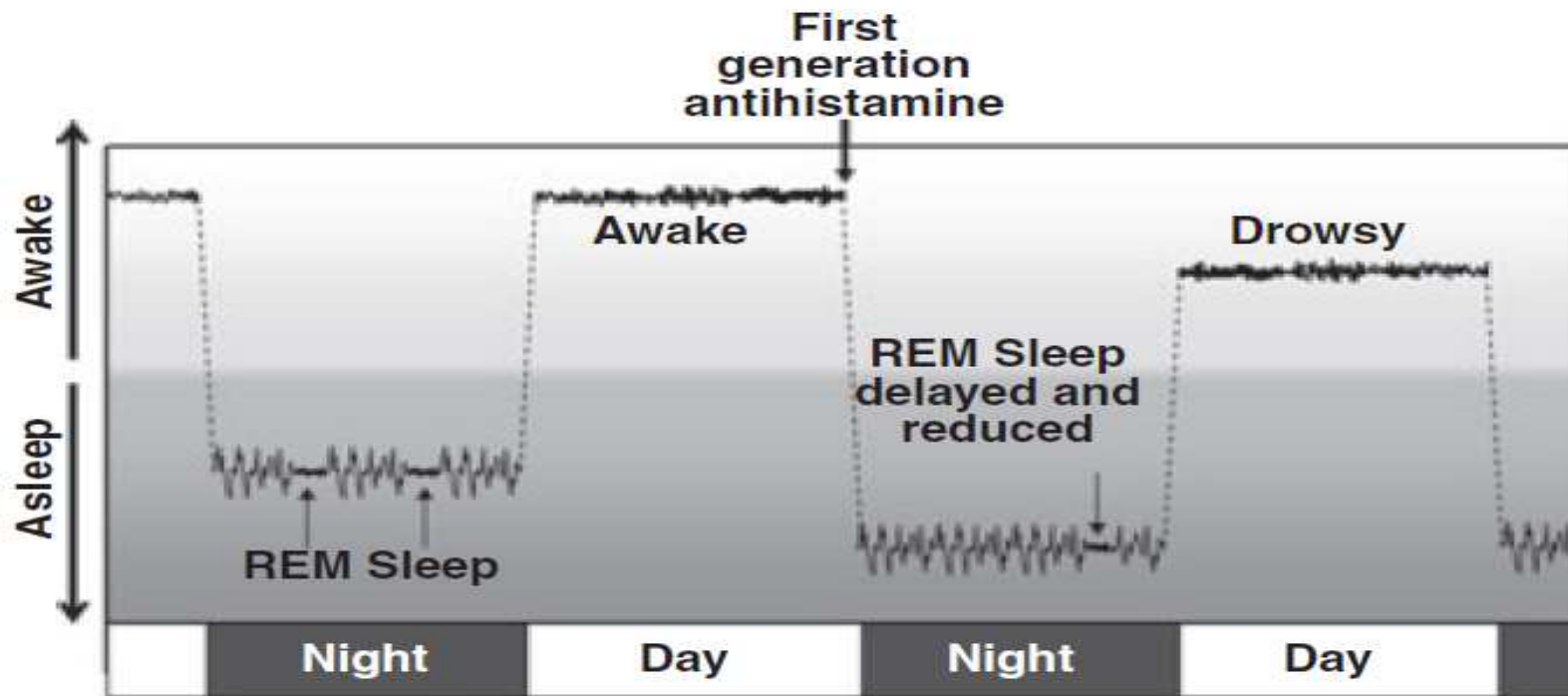
Valovirta et al. Curr Opin Allergy Clin Immunol 2008; 8: 1



Use of medication to control symptoms of allergic rhinitis by disease duration

Risk of first-generation H₁-antihistamines: a GA²LEN position paper

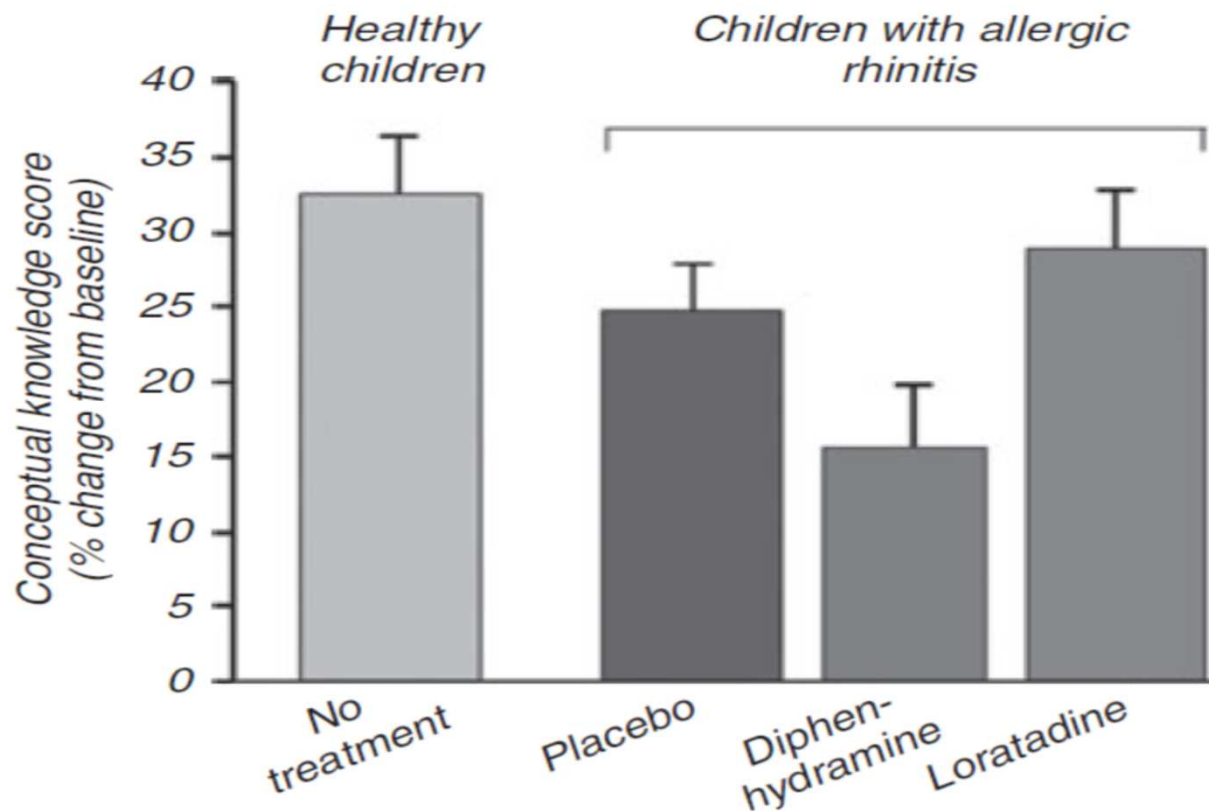
M. K. Church^{1,2}, M. Maurer¹, F. E. R. Simons³, C. Bindslev-Jensen⁴, P. van Cauwenberge⁵, J. Bousquet⁶, S. T. Holgate² & T. Zuberbier¹



2010

Risk of first-generation H₁-antihistamines: a GA²LEN position paper

M. K. Church^{1,2}, M. Maurer¹, F. E. R. Simons³, C. Bindslev-Jensen⁴, P. van Cauwenberge⁵, J. Bousquet⁶, S. T. Holgate² & T. Zuberbier¹



2010

SEASONAL ALLERGIC RHINITIS IS ASSOCIATED WITH A DETRIMENTAL EFFECT ON EXAMINATION PERFORMANCE IN UNITED KINGDOM TEENAGERS: CASE-CONTROL STUDY

Walker JACI 2007; 120: 381

- ✓ Case-control analysis of 1834 students (age 15-17 years);
- ✓ Cases were those who dropped 1 or more grades in any 3 core subjects (mathematics, English, and science) between practice (winter) and final (summer) examinations;
- ✓ Controls were those whose grades were either unchanged or improved.

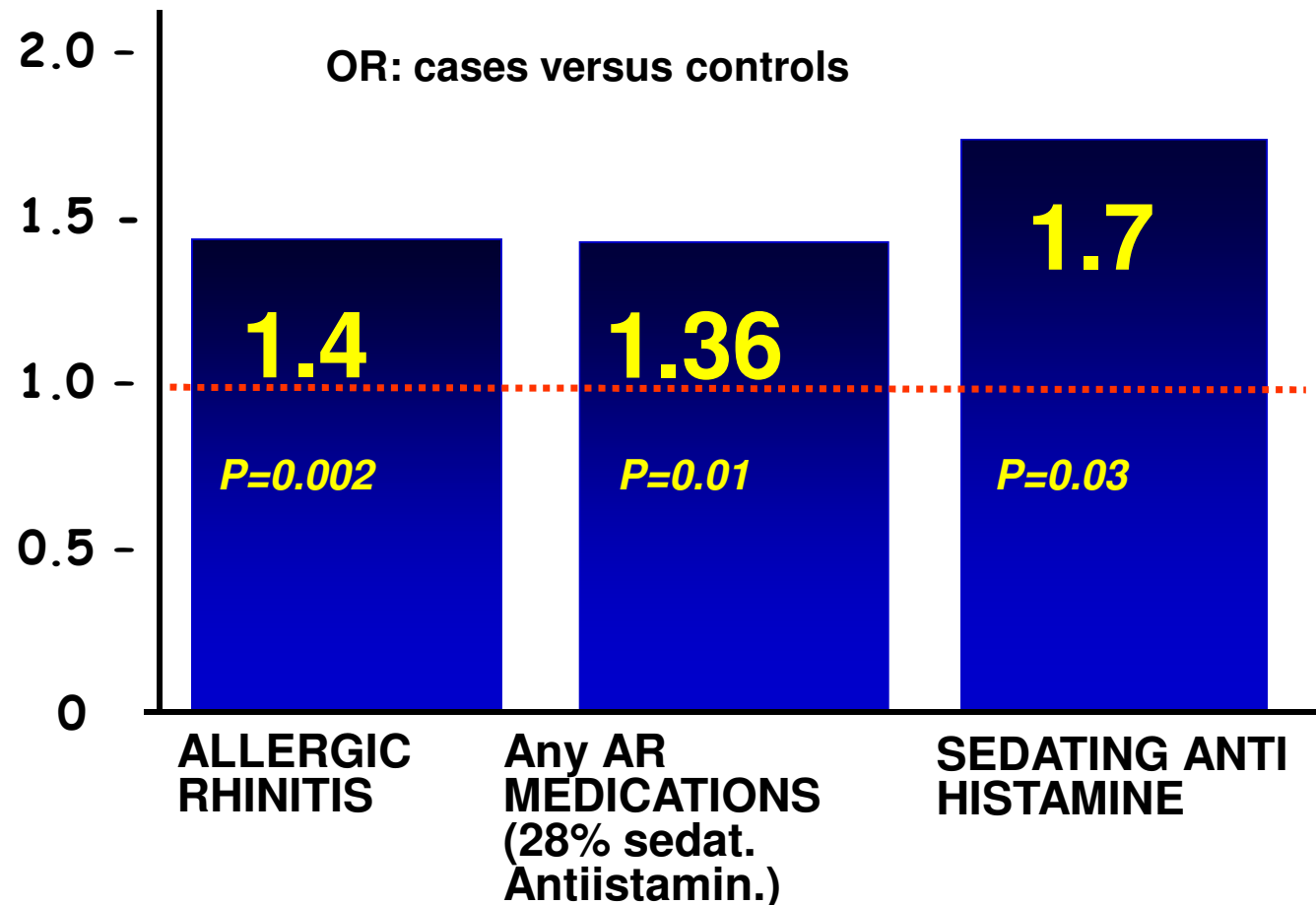
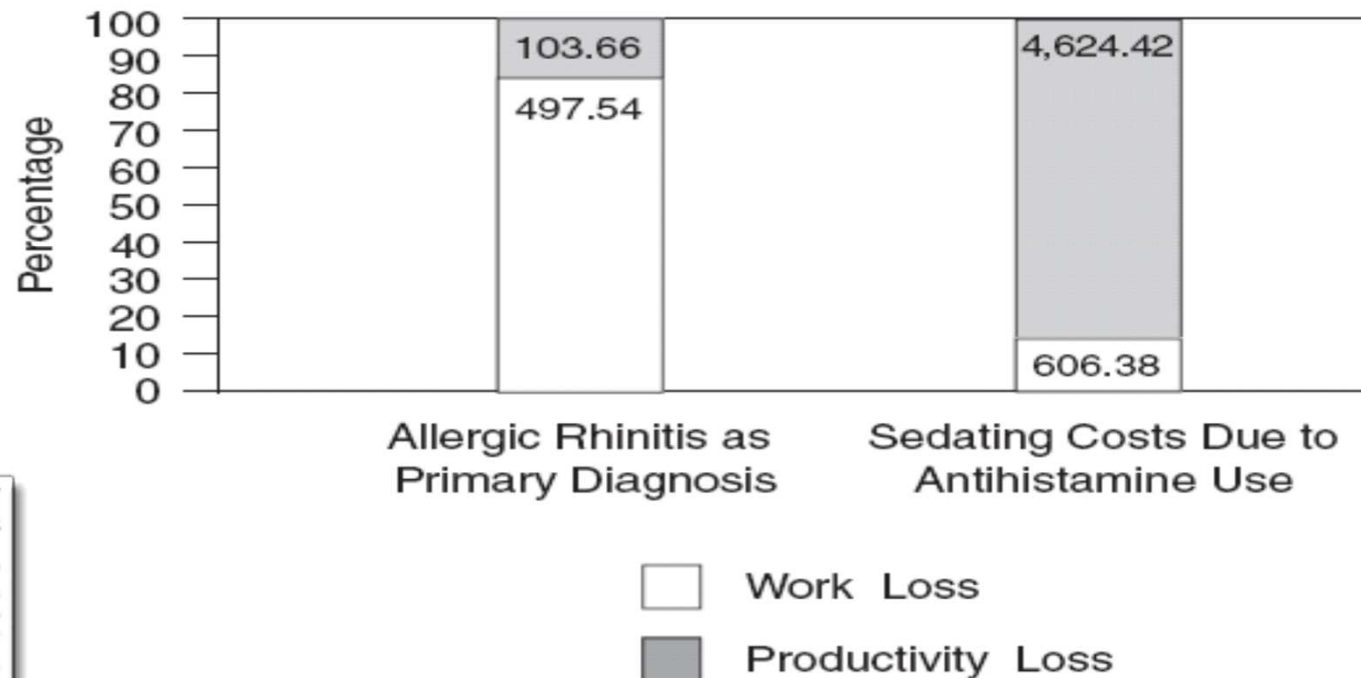


Figure. Productivity Loss and Work-Loss Costs (in Millions) as a Percentage of Total Indirect Costs of Allergic Rhinitis in the Workplace



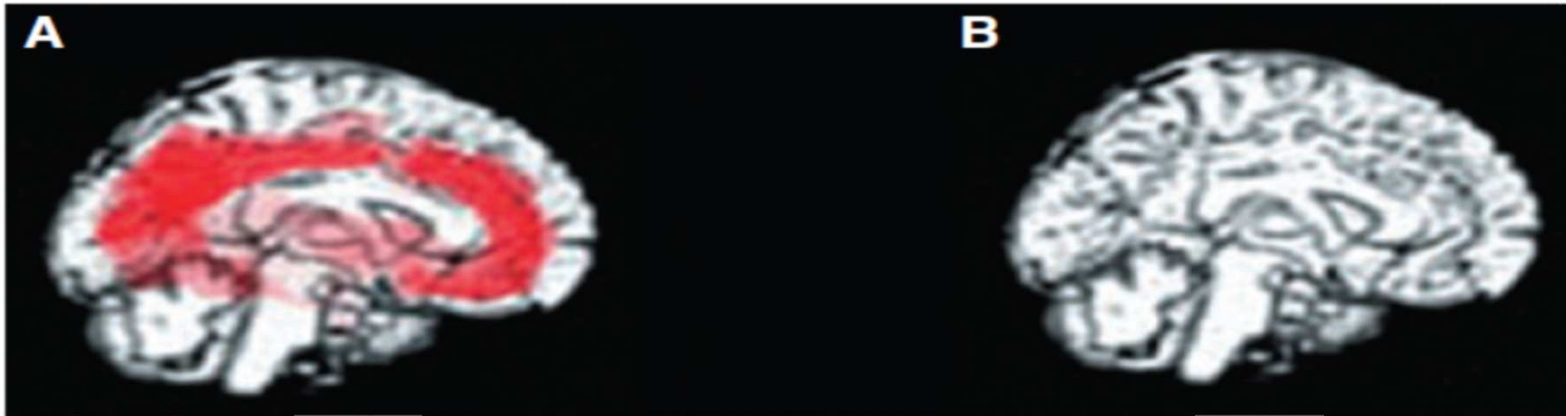
The cost of productivity losses associated with allergic rhinitis
 Crystal-Peters et al. Am J Manag Care 2006; 237: 278



POSITION PAPER

Risk of first-generation H₁-antihistamines: a GA²LEN position paper

M. K. Church^{1,2}, M. Maurer¹, F. E. R. Simons³, C. Bindslev-Jensen⁴, P. van Cauwenberge⁵, J. Bousquet⁶, S. T. Holgate² & T. Zuberbier¹



1 generazione

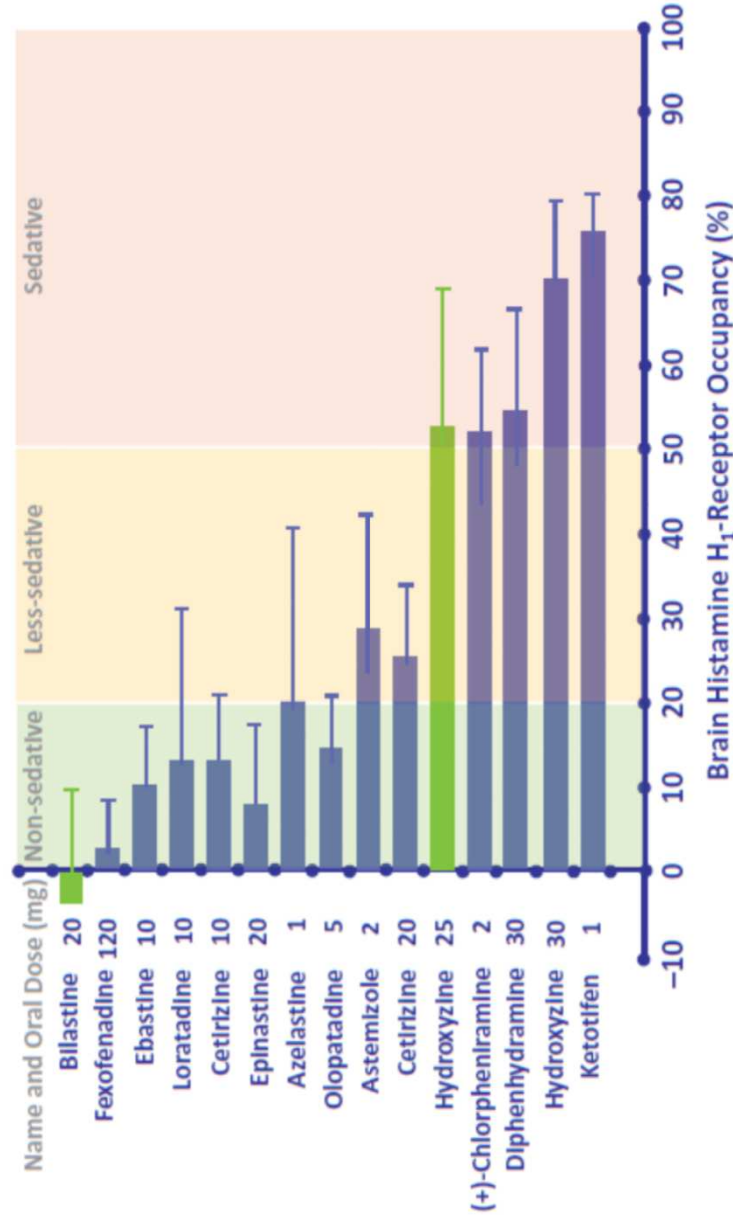
2 generazione

2010



Billastine: a new antihistamine with an optimal benefit-to-risk ratio for safety during driving

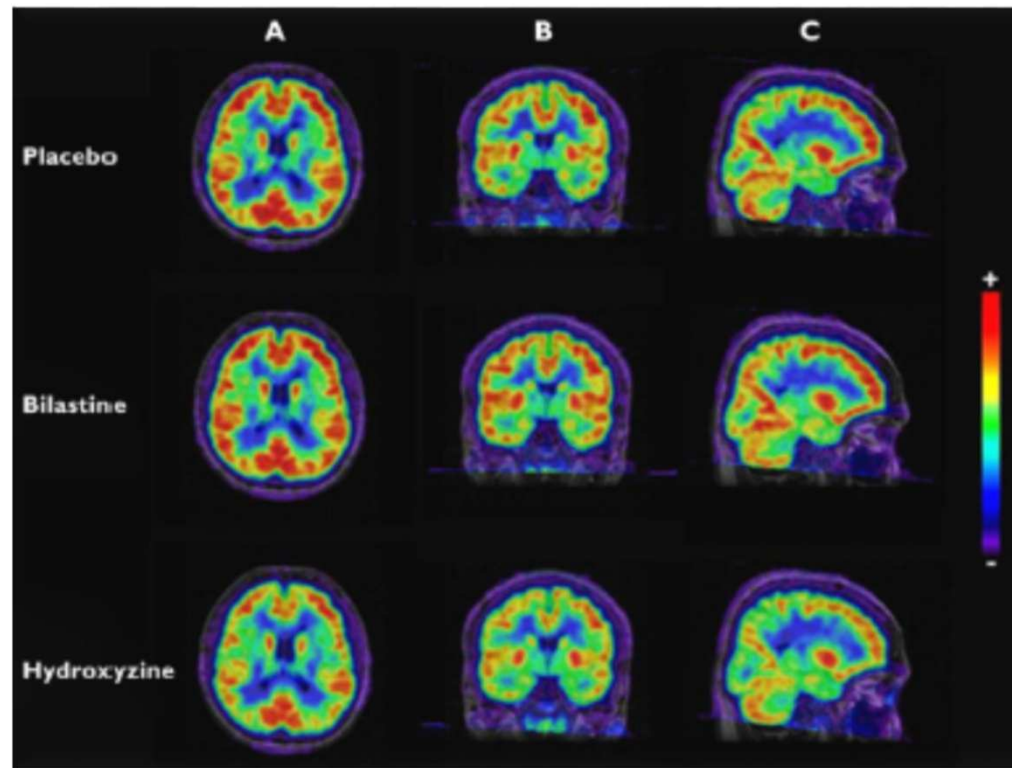
Ignacio Jáuregui[†], Johannes G Ramaekers, Kazuhiko Yanai, Magí Farré, Esther Redondo, Román Valiente & Luis Labeaga



Bilastine vs. hydroxyzine:
occupation of brain
histamine H₁-receptors
evaluated by positron
emission tomography in
healthy volunteers



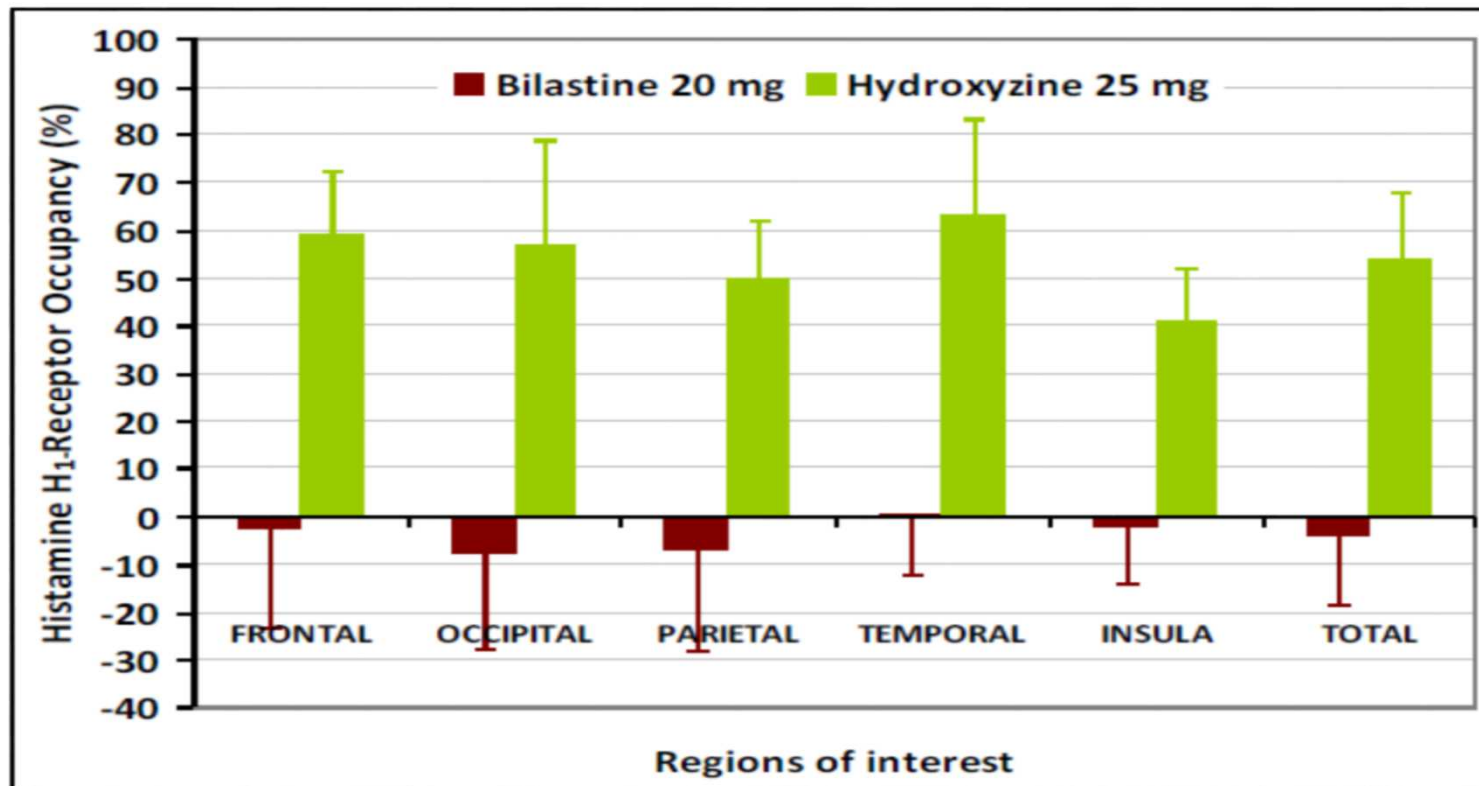
Farrè et al, 2015



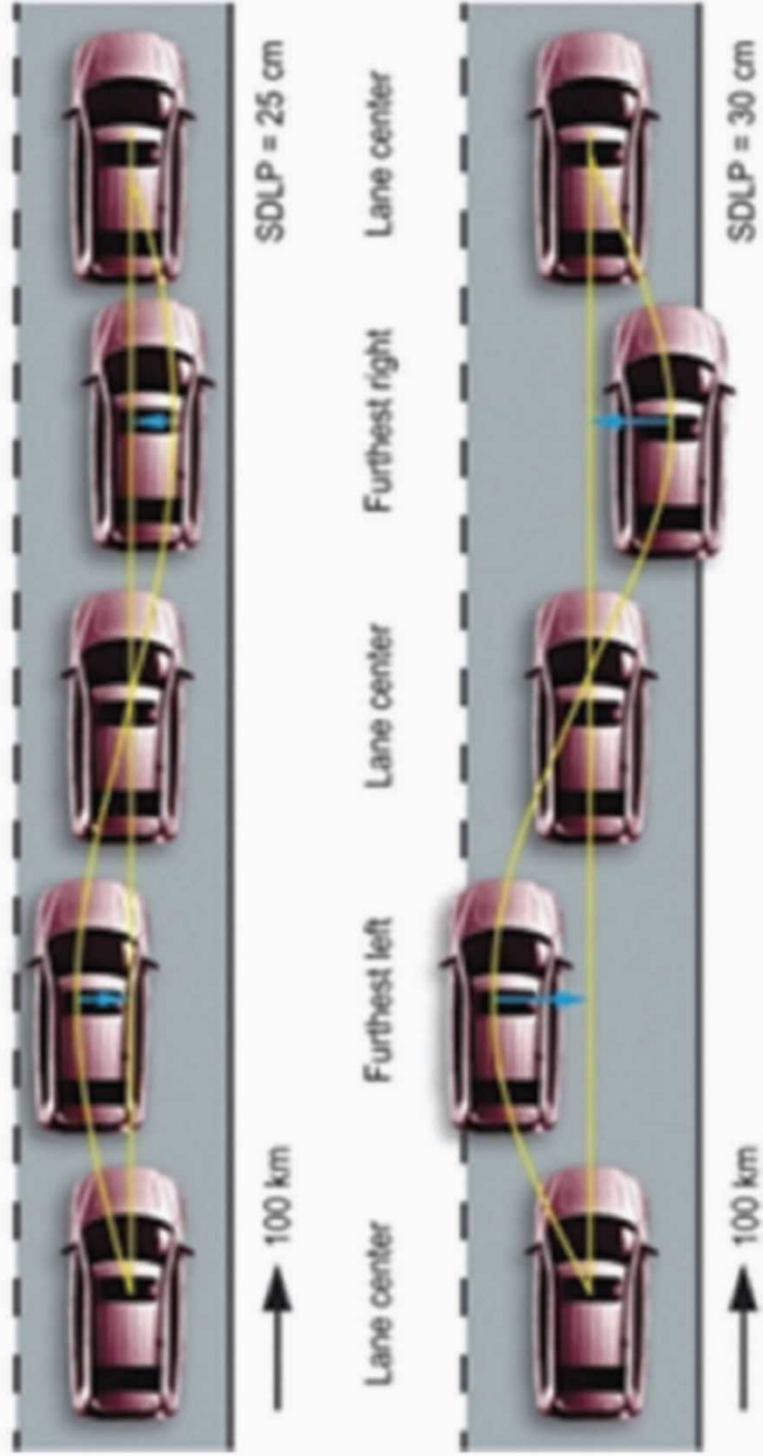
Bilastine vs. Hydroxyzine: Occupation of Brain Histamine H₁ Receptors

Evaluated by Positron Emission Tomography in Healthy Volunteers

Farrè et al, 2016

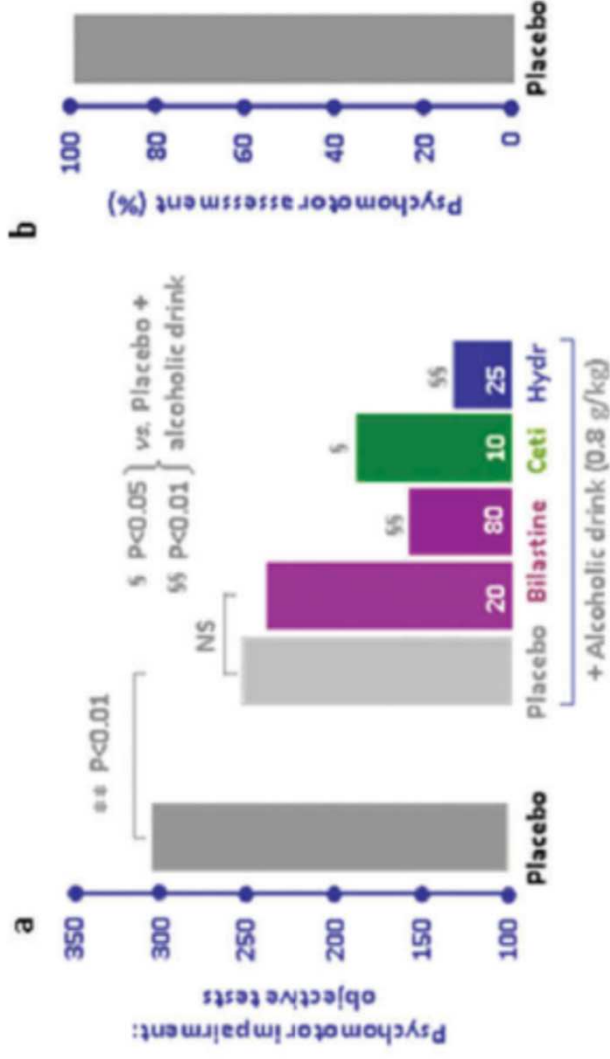


Standard deviation of lateral position (SDLP)



Bilastine: a new antihistamine with an optimal benefit-to-risk ratio for safety during driving

Ignacio Jáuregui[†], Johannes G Ramaekers, Kazuhiko Yanai, Magí Farré, Esther Redondo, Román Valiente & Luis Labeaga

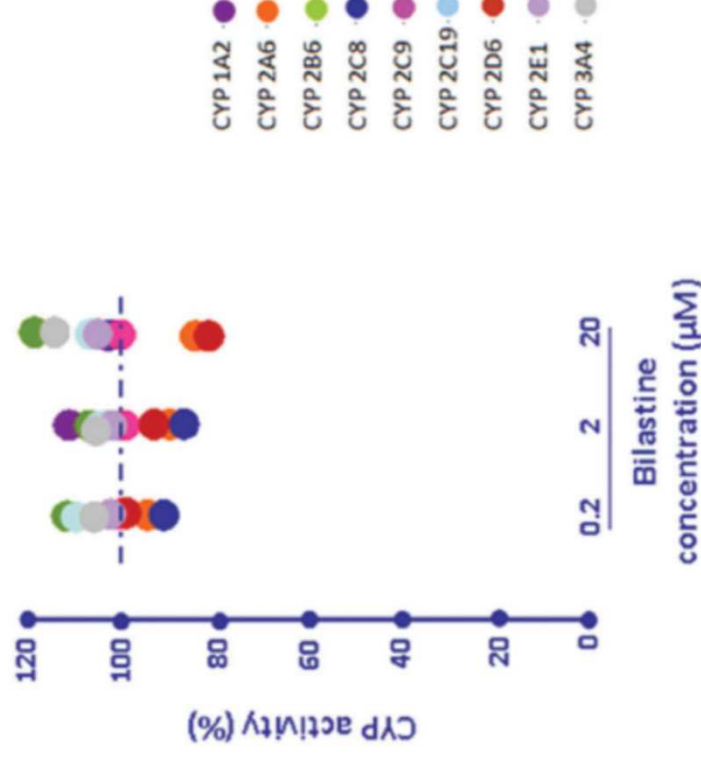


Bilastine: a new antihistamine with an optimal benefit-to-risk ratio for safety during driving

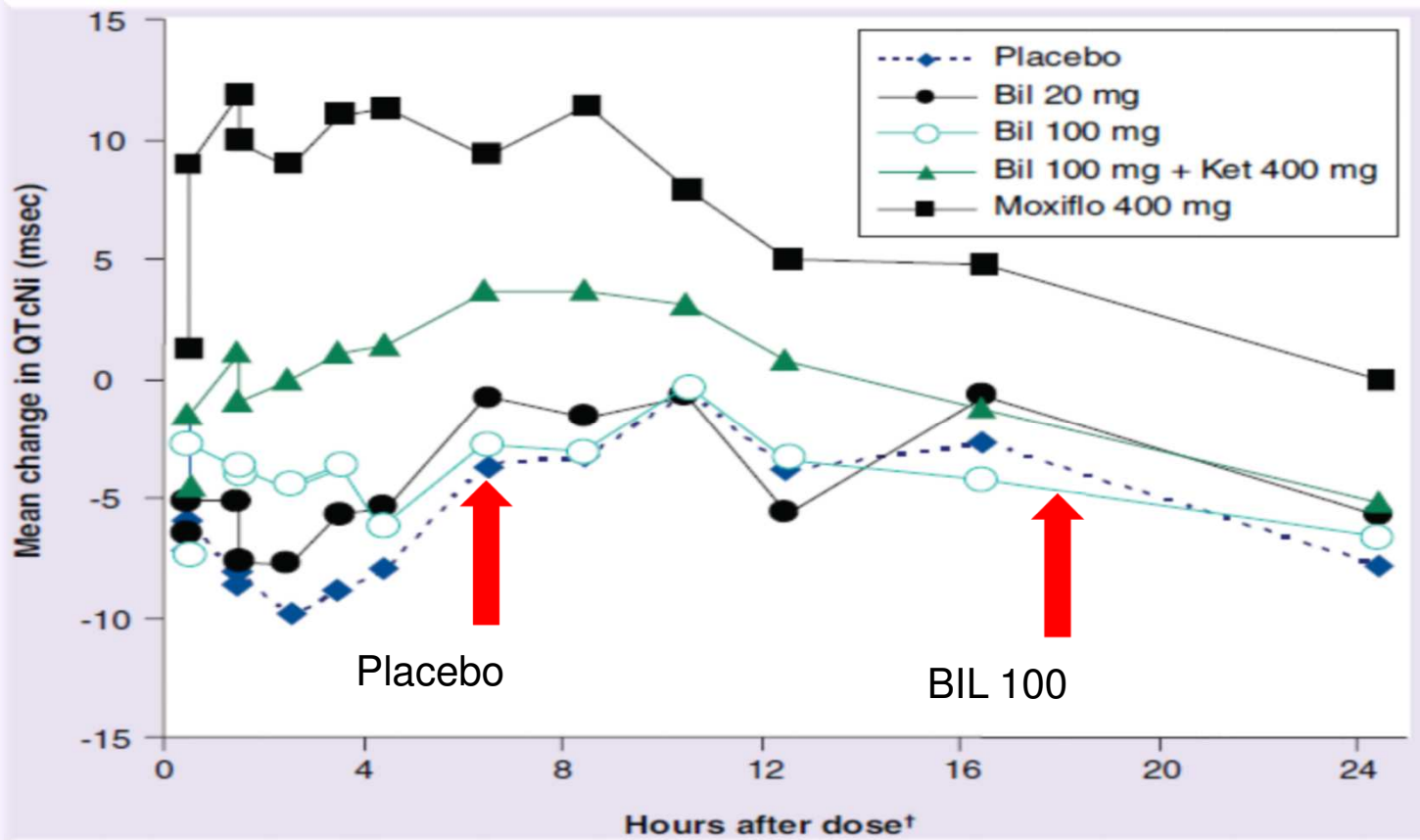
Ignacio Jáuregui[†], Johannes G Ramaekers, Kazuhiko Yanai, Magí Farré, Esther Redondo, Román Valiente & Luis Labeaga



- Bilastine, the newest marketed non-sedating antihistamine, is absorbed rapidly, undergoes no hepatic metabolism or interaction with cytochrome P450, hence has minimal potential for drug–drug interactions, and is a substrate for P-glycoprotein, which limits its CNS entry.



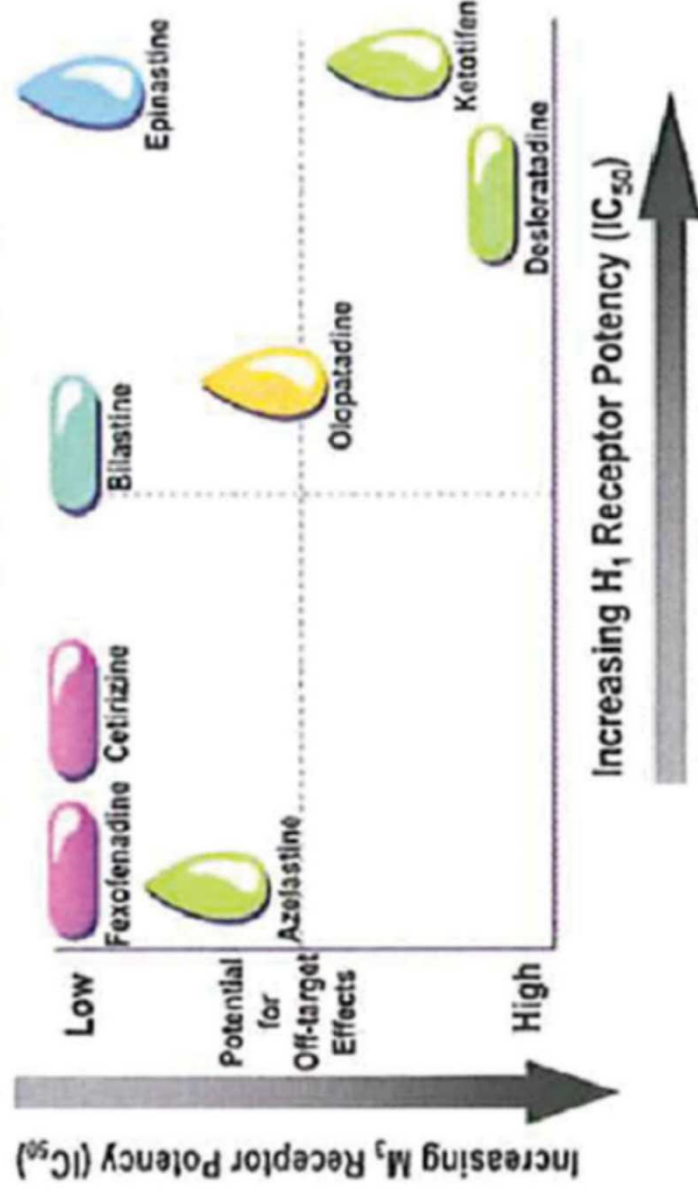
Lack of Significant Effect of Bilastine Administered at Therapeutic and Supratherapeutic Doses and Concomitantly With Ketoconazole on Ventricular Repolarization: Results of a Thorough QT Study (TQTS) With QT-Concentration Analysis. Tyl et al, 2012



Bilastine did not produce any significant change on QT interval even at high dosages

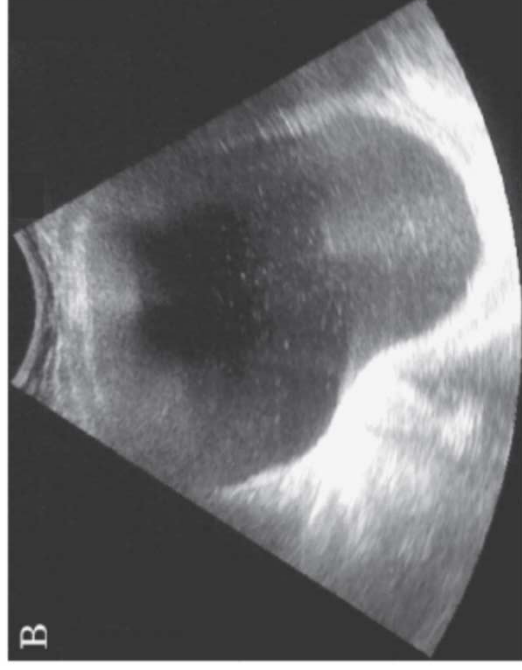
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Acute Urinary Retention

Taro Shimizu¹ and Yasuharu Tokuda²

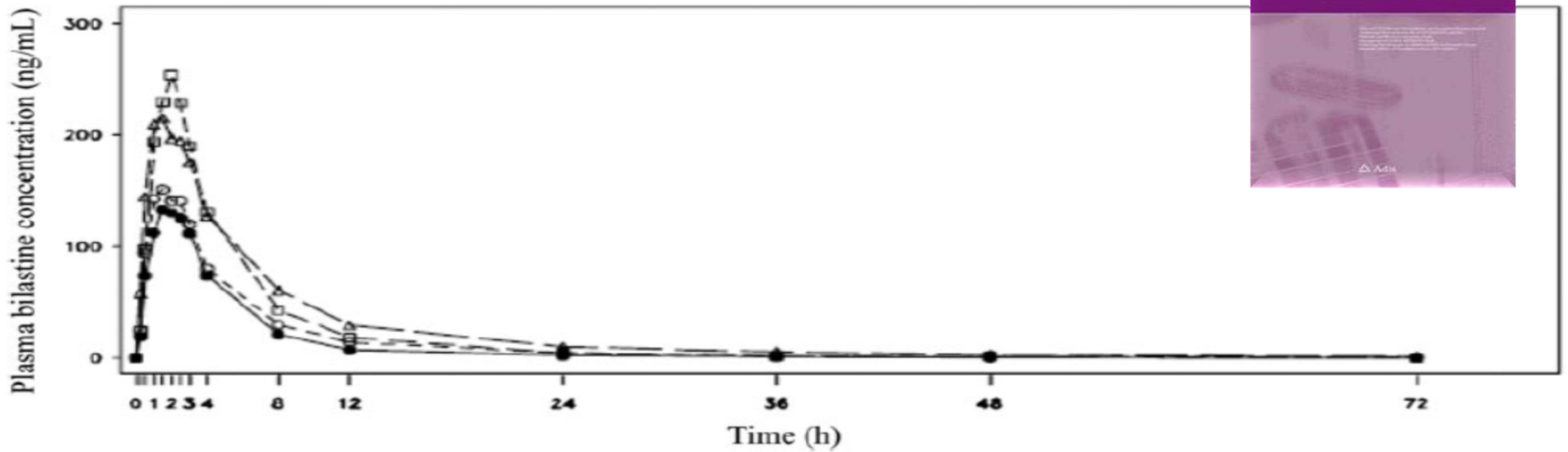


Acute Urinary Retention

Taro Shimizu¹ and Yasuharu Tokuda²

A 68-year-old woman with long-standing diabetes presented with severe lower abdominal dull pain that started 3 hours previously. She did not report any nausea, vomiting, constipation or urinary urgency. She had taken diphenhydramine for her allergy for the prior 2 days. On lateral view of inspection, lower mid abdominal distention (Picture A: above) localized below the umbilicus was observed. Percussion dullness was noted over 13 cm above the pubic symphysis. Palpation of abdomen revealed a slightly tender, non-pulsatile mass. Bedside ultrasonography of the abdomen showed extensively tense urinary bladder (Picture B). Insertion of 16-gauge Foley catheter produced approximately 1,000 mL of clear yellowish urine. After emptying her bladder, she became free of pain with flattened abdomen (Picture A: below). We concluded that the patient's acute urinary retention was attributed to anticholinergic effects from newly administered diphenhydramine on diabetic bladder with a disturbed autonomic nervous system.

Evaluation of the Single-dose Pharmacokinetics of Bilastine in Subjects with Various Degrees of Renal Insufficiency



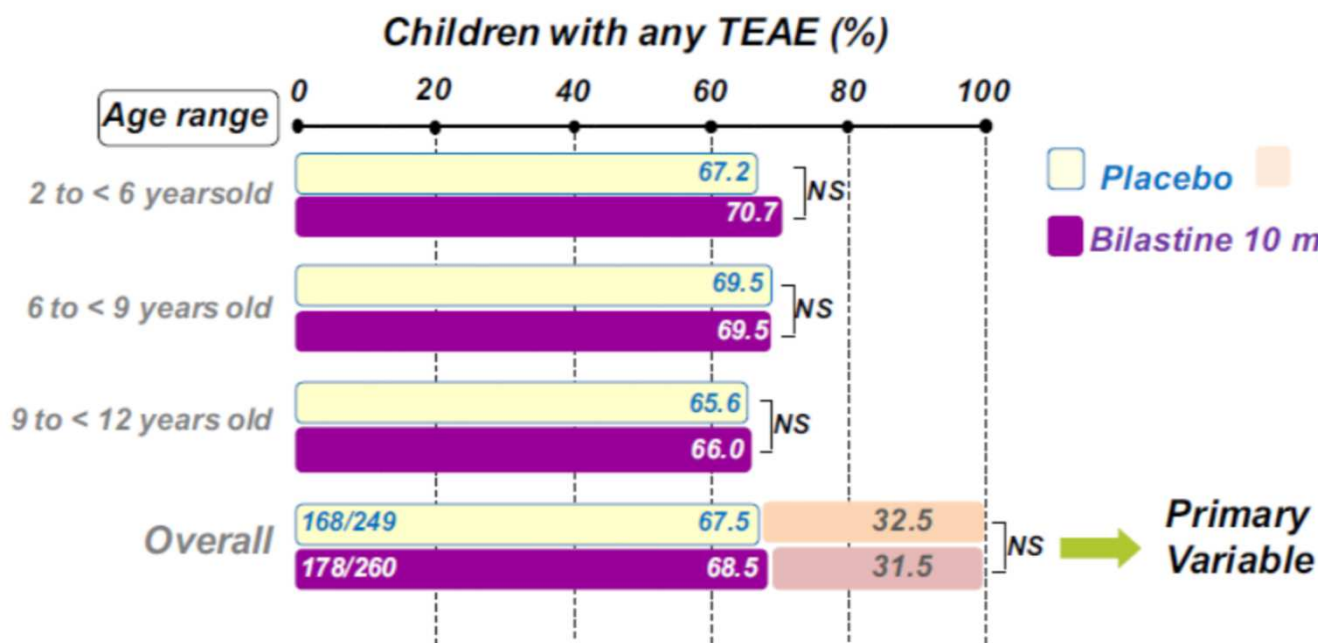
Lasseter et al, 2013

Safety and tolerability of bilastine 10 mg administered for 12 weeks in children with allergic diseases

Zoltán Novák¹, Anahí Yáñez², Ildikó Kiss³, Piotr Kuna⁴, Miguel Tortajada-Girbés⁵, Román Valiente⁶ & the "Bilastine Paediatric Safety Study Group"

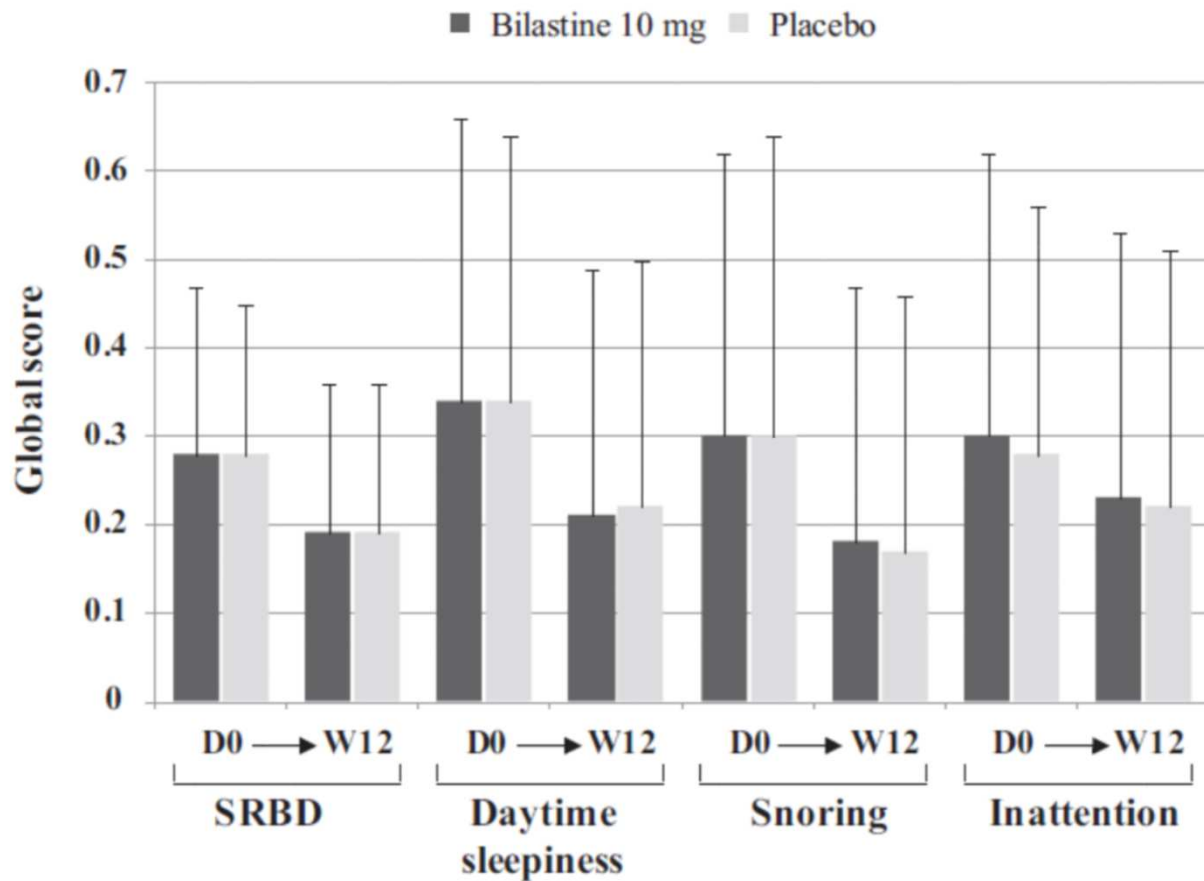


2016



Safety and tolerability of bilastine 10 mg administered for 12 weeks in children with allergic diseases

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2016

TAKE HOME MESSAGES



➔ **Gli anti-istaminici sono farmaci largamente utilizzati e per lunghi periodi.**

➔ **Il profilo di sicurezza appare pertanto di cruciale importanza. In particolare gli effetti sedativi sono un potenziale rischio per la guida**

➔ **Il progresso degli anti-istaminici si è indirizzato ad una progressiva selettività e assenza del passaggio ematoencefalico**

➔ **La bilastina, ultimo antiH1 immesso ne mercato garantisce un ottimo profilo di sicurezza non solo relativamente all'assenza di effetti sedativi, ma anche per l'assenza di effetti anticolinergici e di interferenza col sistema P450**