

Cigarrillo electrónico: poco humo y muchas dudas



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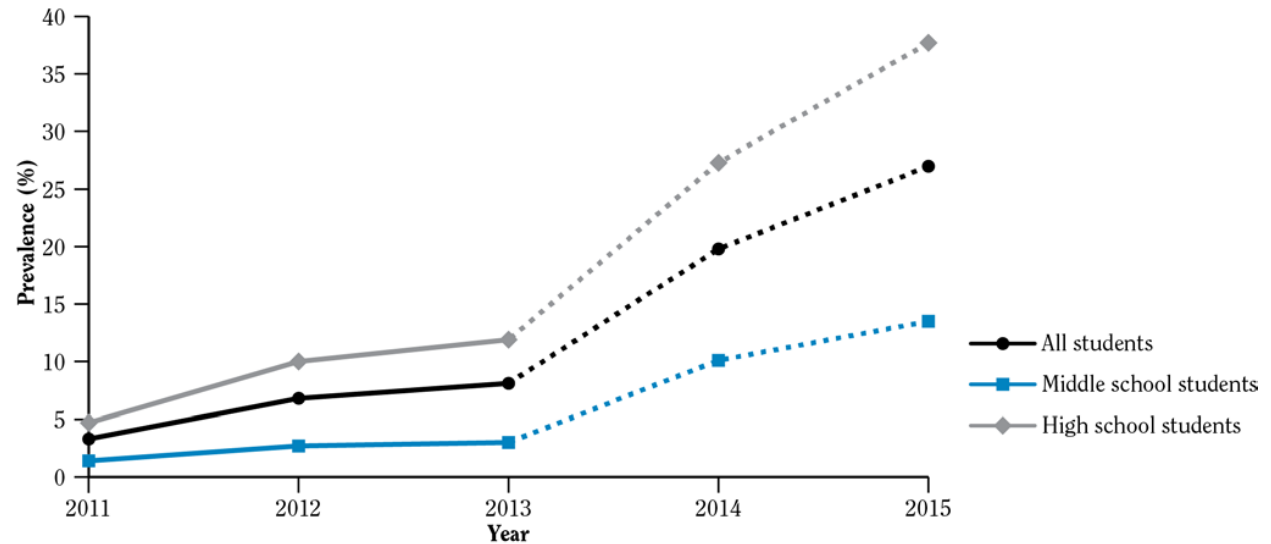
Respecto a esta conferencia

Cigarrillo electrónico: poco humo y muchas dudas

No hay potenciales conflictos de intereses que declarar



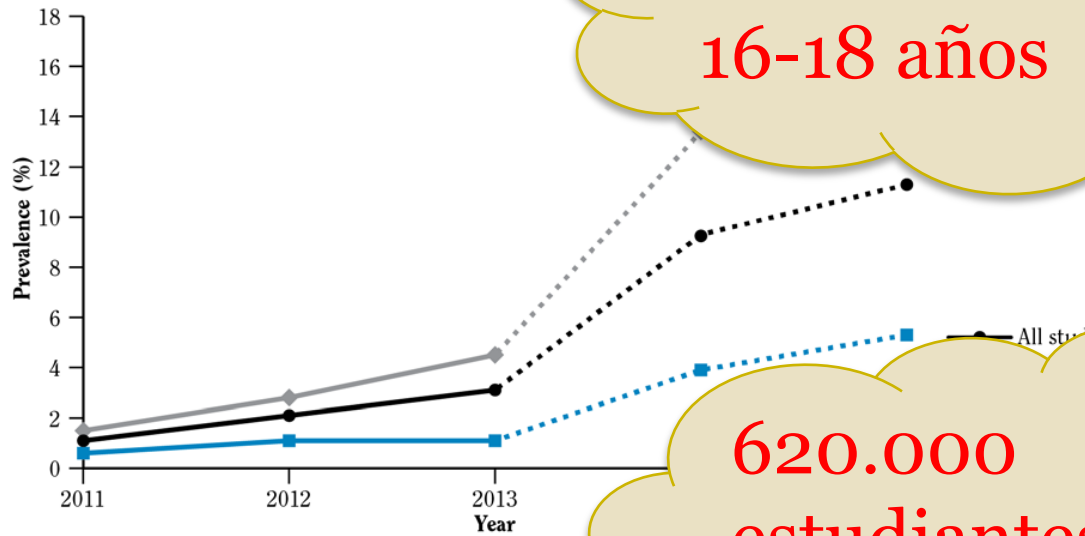
Tendencias en el uso de cigarrillo electrónico entre estudiantes de educación media y superior



Los que han probado alguna vez el cigarrillo electrónico
(National Youth Tobacco Survey 2015)



Tendencias en el uso de cigarrillo electrónico entre estudiantes de educación media y superior



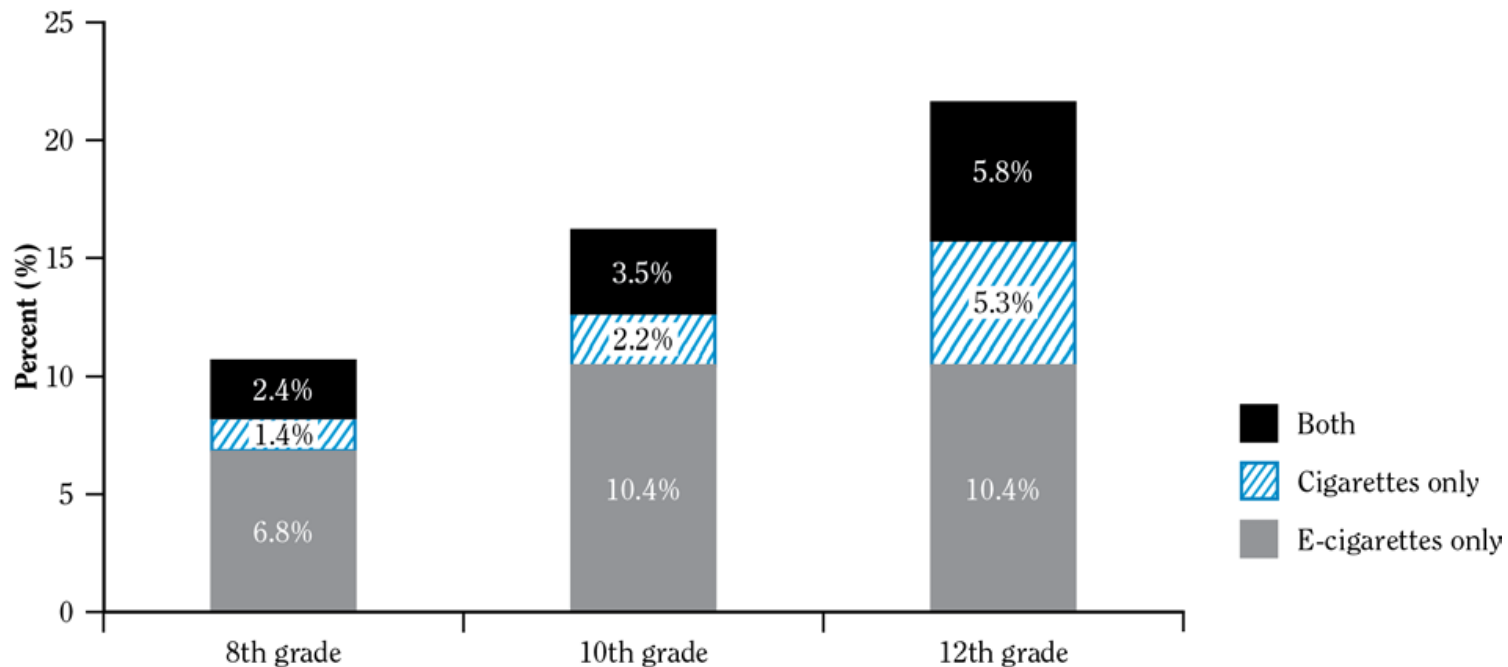
2, 4 millones
estudiantes
16-18 años

620.000
estudiantes
12-15 años

Los que han probado el cigarrillo electrónico al menos una vez en los últimos 30 días
(National Youth Tobacco Survey 2015)



% estudiantes que combinaron cigarrillos electrónicos y cigarrillos convencionales (MTF 2015)



CIGARRILLO ELECTRONICO

**Sabe igual que un cigarrillo
normal, pero tiene muchas otras
ventajas:**

- Sin riesgo para la salud (no le causara la muerte)
- Gastara muchisimo menos dinero en cigarrillos
- La mejor manera para dejar de fumar (80% de exito según muchos estudios)
- Es mucho mas tolerable para las demas personas
- Sin malos olores, cenizas ni ceniceros
- Gran variedad de sabores para escoger
- Se puede fumar en casi cualquier lugar



1 Curso Nacional
de TABAQUISMO
en Pediatría

Objetivos

- Dar a conocer su importancia como objeto de consumo entre adolescentes y adultos jóvenes
- Ofrecer información veraz y objetiva sobre sus componentes y posibles efectos adversos sobre la salud
- ¿Herramienta útil para dejar de fumar?
- ¿Puede inducir al consumo de tabaco convencional?



Un poco de historia



¿Qué es?

El cigarrillo electrónico

1

Botón
activa
el sistema
de calentamiento

2

El líquido se vaporiza
con el calor



AFP



¿Qué es?



¿Qué es?



Bubble Gum



Chocolate



Cotton Candy



Grape



Gummy Bear

Source: Photo by Mandie Mills, CDC.



¿Qué contienen?

- Composición exacta desconocida
- Nicotina en cantidad variable (0-36 mg/ml)
- Saborizantes: tabaco, mentol, frutas
- Propilenglicol y glicerina
- Otros aditivos: nitrosaminas



Efectos sobre la salud. Nicotina

- Capacidad de producir adicción, más precoz e intensa en adolescentes y adultos jóvenes.
- Comportamientos de búsqueda de satisfacción y posibilidad de facilitar nuevas adicciones
- Efectos a corto y largo plazo sobre la atención y la memoria en adolescentes
- Aumento de la frecuencia de trastornos de ansiedad y depresión
- Efectos de la nicotina en el feto



Efectos sobre la salud.

- PG y GV: Efectos a largo plazo desconocidos.
- Saborizantes: seguros por vía oral
- Otras sustancias tóxicas (formaldehído, acetaldehído, acroleína..): no se conocen concentración exacta en los diferentes dispositivos
- Otras sustancias producidas durante la aerosolización: carcinógenos, metales pesados



Electronic Cigarette Use and Respiratory Symptoms in Adolescents

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Abstract

Rationale: Rates of adolescent electronic (e-) cigarette use are increasing, but there has been little study of the chronic effects of use. Components of e-cigarette aerosol have known pulmonary toxicity.

Objectives: To investigate the associations of e-cigarette use with chronic bronchitis symptoms and wheeze in an adolescent population.

Methods: Associations of self-reported use of e-cigarettes with chronic bronchitic symptoms (chronic cough, phlegm, or bronchitis) and of wheeze in the previous 12 months were examined in 2,086 Southern California Children's Health Study participants completing questionnaires in 11th and 12th grade in 2014.

Measurements and Main Results: Ever e-cigarette use was reported by 502 (24.0%), of whom 201 (9.6%) used e-cigarettes during the last 30 days (current users). Risk of bronchitic symptoms was increased by almost twofold among past users (odds ratio [OR],

1.85; 95% confidence interval [CI], 1.37–2.49), compared with never-users, and by 2.02-fold (95% CI, 1.42–2.88) among current users. Risk increased with frequency of current use (OR, 1.66; 95% CI, 1.02–2.68) for 1–2 days and 2.52 (95% CI, 1.56–4.08) for 3 or more days in past 30 days compared with never-users. Associations were attenuated by adjustment for lifetime number of cigarettes smoked and secondhand smoke exposure.

However, risk of bronchitic symptoms among past e-cigarette users remained elevated after adjustment for relevant potential confounders and was also observed among never-cigarette users (OR, 1.70; 95% CI, 1.11–2.59). There were no statistically significant associations of e-cigarette use with wheeze after adjustment for cigarette use.

Conclusions: Adolescent e-cigarette users had increased rates of chronic bronchitic symptoms. Further investigation is needed to determine the long-term effects of e-cigarettes on respiratory health.

Keywords: e-cigarettes; bronchitis; smoking in young adults

Efectos sobre la salud no relacionados con la inhalación

- Fuego o explosión durante el consumo o con recarga de las baterías
- Intoxicación por ingesta de nicotina por vía oral, que incluso puede ser letal (1-13 mg/kg)



¿Sirven para dejar de fumar?

- Los estudios disponibles no avalan su utilidad
- Eficacia para controlar el síndrome de abstinencia
- Tasas muy bajas de abandono
- Utilidad en fumadores que no pueden o no desean dejar de fumar. No aplicable a adolescentes
- Gran interés por las tabacaleras en las marcas de cigarrillos electrónicos



Table 2.13 Summary of studies on reasons for use and discontinuation of e-cigarettes among youth and young adults

Study	Design/population	Measures	Outcomes/findings
Sutfin (2015)	<ul style="list-style-type: none"> Longitudinal cohort study Data from the Smokeless Tobacco Use in College Students Study College students from North Carolina and Virginia Reasons for e-cigarette use were evaluated at Wave 6 of the study, n = 271 	<ul style="list-style-type: none"> Why did you try e-cigarettes? (check all that apply): <ul style="list-style-type: none"> “I was curious about the product” “It might be better for my health than smoking cigarettes” “My friends use e-cigarettes” “I can use it in places where cigarette smoking is not allowed” “To help me quit smoking” “To cut down on smoking” “It doesn’t smell bad” 	<ul style="list-style-type: none"> The majority (91.6%) reported curiosity as a reason for trying e-cigarettes More than 70% tried e-cigarettes because their friends used them About 70% tried e-cigarettes because they believed them to be better for their health than cigarettes Fifty percent cited, “It doesn’t smell bad,” and “I can use it where cigarette smoking is not allowed” About 31% said that they used e-cigarettes to cut down on smoking Twenty percent said that they tried e-cigarettes to help them quit smoking
University of Michigan (2015)	<ul style="list-style-type: none"> Cross-sectional Data from the Monitoring the Future Study School-based, self-administered, paper-and-pencil questionnaire with cross-sectional and longitudinal components Students from 8th, 10th, and 12th grades Weighted sample of students responding to the “reasons for use of electronic vaporizer” question: 603 (8th grade), 846 (10th grade), and 1,449 (12th grade) 	<ul style="list-style-type: none"> “What have been the most important reasons for your using an electronic vaporizer, such as an e-cigarette?” <ul style="list-style-type: none"> To help me quit regular cigarettes Because regular cigarette use is not permitted To experiment to see what it’s like To relax or relieve tension To feel good or get high Because it looks cool To have a good time with my friends Because of boredom—nothing else to do Because it tastes good Because I am “hooked”—I have to have it 	<ul style="list-style-type: none"> More than half of all students in 8th, 10th, and 12th grades reported that curiosity to see what they were like was a primary reason for use Forty percent said that they used e-cigarettes because they tasted good About 10% said they used them in an attempt to quit smoking regular cigarettes

A Report of the Surgeon General (2016)



Multinacionales del tabaco con cigarrillos electrónicos

Table 1.1 Multinational tobacco companies with e-cigarette brands

Company	E-cigarette brand
Altria (NuMark)	MarkTen, Green Smoke
Philip Morris International	Heat-not-burn, IQOS brand (Vape Ranks 2014) E-cigs, Nicolites by Nicocigs (Philip Morris International 2014)
Reynolds (Reynolds Vapor Company)	VUSE
Lorillard (Lorillard Vapor Company)	blu (until 2015)
Imperial Tobacco (Fontem Ventures)	Puritane (formerly Ruyan) blu (acquired in 2015)
British American Tobacco	Vype
Swisher	E-swisher
Japan Tobacco International (JTI)	E-Lites, offered in the United Kingdom by Zandera Ltd., which was acquired by Japan Tobacco Inc. in 2014 (Japan Tobacco Inc. 2014) Ploom (tobacco pods in heat-not-burn) and Ploom PAX (used for vaporizing marijuana) (Japan Tobacco Inc. 2015)



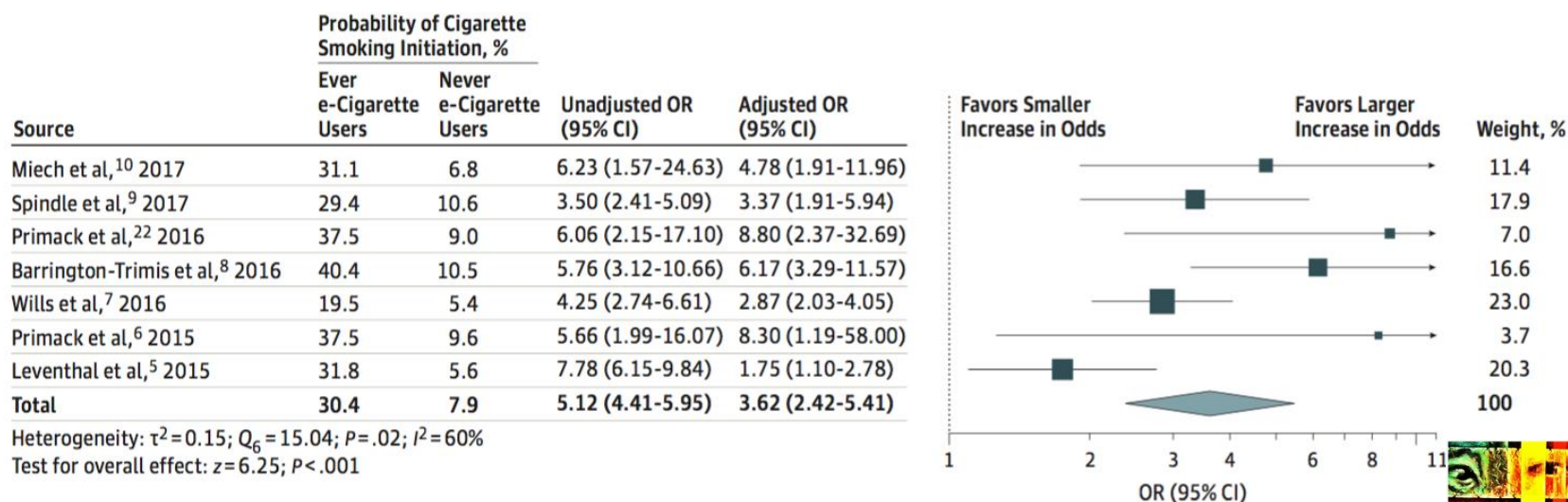
Association Between Initial Use of e-Cigarettes and Subsequent Cigarette Smoking Among Adolescents and Young Adults

A Systematic Review and Meta-analysis

Samir Soneji, PhD; Jessica L. Barrington-Trimis, PhD; Thomas A. Wills, PhD; Adam M. Leventhal, PhD; Jennifer B. Unger, PhD; Laura A. Gibson, PhD; JaeWon Yang, BA; Brian A. Primack, MD, PhD; Judy A. Andrews, PhD; Richard A. Miech, PhD; Tory R. Spindle, MS; Danielle M. Dick, PhD; Thomas Eissenberg, PhD; Robert C. Hornik, PhD; Rui Dang, PhD; James D. Sargent, MD

JAMA Pediatr. 2017;171(8):788-797.

Figure 2. Meta-analysis of Adjusted Odds of Cigarette Smoking Initiation Among Never Cigarette Smokers at Baseline and Ever e-Cigarette Users at Baseline Compared With Never e-Cigarette Users at Baseline



The odds ratios (OR) for the studies^{5-10,22} are adjusted for a study-specific set of demographic, psychosocial, and behavioral risk factors. The size of the point estimate (black square) is proportional to the weight of the study in the

random-effects meta-analysis model. The weights add to 99.9% because of rounding. Q indicates Cochrane Q.



Association Between Initial Use of e-Cigarettes and Subsequent Cigarette Smoking Among Adolescents and Young Adults

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Gibson, PhD;
71(8):788-797.

Figure 3. Meta-analysis of the Association Between Initial and Current e-Cigarette Use and Subsequent Cigarette Smoking

Key Points

Question Is there an association between e-cigarette use and cigarette smoking among adolescents and young adults?

Finding A systematic review and meta-analysis showed strong and consistent evidence of an association between initial e-cigarette use and subsequent cigarette smoking initiation, as well as between past 30-day e-cigarette use and subsequent past 30-day cigarette smoking.

Meaning To minimize the potential public health harm from e-cigarette use, the US Food and Drug Administration, as well as state and local agencies, will need to engage in effective regulatory actions to discourage youths' use of e-cigarettes and prevent the transition from e-cigarettes to other combustible tobacco products.

Source

Unger et al,²³
Hornik et al,²⁴

Total

Heterogeneity
Test for overa

The odds ratios (OR) and 95% confidence intervals (CI) are shown. The black square is the point estimate

Smokers at Baseline


OR	Weight, %
→	48.6
→	51.4
	100

11

of the point estimate



Cuestión de Salud Pública



“ We must protect our nation’s young people from a lifetime of nicotine addiction and associated problems by **immediately addressing e-cigarettes as an urgent public health problem.** Now is the time to take action. ”

U.S. Surgeon General | Vivek H. Murthy, M.D., M.B.A.



Una Llamada a la Acción

- Lo primero, no dañar. Regular como cualquier producto del tabaco
- Informar sobre los efectos sobre la salud del cigarrillo electrónico
- Impedir que se fume en lugares públicos
- Normas sobre la comercialización, etiquetado y limitación de la publicidad



Puntos clave

- Los cigarrillos electrónicos no son “vapor de agua”
- Es el producto de tabaco más consumido por los adolescentes
- Constituye un asunto de salud pública ya que puede favorecer el consumo de tabaco
- Tenemos gran responsabilidad en la educación de nuestros pacientes y su familia



