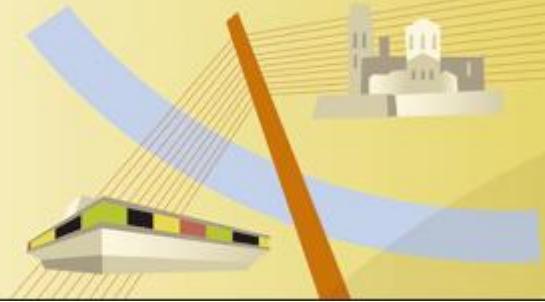




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Lleida 22 de novembre de 2013



Cigarretes electròniques: què en sabem?

Esteve Saltó

Vicepresident de CNPT

Professor de Salut Pública, UB



Guió

- Definicions
- Dispositiu-mecanisme
- Seguretat
- Efectivitat
- Regulació-estatus legal
- Producte de consum, moda...
- Síntesi

Definiciones

- **VAPING / Vapeador, vapear....**

- A principios de 2008 en Estados Unidos, cuando los cigarrillos electrónicos se empezaron a usar, se crearon los primeros foros temáticos y dentro de estos foros se empezó a utilizar el término “vaping”.. Este término ya era usado con anterioridad por los consumidores de marihuana que utilizaban vaporizadores herbales para consumir la droga con mucha más eficacia y sin producir olores incriminatorios.
- La idea de utilizar esta palabra, es en términos prácticos, para diferenciar el vapear del fumar, ya que son cosas distintas.



Definiciones

“Vaping” se convirtió rápidamente en un verbo en inglés, a quien vapeaba se le comenzó a llamar “vaper” que posteriormente se tradujo como “vapeador” o “vapero”. Vapeador” prevaleció para referirse a la persona que vapea, así se crea una analogía con el término “fumador”.



Al dispositivo se le comenzó a denominar como “vaporizer” que en español sería “vaporizador” sin embargo por ser una palabra mas larga, se comenzó a usar también la palabra “vapeador” para referirse al dispositivo. Por estas razones, actualmente la misma palabra es válida en el argot “vaperil” tanto para referirse a la persona que vapea como para referirse al dispositivo.

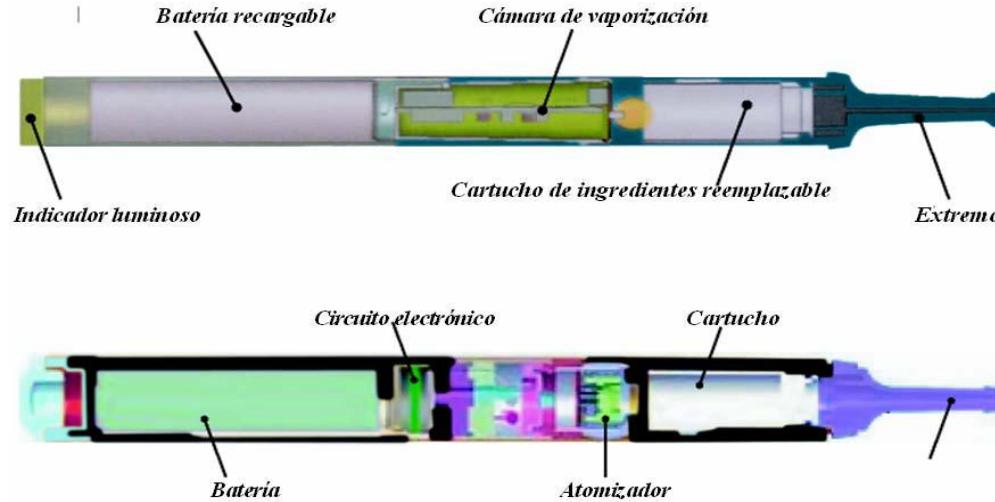
Definiciones

- ENDS (*Electronic nicotine delivery systems*)
 - Los sistemas electrónicos de administración de nicotina (ENDS) constituyen una categoría de productos de consumo diseñados para liberar nicotina en los pulmones tras introducir en la boca el extremo de un cilindro de plástico o metálico, de manera similar a un cigarrillo o un puro, e inhalar con objeto de extraer una mezcla de aire y dispositivo y liberarla en el aparato respiratorio.
 - Esta denominación abarca productos que contienen sustancias derivadas del tabaco pero no requieren tabaco para su funcionamiento. Se comercializan asociados con diversos nombres comerciales y descriptores como:
 - • “cigarrillo electrónico”
 - “cigarro electrónico”,
 - “fumar electrónicamente”
 - “cigarrillo ecológico o verde”

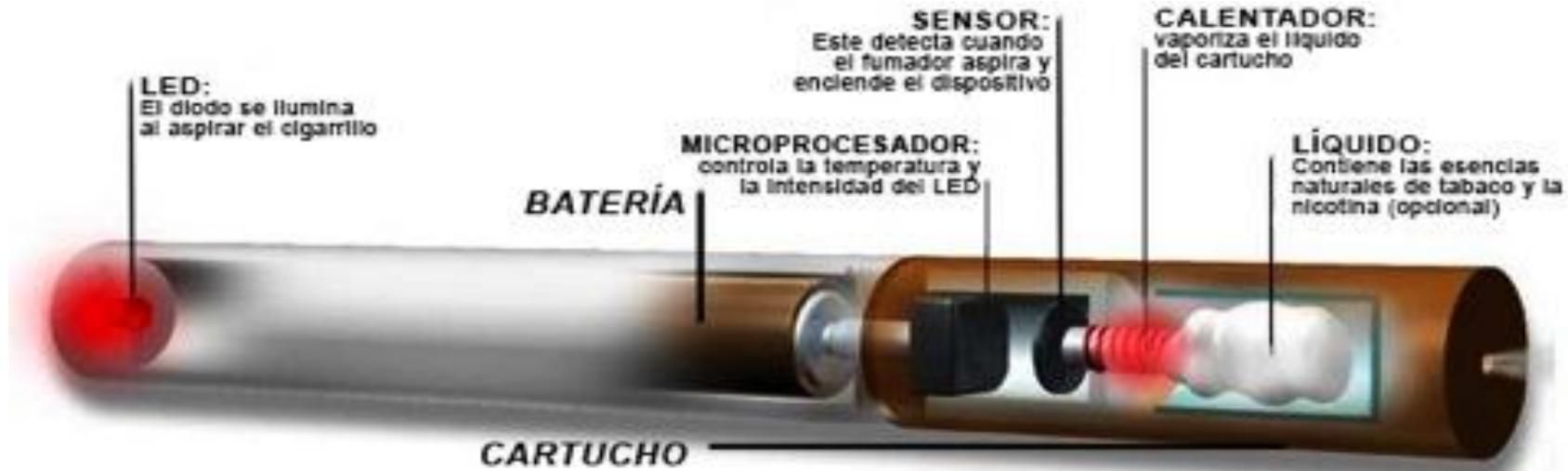
The electronic cigarette was invented by a Chinese medicine practitioner Hon Lik in China in 2003 and introduced to the market the next year.

The company he worked for, Golden Dragon Holdings, later changed its name to Ruyan (meaning "to resemble smoking") and started selling abroad.

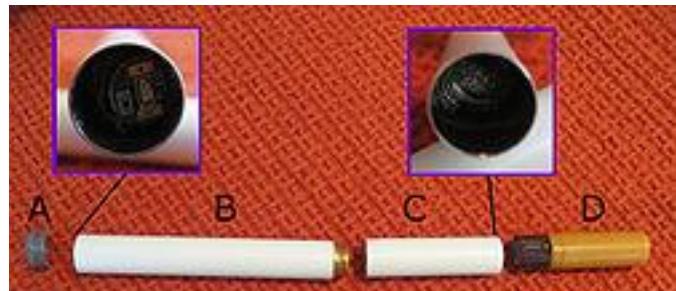
Dispositiu-mecanisme



- Una bateria (i carregador).
- Una càrrega o cartutx amb el líquid amb nicotina.
- Un atomitzador que escalfa els ingredients de la càrrega i genera el vapor.



- La bateria s'activa amb l'aspiració, i altament resta apagada.
- El líquid conté nicotina (alguns no), dissolta en un líquid (aigua i glicerina o propilenglicol, que permet crear l'efecte 'fum' o "vapor", a més d'essències o altres ingredients que proporcionen sabor i/o olor.
- Alguns dispositius contenen díodes emissors de llum, per reproduir l'aparença d'una punta de cigarret encès.



A disassembled cigarette-styled electronic cigarette.
A. LED light cover
B. battery (also houses circuitry)
C. atomizer (heating element)
D. cartridge (mouthpiece)



Components...

- La composició pot variar entre diferents marques i dins d'una mateixa marca. Poden contenir altres tòxics que no apareguin en l'etiquetatge
- Poden tenir sabors (menta, xocolata, regalèssia, etc.) que poden ser particularment atractius per als adolescents . S'estan començant a produir cigarretes amb sabor a marques de cigarretes conegudes.
- Els fabricants informen que els cartutxos contenen típicament 6 i 24 mg de nicotina , però de vegades poden tenir més de 10 mg. En alguns casos no contenen nicotina (segons els fabricants) .
- El consumidor pot combinar diferents tipus de recanvis de líquid per crear la seva pròpia mescla. La nicotina obtinguda de cada canvi és variable.
- Cada càrrega equival a unes 300 calades, i cada cigarreta normalment equival a 15 calades >> 20 cigarretes.



Nitrosaminas, nicotina...

- Recientemente, la Administración de Alimentos y Medicamentos de los Estados Unidos (FDA) analizó los productos químicos contenidos en 18 variedades de cartuchos de ENDS de dos marcas diferentes, y se observó una importante variación en cuanto a los contenidos y los niveles de sustancias liberadas. Varios productos contenían “niveles detectables de **nitrosaminas**, compuestos específicos del tabaco que son cancerígenos conocidos”.
- El análisis realizado por la FDA también reveló que los **niveles de nicotina** no se correspondían con la información que aparecía en las etiquetas de los cartuchos, y se detectó la presencia de nicotina en algunos cartuchos que se anunciaban como exentos de esta sustancia.

y Propilenglicol....



Substance	Recipe 1	Recipe 2	Recipe 3	Recipe 4
<u>Propylene glycol</u>	85%	80%	90%	80%
<u>Nicotine</u>	1.6%	2.4%	3.2%	0.1%
<u>Glycerol</u>	2%	5%	-	5%
<u>Tobacco essence</u>	-	4%	4.5%	1%
<u>Essence</u>	2%	-	1%	1%
<u>Organic acid</u>	1%	-	-	2%
<u>Anti-oxidation agent</u>	1%	-	-	-
<u>Butyl valerate</u>	-	1%	-	-
<u>Isopentyl hexonate</u>	-	1%	-	-
<u>Lauryl laurate</u>	-	0.6%	-	-
<u>Benzyl benzoate</u>	-	0.4%	-	-
<u>Methyl octynicate</u>	-	0–5%	-	-
<u>Ethyl heptylate</u>	-	0.2%	-	-
<u>Hexyl hexanoate</u>	-	0.3%	-	-
<u>Geranyl butyrate</u>	-	2%	-	-
<u>Menthol</u>	-	0.5%	-	-
<u>Citric acid</u>	-	0.5%	2.5%	-
<u>Water</u>	-	-	-	2.9%
<u>Alcohol</u>	-	-	-	8%

Possibles efectes

- Nicotina

La administración de nicotina por vía inhalatoria despierta inquietud ante posibles problemas de seguridad y adicción que van más allá de los relacionados con los tratamientos sustitutivos con nicotina (TSN) aprobados actualmente. Esta inquietud está asociada con la probable exposición de los pulmones a dosis repetidas, tal vez cientos de veces al día durante muchos meses, si estos productos se utilizan como un tratamiento de apoyo al abandono del hábito de fumar, o durante años, en el caso de fumadores que los utilicen como sustitutos del cigarrillo a largo plazo.



CHEST

Original Research

TOBACCO CESSATION AND PREVENTION

Short-term Pulmonary Effects of Using an Electronic Cigarette

Impact on Respiratory Flow Resistance,
Impedance, and Exhaled Nitric Oxide

Constantine I. Vardavas, MD, MPH, PhD; Nektarios Anagnostopoulos, MD;
Marios Koulias, MD; Vassiliki Evangelopoulou, MD; Gregory N. Connolly, DMD, MPH;
and Panagiotis K. Behrakis, MD, PhD, FCCP

Short-term Pulmonary Effects of Using an Electronic Cigarette Immediate Respiratory Effects of e-Cigarette Use: Impact on Respiratory Flow Resistance, Impedance, and Exhaled Nitric Oxide

Constantine I. Vardavas, MD, MPH, PhD; Nektarios Anagnostopoulos, MD; Marios Koulias, MD; Vassiliki Evangelopoulou, MD; Gregory N. Connolly, DMD, MPH; Panagiotis K. Behrakis, MD, PhD, FCCP

[http://journal.publications.chestnet.org/article.aspx?articleid=1187047 – Abstract](http://journal.publications.chestnet.org/article.aspx?articleid=1187047)

Estudi experimental al laboratori amb voluntaris sans . Mostra efectes fisiològics adversos immediats en la funció pulmonar Són diferències estadísticament significatives, però de rellevància clínica incerta.
No hi ha dades a llarg termini.

e-Cigarettes assessed in the context of this study to have immediate adverse physiologic effects on short-term use that are similar to some of the effects of tobacco smoking; however, the long-term effects of e-cigarette use are unknown but important and worthy of further investigation.

Són segurs ?

- **La seguretat no està demostrada científicamente . Els riscos potencials a curt i llarg termini per a la salut dels usuaris continuen sense ser coneguts.**
- **Els productes varien molt en quantitat de nicotina i altres substàncies químiques que lliuren. Els consumidors no poden saber el que realment està alliberant el producte que han comprat .**
- **La majoria contenen grans concentracions de propilenglicol, que és un irritant de les mucoses i les vies respiratòries altes quan s'inhala . El propilenglicol és un alcohol classificat per la FDA com “generalment reconegut com segur”. S'utilitza en aliments, cosmètics, productes farmacèutics (inhaladors) i al fum artificial dels teatres i espectacles .**
- **A banda de la nicotina, detecció de nitrosamines (en dosis molt inferiors a les emeses per una cigarreta convencional), metalls (Ni, Cr), formaldehid, acetaldehid i altres COVs (a dosis baixes).**

Ús per deixar de fumar o ús per seguir fumant?

- ❖ Un dels elements de marketing dels e-cigs. és el seu ús per a deixar de fumar.
- ❖ Alguns estudis petits en la fase inicial de penetració al mercat de les e-cigs. mostren que una proporció d'usuaris ho fa servir per deixar de fumar del tot.
- ❖ Un altre element de marketing dels e-cigs. ha estat orientat a oferir un producte que es pot fer servir a tot arreu i que per tant afebleix clarament el camí cap a deixar de fumar.

Com mètode per deixar de fumar

- La FDA **no considera estos productos como válidos para ayudar a dejar de fumar**. Una monografía del Institute of Medicine (IOM) de la National Academy of Science de EEUU concluía que los cigarrillos electrónicos no han demostrado ser más seguros que los cigarrillos convencionales ni son un método evaluado para dejar de fumar.
- Varios investigadores han señalado que las noticias de que estos cigarrillos reducen el riesgo, como informan algunas marcas, puede tener el efecto adverso de **impedir el cese definitivo del consumo de tabaco o animar a los mas jóvenes y a los ex fumadores a probar estos nuevos productos** al verse atraídos por los sabores y la falsa imagen de seguridad. La evidencia para promocionar el tabaco sin humo como estrategia de salud pública es débil e inconsistente (Tomar, 2007)

Què diuen els assajos?

- ❖ El principal assaig és el de **Chris Bullen et al (Lancet 2013)** que compara e.cigs amb nicotina, pegats de nicotina i e-cigs sense nicotina (considerats placebo).
- ❖ Assaig pragmàtic randomitzat per valorar superioritat:
N 657, aleatoritzats 4:4:1.
- ❖ Valora l'abstinència de fumar tabac de manera continuada i puntual (els darrers 7 dies), mesurada mesurant el CO en l'aire espirat (<10 ppm), així com la magnitud del consum i els esdeveniments adversos.

Electronic cigarettes for smoking cessation: a randomised controlled trial

Christopher Bullen, Cathi Horwitz, Murray Laugesen, Hayden Mitchell, Versha Parag, Jonathan Willmetts, Natalie Warner

Summary

Background Electronic cigarettes (e-cigarettes) can deliver nicotine and mitigate tobacco withdrawal and are used by many smokers to assist quit attempts. We investigated whether e-cigarettes are more effective than nicotine patches at helping smokers to quit.

Methods We did this pragmatic randomised-controlled superiority trial in Auckland, New Zealand, between Sept 6, 2011, and July 5, 2013. Adult (≥18 years) smokers wanting to quit were randomised (with computerised block randomisation) to receive either nicotine patches (16 mg nicotine/24 h), nicotine e-cigarettes (16 mg nicotine/24 h), or placebo e-cigarettes (nicotine patches [21 mg patch, one daily], or placebo e-cigarettes [no nicotine], from 1 week before until 12 weeks after quit date). Primary outcome was self-reported continuous abstinence at 4 months (urine carbon monoxide measurement <10 ppm). Primary analysis was by intention to treat. This trial is registered with the Australian New Zealand Clinical Trials Registry.

Findings Of 657 people randomised (289 to nicotine e-cigarettes, 295 to patches, and 73 to placebo e-cigarettes) and were included in the intention-to-treat analysis, At 4 months, verified abstinence was 7.3% (21 of 289) with nicotine e-cigarettes, 5.8% (17 of 295) with patches, and 4.1% (three of 73) with placebo e-cigarettes (risk difference for nicotine e-cigarettes vs patches: 1.5% [95% CI -0.29 to 3.4]; risk difference for nicotine e-cigarettes vs placebo e-cigarettes: 3.2% [95% CI -2.29 to 8.4]). Achievement of abstinence was substantially lower than we anticipated for the power calculation, thus we had insufficient statistical power to conclude superiority of nicotine e-cigarettes to patches or to placebo e-cigarettes. There were no significant differences in adverse events between the three groups. In the nicotine e-cigarettes group, 119 events in the patches group, and 36 events in the placebo e-cigarettes group. We noted no evidence of an association between adverse events and study product.

Interpretation E-cigarettes, with or without nicotine, were modestly effective at helping smokers to quit, with similar achievement of abstinence as with nicotine patches, and few adverse events. Uncertainty exists about the place of e-cigarettes in smoking cessation, and further research is urgently needed to clarify establish their overall benefits and harms at both individual and population levels.

Funding Health Research Council of New Zealand.

Introduction

Since their launch in 2004, electronic cigarettes (e-cigarettes), a diverse range of battery-operated devices that release a fine aerosol containing nicotine, have been adopted by millions of people. Many smokers use e-cigarettes to help them quit or of those making a quit attempt in the USA in 2011 (n=20 312) 17% (95% CI 16.1–17.9%) used e-cigarettes, thus some analysts predict that they will surpass cigarette sales by 2015. 2

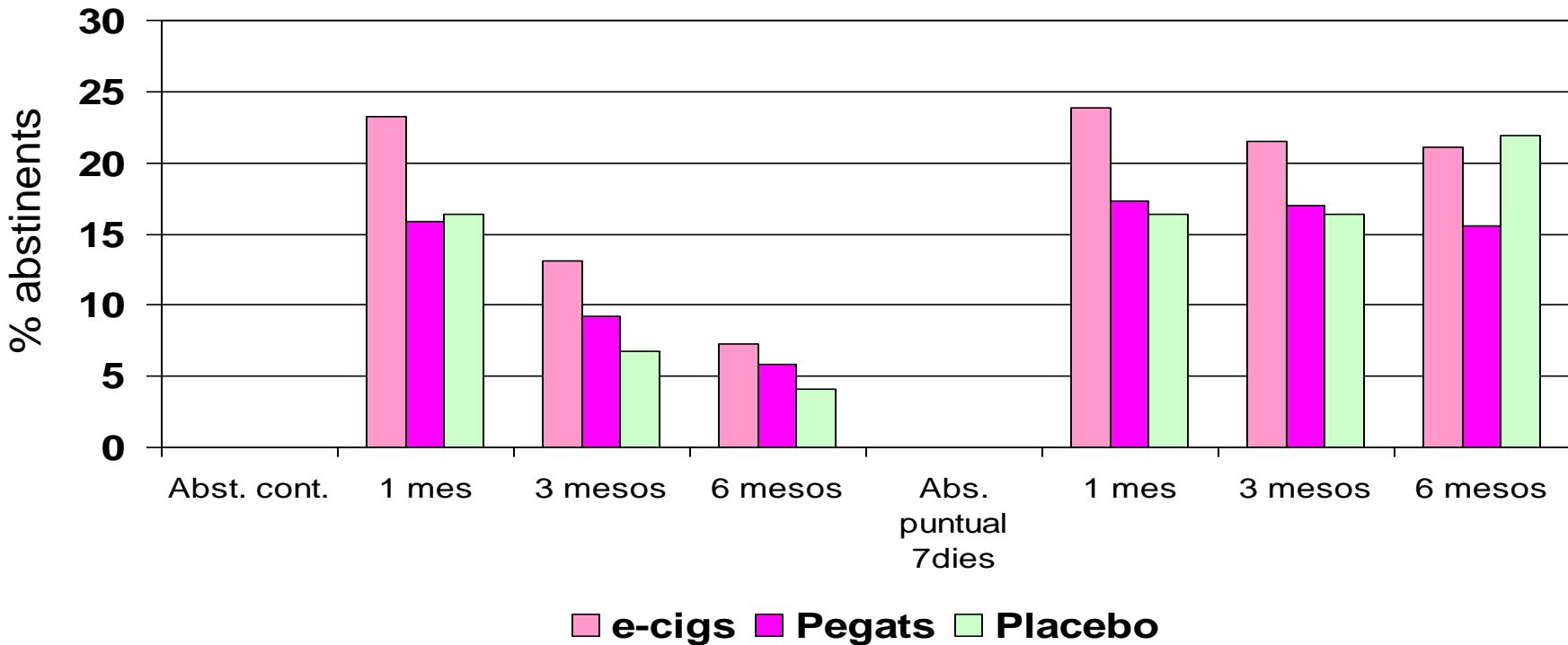
The place of e-cigarettes in tobacco control is controversial, and there is a paucity of reliable data to inform debate. E-cigarettes have the potential to assist smokers to quit or reduce smoking; surveys show that many smokers try e-cigarettes to help them quit, and that e-cigarettes e-cigarettes are capable of delivering nicotine into the bloodstream and attenuating tobacco withdrawal as effectively as nicotine replacement therapy (RT). Use of e-cigarettes also mimics behaviour and sensory dimensions of smoking. However, a trial in 300 smokers unwilling to quit showed low rates of cessation at 12 months for nicotine e-cigarettes and placebo e-cigarettes compared with nicotine patches. 3 Previous researchers have detected toxins in e-cigarette fluid and vapour, but at much the same concentrations as with conventional tobacco smoke. 4–6 Some analysts now deem e-cigarettes to be very unlikely to pose significant health risks.

In this trial we aimed to assess whether e-cigarettes with cartridges containing nicotine (nicotine e-cigarette) and those containing no nicotine (placebo e-cigarette) are more effective than patches and placebo e-cigarettes for smoking reduction, tobacco dependence, and risk of smoking-related diseases, and that they would have no greater risk of adverse events than nicotine patches.

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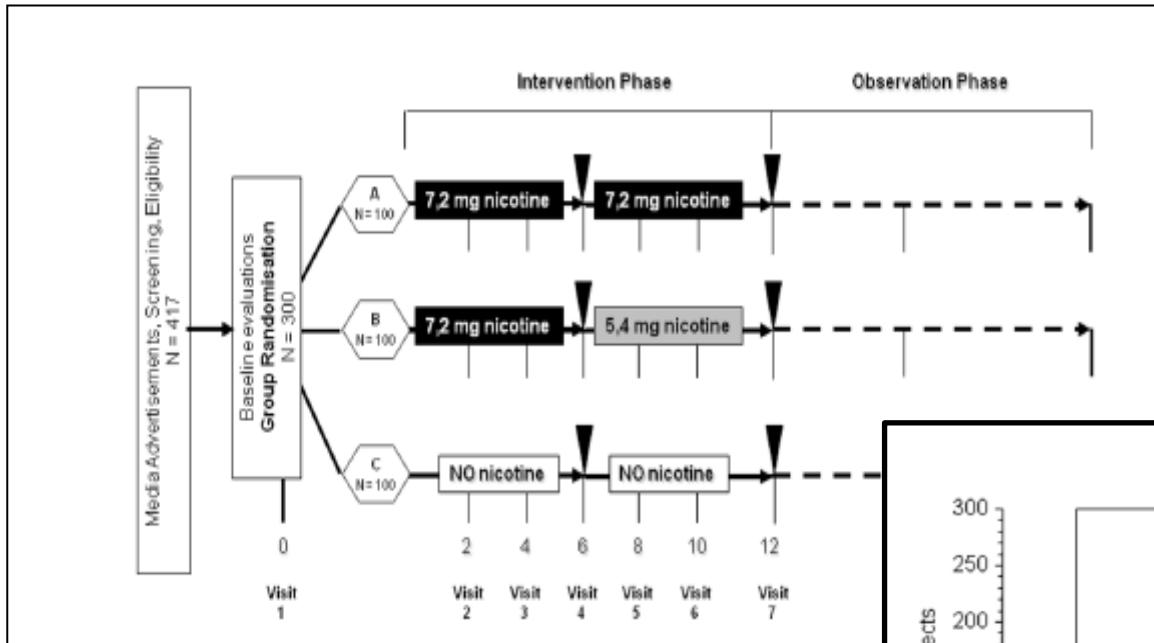
Abstinència continuada i puntual

C. Bullen et al. 2013



‘les e-cigs, amb i sense nicotina, van tenir una efectivitat de petita magnitud per ajudar als fumadors a deixar de fumar, assolint nivells d’abstinència similars als pegats de nicotina, amb pocs efectes adversos. (...) cal de forma urgent més recerca per establir amb claretat els seus beneficis i riscos globals a nivell individual i poblacional’.

Caponnetto et al, PLOS ONE 2013



EffiCacy and Safety of an eLectronic cigarette SubstitutE (ECLAT): A Prospective 12-Month Randomized Control Design Study

Paolo Caponnetto^{1,2*}, Daniela Campagna^{1,2}, Fabio Cibella¹, Jayne B. Morrell¹, Massimo Caruso¹, Cristina Russo¹, Riccardo Polosa¹

¹Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy; ²Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy; ³Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy; ⁴Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy; ⁵Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy; ⁶Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy; ⁷Istituto Superiore di Sanità, National Research Institute for Health, Rome, Italy

Abstract

Background: Electronic cigarettes (e-cigarettes) are becoming increasingly popular, with smokers, non-smokers, users report benefits such as taste and smoking to reduce cigarette consumption. To reduce tobacco-related diseases, due to cigarette smoking experience, but with reduced health risks, research on e-cigarettes is urgently needed in order to evaluate their safety and efficacy.

Objectives: To evaluate the efficacy and safety of an electronic cigarette (ECLAT) compared with a placebo e-cigarette (Cigarette-Add Group) or no cigarette (No Nicotine group) in smokers who are willing to quit smoking.

Methods: This prospective, randomized, double-blind, parallel group study included 300 smokers (mean age 56.5 ± 9.3 years) who expressed the intention to reduce or quit smoking.

Interventions: Participants were assigned to three groups: Group A received 7.2 mg nicotine followed by a further 7.2 mg nicotine cartridge (Cigarette-Add Group); Group B received 7.2 mg nicotine followed by a further 5.4 mg nicotine cartridge (Cigarette-Add Group); Group C received no nicotine (No Nicotine group).

Measurements and main analyses: Primary outcome measures were the number of subjects who reduced or quit smoking.

Results: Decline in cigarette use and eCIG levels were observed in each study visit in all three study groups ($p<0.001$ vs baseline). At week 12, 35% of subjects in the Cigarette-Add Group, 29% in the Cigarette-Add Group and 14% in the No Nicotine Group reduced smoking. At week 24, 44% in the Cigarette-Add Group, 33% in the Cigarette-Add Group and 17% in the No Nicotine Group reduced smoking. Complete abstinence from tobacco smoking was documented in 15.7% and 6.7% of subjects in the Cigarette-Add Group and the No Nicotine Group, respectively. Adverse events were infrequent and most were mild. No serious adverse events were reported. No significant differences in adverse events were observed between the three groups.

Conclusion: In smokers not intending to quit, the use of e-cigarettes, with or without nicotine, decreased cigarette consumption and increased the number of subjects reducing or quitting smoking. The safety of e-cigarettes has been demonstrated in this study.

*Correspondence: Caponnetto P, Polosa R, Capanna D, Russo C, Cibella F, Morrell JB, Caruso M (2013) Efficacy and Safety of an eLectronic cigarette SubstitutE (ECLAT): A Prospective 12-Month Randomized Control Design Study. PLoS ONE 8(5): e63102. doi:10.1371/journal.pone.0063102

Check for updates

Citation: Caponnetto P, Polosa R, Capanna D, Russo C, Cibella F, Morrell JB, Caruso M (2013) Efficacy and Safety of an eLectronic cigarette SubstitutE (ECLAT): A Prospective 12-Month Randomized Control Design Study. PLoS ONE 8(5): e63102. doi:10.1371/journal.pone.0063102

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Competing interests: The funders of this study have no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript. The funders had no role in the preparation of the manuscript. The authors declare that the research was conducted in the absence of any commercial or financial bias for this article.

Availability of data and materials: All relevant data are within the paper. All additional data are contained in the supporting information file.

Funding: The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript. The funders had no role in the preparation of the manuscript. The funders had no role in the preparation of the manuscript.

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N= 300 (1-1-1)
No intention to quit

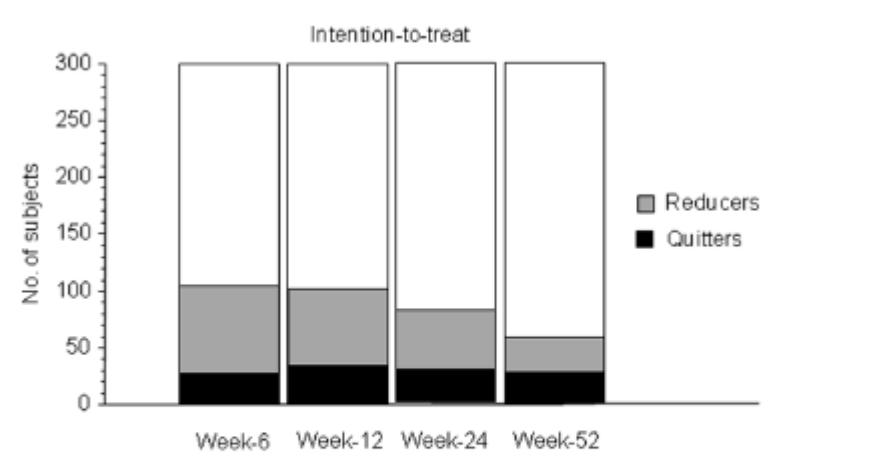


Figure 6. Time-course (at Week-6, -12, -24, and -52) of changes in the number of reducers and quitters in the ECLAT study (intention-to-treat analysis; all three study groups combined together).

doi:10.1371/journal.pone.0066317.g006

En fumadors sense intenció de deixar-ho, les ecigs representen un instrument prometedor per reduir el consum mitjà i s'aconsegueixen nivells d'abstinència semblants als obtinguts per les teràpies homologades (TSN, altres...)...

RESEARCH ARTICLE

Open Access

Effect of an electronic nicotine delivery device (e-Cigarette) on smoking reduction and cessation: a prospective 6-month pilot study

Ricardo Polosa^{1,2}, Pasquale Caponnetto^{1,2}, Jaymin B Morjaria³, Gabriella Papale^{1,2}, Davide Campagna^{1,2} and Cristina Russo^{1,2}

Abstract

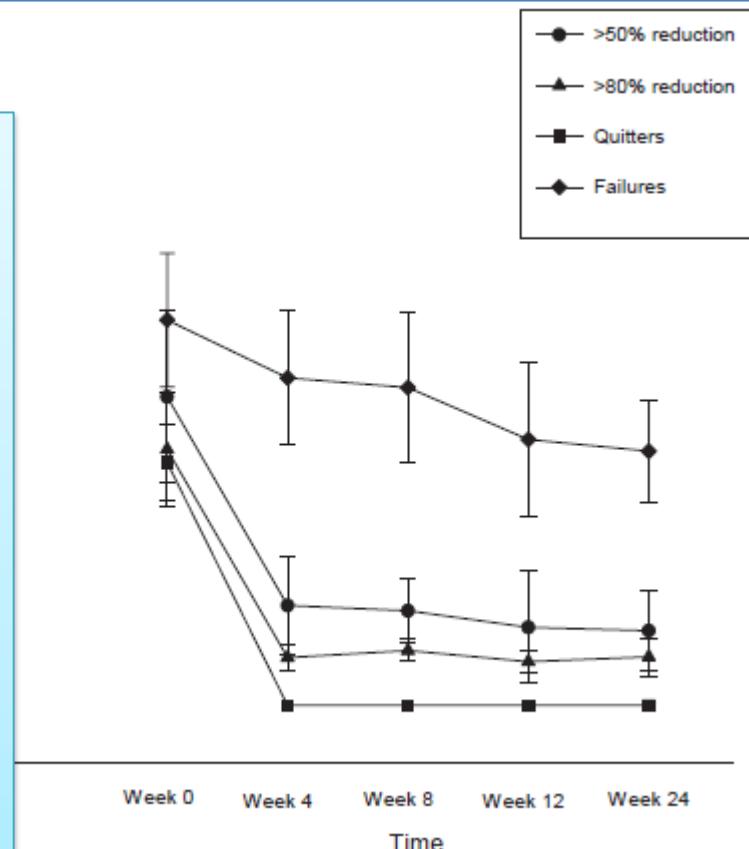
Background: Cigarette smoking is a tough addiction to break. Therefore, improved approaches to smoking cessation are necessary. The electronic-cigarette (e-Cigarette), a battery-powered electronic nicotine delivery device (ENDO) resembling a cigarette, may help smokers to remain abstinent during their quit attempt or to reduce cigarette consumption. Efficacy and safety of these devices in long-term smoking cessation and/or smoking reduction studies have never been investigated.

Methods: In this prospective proof-of-concept study we monitored possible modifications in smoking habits of 40 regular smokers (smokers in full accordance with 'Cigarette's a Cigarette with a focus on smoking reduction).

N= 40 smokers

Results: Sustained 50% reduction in the number of cig/day at week-24 was shown in 13/40(32.5%) participants; their median of 25 cigs/day decreasing to 6 cigs/day ($p < 0.001$). Sustained 80% reduction was shown in 5/40 (12.5%) participants; their median of 30 cigs/day decreasing to 3 cigs/day ($p = 0.043$). Sustained smoking abstinence at week-24 was observed in 9/40(22.5%) participants, with 6/9 still using the e-Cigarette by the end of the study. Combined sustained 50% reduction and smoking abstinence was shown in 22/40 (55%) participants, with an overall 88% fall in cigs/day. Mouth (20.6%) and throat (32.4%) irritation, and dry cough (32.4%) were common, but diminished substantially by week-24. Overall, 2 to 3 cartridges/day were used throughout the study. Participants' perception and acceptance of the product was good.

Polosa et al. BMC Public Health
2011, 11:786
<http://www.biomedcentral.com/1471-2458/11/786>



SIEGEL MB. ET AL.
Am J Prev Med
2011;40(4):472–475

- Encuesta a 222 fumadores que usaron eCigs
- RES>
- Abst Puntual a los 6 meses: 31.0%
(95% CI 24.8%, 37.2%).
- Reducción: 67%

Electronic Cigarettes As a Smoking-Cessation Tool Results from an Online Survey

Michael B. Siegel, MD, MPH, Kerry L. Tanwar, BA, Kathleen S. Wood, MPH

This activity is available for CME credit. See page A4 for information.

Background: Electronic cigarettes (e-cigarettes) are battery-powered devices that deliver nicotine without any combustion or smoke. These devices have generated much publicity among the smoking-cessation community and support from dedicated users; however, little is known about the efficacy of the device as a smoking-cessation tool.

Purpose: This study aimed to examine the effectiveness of e-cigarettes for smoking cessation using a survey of smokers who had tried e-cigarettes.

Methods: Using as a sampling frame a cohort of all first-time purchasers of a particular brand of e-cigarettes during a 2-week period, a cross-sectional, online survey was conducted in 2010 to describe e-cigarette use patterns and their effectiveness as a smoking-cessation tool. There were 222 respondents, with a survey response rate of 4.5%. The primary outcome variable was the point prevalence of smoking abstinence at 6 months after initial e-cigarette purchase.

Results: The primary finding was that the 6-month point prevalence of smoking abstinence among the e-cigarette users in the sample was 31.0% (95% CI=24.8%, 37.2%). A large percentage of respondents reported a reduction in the number of cigarettes they smoked (66.8%) and almost half reported abstinence from smoking for a period of time (48.8%). Those respondents using e-cigarettes more than 20 times per day had a quit rate of 70.0%. Of respondents who were not smoking at 6 months, 34.3% were not using e-cigarettes or any nicotine-containing products at the time.

Conclusions: Findings suggest that e-cigarettes may hold promise as a smoking-cessation method and that they are worthy of further study using more-rigorous research designs.

(Am J Prev Med 2011;40(4):472–475) © 2011 American Journal of Preventive Medicine

Introduction

Electronic cigarettes (e-cigarettes) are battery-powered devices that deliver nicotine without any combustion or smoke. Use and awareness of e-cigarettes has dramatically increased over the past 3 years.^{1–3} Ayers et al.,³ in this issue of the *American Journal of Preventive Medicine*, report that Internet searchers for e-cigarettes in the U.S. now exceed those for any other smoking alternative, nicotine replacement, or smoking-cessation product. Although e-cigarettes have generated much support from dedicated users, little is known about the efficacy of the device as a smoking-cessation tool.

Most smoking-cessation methods focus on one component of smoking: nicotine addiction. However, even with the assistance of medications that treat nicotine addiction, the success rate for quitting remains low. Based on a Cochrane review of seven studies^{4–9} that measured smoking cessation using nicotine replacement therapy (NRT), the average 6-month point prevalence of smoking abstinence is only 17.8%, and the 6-month point prevalence of smoking abstinence in the pooled data from these studies is only 11.9%.

Several studies^{10,11} have suggested that physical and behavioral stimuli—such as merely holding a cigarette—can reduce the craving to smoke, even in the absence of nicotine delivery. Given that both nicotine and smoking-related cues appear to influence cigarette craving, e-cigarettes may present a unique opportunity to promote smoking cessation. Two preliminary studies^{12–14} provide evidence that e-cigarette use suppresses the urge to smoke.

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- Los cigarrillos electrónicos están evolucionando y cada vez hay más pruebas que sugieren que algunos, si no todos, proporcionan nicotina eficazmente.
- Hay poca evidencia real de los daños causados por los cigarrillos electrónicos hasta la fecha, sobre todo en comparación con el tabaquismo.
- Los cigarrillos electrónicos son utilizados por los fumadores y ex fumadores, pero hay poca evidencia de su uso por los que nunca han fumado.
- ASH apoya la regulación para garantizar la seguridad y la fiabilidad de los e-cigarrillos pero, en ausencia de daño a terceros, no considera adecuado incluirlos bajo las regulaciones de ambientes libres de humo.
- La Agencia Reguladora de Medicamentos y Productos Sanitarios (MHRA) ha revisado posibles opciones de regulación, mientras la NICE ha elaborado orientaciones.

January 2013

ash. briefing
action on smoking and health

Electronic cigarettes

www.ash.org.uk

Summary

- E-cigarettes are evolving and there is increasing evidence to suggest that some if not all products provide effective nicotine delivery.
- There is little real-world evidence of harm from e-cigarettes to date, especially in comparison to smoking.
- E-cigarettes are used by both smokers and ex-smokers, but there is little evidence of use by those who have never smoked.
- ASH supports regulation to ensure the safety and reliability of e-cigarettes but, in the absence of harm to bystanders, does not consider it appropriate to include e-cigarettes under smokefree regulations.
- The Medicines and Healthcare products Regulatory Agency (MHRA) is currently reviewing options to regulate nicotine-containing products including e-cigarettes. Meanwhile, the National Institute for Health and Clinical Excellence (NICE) is developing guidance on harm reduction, which will include electronic cigarettes, for publication in May 2013.

Nicotine Substitution

Smoking is the largest, preventable cause of premature mortality in the UK. The goal of public health is to diminish the harm caused by tobacco products. While the ideal remains that people should stop using tobacco completely and permanently, consensus currently supports a properly regulated harm reduction approach¹⁻², a framework by which the harmful effects of smoking are reduced without requiring the elimination of a behaviour that is not necessarily condoned. Such strategies have proved successful in the past, for example within the contexts of needle exchange programmes for illicit drug use and the promotion of safer sex to prevent HIV infection.³⁻⁴

In 1978 Professor Michael Russell wrote: "People smoke for nicotine but they die from the tar."⁵ Indeed, the harm from smoking is caused almost exclusively by toxins present in tobacco released through combustion. By contrast, pure nicotine products, although addictive, are considerably less harmful. Electronic cigarettes consequently represent a safer alternative to cigarettes for smokers who are unable or unwilling to stop using nicotine.

The National Institute for Health and Clinical Excellence (NICE) is currently developing guidance on a harm reduction approach to smoking.⁶ NICE's recommendations, to be published in spring 2013, aim to inform on how best to reduce illness and deaths attributable to smoking through a harm reduction approach. As part of this guidance, NICE will include recommendations on electronic cigarettes.

What are e-cigarettes?

Electronic cigarettes, also known as electronic nicotine delivery systems (ENDS),⁷ are designed to look and feel like cigarettes. They have been marketed as cheaper and healthier alternatives to cigarettes and for use in places where smoking is not permitted since they do not produce smoke.

És eficaç per deixar de fumar tabac ?

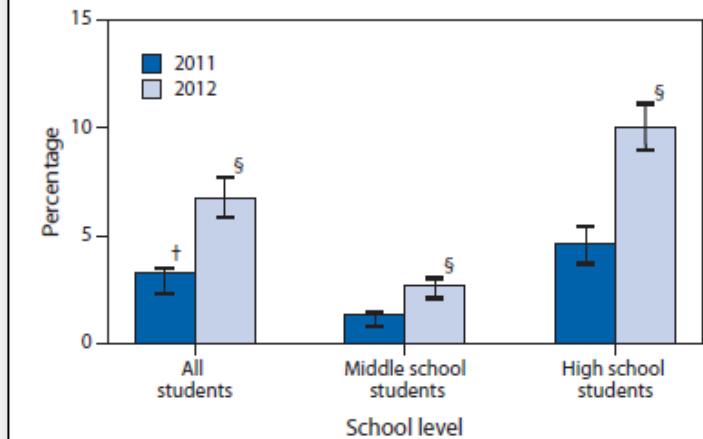
- L'eficàcia de les cigarretes electròniques per ajudar les persones a deixar de fumar no s'ha demostrat científicament .
- No hi ha suficients estudis que mostrin que les cigarretes electròniques poden ser una ajuda efectiva per deixar de fumar. La majoria de les afirmacions que es fan son inexactes, enganyoses o estan insuficientment provades.
- Hi ha **estudis molt petits o amb limitacions metodològiques clares**. A l'estudi de C. Bullen a Nova Zelanda només es van estudiar 289 persones que utilitzaven cigarretes electròniques amb nicotina i 73 cigarretes electròniques placebo (enfront a 295 amb pegats de nicotina) i es van seguir només durant 6 mesos. Es un estudi petit que no troba diferències d'èxit amb els pegats però tampoc amb el placebo.
- Un altre assaig clínic comparant cigarretes electrònics amb diferents quantitats de nicotina i sense nicotina en persones que no volien deixar de fumar no va trobar diferències entre ells.

e-cigs i menors

Hi ha dades que suggereixen que **podria ser una porta d'entrada** a l'addicció a la nicotina.

- EUA (MMWR 2013): ús per 10% a *high school* (4,7% l'any anterior).
- França (Dautzenberg 2013): ús per 8,1% 12-19 anys, 4,4% entre no fumadors.
- Polònia (Goniewicz 2012): ús per 23,5% 15-19 anys, 3,2% entre no fumadors.
- Corea (Cho 2008): 0,5% adolescents escolaritzats l'havien usat.

FIGURE. Ever electronic cigarette use* among middle and high school students, by year — National Youth Tobacco Survey, United States, 2011-2012



* Ever electronic cigarette use defined as having ever used electronic cigarettes, even just one time.

† 95% confidence interval.

§ Statistically significant difference between 2011 and 2012 (chi-square, p<0.05).

Arguments

- **A favor**
 - No hi ha evidència riscos importants
 - “Harm reduction”
 - Balanç de riscos favorable respecte a fumar tabac
 - Preferible a TSN
 - Estimula abandonament
- **En contra**
 - Dubtes en relació a la seva seguretat
 - Retarda/impedeix cessació
 - Porta d’entrada a l’addició nicotínica
 - Renormalitza/reculturalitza el fet de fumar
 - Mina avenços obtinguts (com lleis espais sense fum)
 - Màrqueting agressiu /mercat desregulat

Criteris i recomanacions: antecedents

- La FDA no els considera productes vàlids per a deixar de fumar: no estan autoritzats com a tractament, tampoc els ha regulat (ho feia però va perdre un judici el 2010; potser ho farà aquest mes).
- El CNPT va fer un informe el 25 d'octubre de 2012.
- L'OMS va fer un toc d'alerta fort el 9 de juliol de 2013
- Les nostres xarxes (XCHSF, XAPSF) van fer un posicionament conjunt el 31 de juliol.
- La proposta de directiva europea sobre productes de tabac discutida aquests dies inclou referències (farmàcia vs. prods. tabac).
- Diversos països han optat per diverses opcions (una entre altres és no fer rès).

CIGARRETES ELECTRÓNIQUES

En els darrers anys a diversos països, i més recentment a Catalunya, la comercialització de cigarretes electròniques ha crescut molt ràpidament, doblant o triplicant cada any el nombre d'usuaris. Malgrat la popularitat d'aquests aparells, encara romanen molts dubtes entre els consumidors i entre els professionals sanitaris.

acciones
xarxa

Es de temer que la promoción de estos productos pueda minar las estrategias de eficacia demostrada en el control del tabaco.

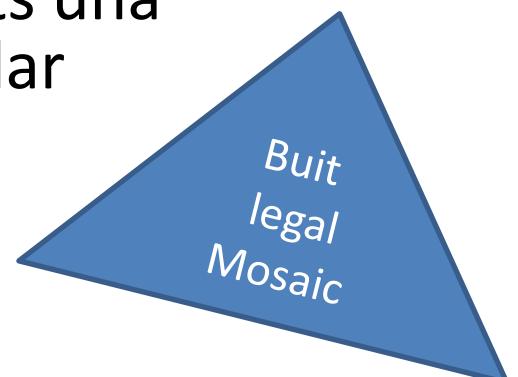
Uno de los problemas que pueden acarrear es conflictos y discusiones si se consumen en lugares públicos cerrados en los que no está permitido fumar



CNPT 2012

La Unió Europea

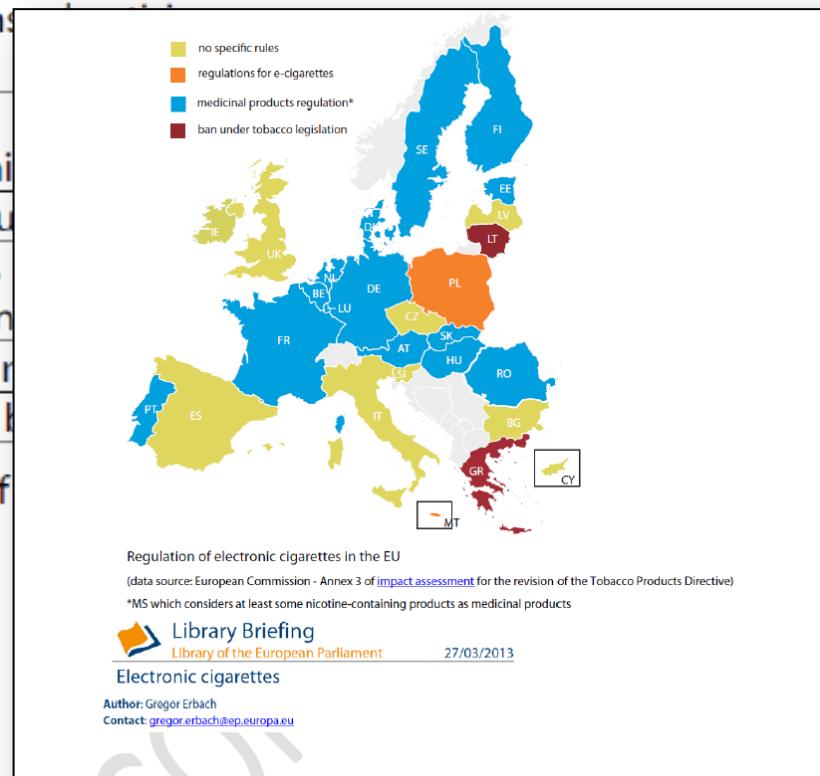
- Whether electronic cigarettes could be regarded as falling under Directive 93/42/EEC on medical devices depends on the claimed intended use and whether this intended use has a medical purpose. "It is for each national authority to decide, account being taken of all the characteristics of the product, whether it falls within the definition of a medicinal product by its function or presentation" (UE, inf. 2009)
- La UE está discutint en aquests moments una normativa (nova DPT) que podria regular aquests productes.



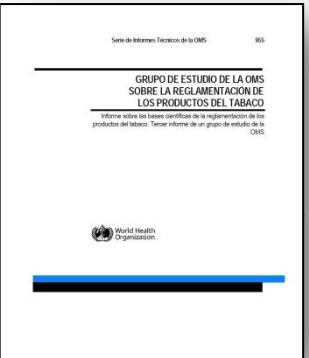
Annex: Regulation in EU Member States

Bulgaria, Cyprus, Czech Republic, Ireland, Italy, Latvia, Slovenia, Spain, United Kingdom	no specific rules, existing consumer product safety legislation applies
Belgium, Luxembourg	considered as tobacco product if it contains tobacco extract, and as medicinal product if it contains nicotine but no tobacco extract
Austria, Denmark, Estonia, Finland, Germany, Hungary, Netherlands, Portugal ⁷ , Romania, Slovakia, Sweden	considered as medicinal product; Finland bans e-cigarettes
France	considered exceeds limits
Greece	prohibited under tobacco legislation
Lithuania	banned as nicotine content exceeds limits
Malta	regulated under tobacco legislation
Poland	advertising banned

Belgium, Malta and Slovakia ban the consumption of e-cigarettes in bars and restaurants and other workplaces. (source: European Parliament resolution on smoke-free environments, March 2013).



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Tobacco Free Initiative (TFI)

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Questions and answers on electronic cigarettes or electronic nicotine delivery systems (ENDS)

Statement

9 July 2013

What are electronic cigarettes?

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[Marketers of electronic cigarettes halt unproven therapy claims](#)[Report on the Scientific Basis of](#)

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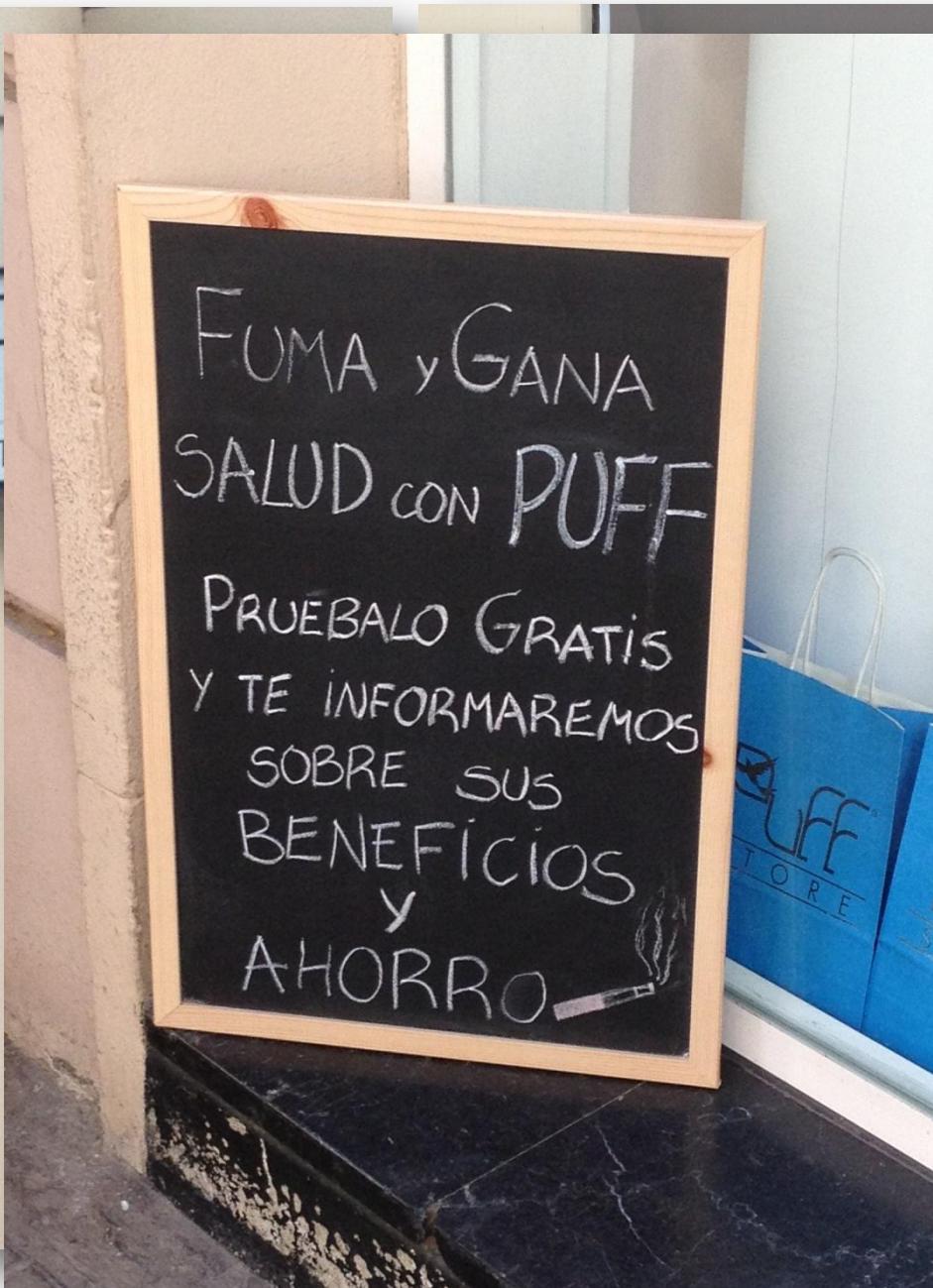
Conclusió

“ Fins que no hi hagi dades que demostrin que són productes segurs, eficaços i de qualitat acceptable i que això estigui certificat per un organisme regulador nacional competent , els consumidors no haurien d’ utilitzar-los”

Una innovació tecnològica...



Fotos. Esteve Saltó (ES)



Pedro Cátedra, portaveu dels vaporejadors d'Espanya



HONDA
The Power of Dreams

Tinc 43 anys. Sóc de Madrid i visc a Barcelona. Dirigeixo la distribució a Espanya d'una marca d'e-cigarrets. Sóc casat i tinc dos fills, de 9 i 5 anys. Política? Agnòstic. Creences? Agnòstic: sóc un pragmàtic! Ja hi ha 200.000 vaporejadors a Espanya, i cada cop som més

“Vaporejar és una manera de fumar sense conseqüències”



MANE ESPINOSA

Quina bona olor que fa! Aroma de crema irlandesa. Li agrada? És una de les aromes que tenen més sortida, avui, entre els vaporejadors.

Vaporejadors? Fumar un cigarret electrònic és vaporejar.

Vaporejar ve de vapor?

Sí, només inhales pel broquet d'un e-cigarret. És vapor d'aigua.

El veig exhalar un vapor blanc, dens... i aromàtic.

El dipòsit de l'e-cigarret es carrega amb un líquid que allibera aquest vapor en contacte amb l'escalfador d'una resistència interna.

Quin líquid és, aquest?

Glicol propilènic i glicerol vegetal. Atomitzà molt bé, esdevé vapor d'aigua desionitzat, com d'aigua destil·lada.

I per què no es fa amb aigua destil·lada? No vaporitzaria bé, aquesta temperatura.

I aquests líquids són innocus? Són del tot innocus: són alcoholos estables utilitzats en aerosols per a aèrmatics i altres compostos farmacèutics.

Què mes conté, l'e-cigarret?

Dissolta en el líquid, aroma alimentària.

Què es això?

Molècules aromatitzants com les que es fan servir en l'alimentació, aprovades per la Unió Europea. Dissoltes en el líquid, atomitzat molt bé i expandeixen aquesta aroma.

Hummm... Quines altres aromes hi ha?

N'hi haunes 60 de diferents! Whisky i altres lícors, gintonic, mojito, cirera, pera, poma, coco, galeta, cafè, fusta, eucaliptus, marihuana...

Marihuana?

Vapor d'aigua amb aroma de marihuana, sens els principis actius de la marihuana! Ens ho han demandat molts vaporejadors.

Caram.

Podem dissenyar qualsevol aroma. Però les més sol·licitades són les aromes de tabac...

Ros o negre?

Hi ha vint-i-dues aromes de tabac diferents: Winston, Marlboro, Chesterfield, Cohibas... Els exfumadors del qualsevol marca de tabac tenen la seva aroma per vaporejar!

Però sense nicotina.

Tota la gamma de líquids aromàtics per vaporejar té una versió amb nicotina i sense.

Amb quina dosi de nicotina?

Hi ha líquids amb diverses intensitats de nicotina, des de quatre mil·ligrams de nicoti-

E-cigarret

Agafa una pipa d'aigua (narguil) i miniaturitza-la: tens un cigarret elèctric. Cinc milions d'europeus ja es dediquen a vaporejar (atenció al neologisme). A Espanya ja ho fan 200.000 persones, i cada cop són més: cada mes es dobla la quantitat de botigues

d'e-cigarrets (de la marca Puff, la que porta Pedro Cátedra). Totes les marques d'e-cigarrets estan acordant constituir l'Asociación Nacional Espanola de Vapeadores (ANEV), per defensar els seus interessos: ne-

guen que vaporejar tingui contraindicacions per a la salut, com insinuen els fabricants de xiclets, pastilles i pegats de nicotina. Té l'avantatge psicològic que s'assembla a fumar, sense jugar-s'hi el pulmó.

na per mil·litre fins a 8, 12, 16, i fins i tot 24 mg/ml; dóna el mateix cop i fa el mateix picor al pit que el tabac negre fort.

Quina equivalència tenen aquestes càrregues amb el tabac?

Una càrrega de 16 mg/ml en un dia equival a fumar en un dia un paquet de tabac. Però sense les conseqüències nocives!

Vaporejar amb nicotina és més sa que fumar?

La combustió de tabac allibera 4.900 substàncies, vint de les quals són cancerígenes! El cigarret elèctric no en té cap: vaporejar és fumar sense conseqüències nocives.

Però mentre hi hagi nicotina...

És una toxina, però no cancerígena. Fes la prova del tovallop!

Com es fa?

Fes una pipada de tabac, posa un tovallop als llavis i exhala: queda una taca marró. Ara fes una pipada d'e-cigarret i repeteix l'operació: què queda al tovallop? Res! Només és vapor d'aigua!

Es vaporeja més amb nicotina o sense?

El 80% dels vaporejadors ho fan amb nicotina. Volen l'hàbit i el plaer, sense fer-se malbé la salut ni escurcar-se la vida.

Quin és el perfil del vaporejador?

Home de 30 a 45 anys, per salut. Fa millorar la tensió arterial i l'oxigen a la sang, i recupera el gust del menjar.

Qui comença a vaporejar, persevera?

En un 10% no arrela, un 30% combina fumar i vaporejar, i un 60% s'aficiona només a vaporejar. Els joves s'hi animen per estalviar.

Quant costa vaporejar?

Fumar un paquet de tabac al dia suposa uns 200 euros mensuals. Vaporejar les recàrregues equivalents amb un e-cigarret surt per 40 euros al mes: és un 80% d'estalvi!

Quin preu té, un e-cigarret?

Un de bò costa de 25 a 35 euros, i funciona durant un any: és la vida de la bateria de liti.

Algún avantatge més de vaporejar?

Moltissim! La roba i els cabells no s'impregnen de l'olor acre del tabac. Si vaporeges al cotxe no l'empudegues. La meva dona em demana que vaporegi a casa: diu que soc millor que un ambientador, ha, ha...

Es pot vaporejar a qualsevol lloc?

Sí: a la Renfe, al bar, al restaurant, a l'hotel, al taxi, al metro, a la biblioteca, al Camp Nou... Hi ha debat als hospitals... Aconsello al vaporejador demanar sempre permís.

Fa proselitisme, el vaporejador?

És un acte vistós, i cada vaporejador genera uns cinc vaporejadors més.

Hi ha vaporejadors famosos?

Charlie Sheen, Kate Moss, els Tous...

Què hi diu, la medicina?

El prestigiós oncòleg Umberto Veronesi ha regalat cigarrets elèctrics a tots els seus parents fumadors: diu que si s'imposés l'e-cigarret deixarien de morir molts fumadors! Itàlia ja té un milió de vaporejadors.

VÍCTOR-M. AMELA





ES



ES



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A descriptive model of the cigarette epidemic in developed countries

Alan D Lopez, Neil E Collishaw, Tapati Piha

Abstract
It has been estimated that cigarettes are the cause of the deaths of one in two of their persistent users, and that approximately half a billion people currently alive – 10% of the world's population – could eventually be killed if smoking patterns persist. Despite this pandemic, tobacco consumption among adults is increasing in many countries, especially in Asia and in Southern and Eastern Europe. A major factor in this continuing increase is the substantial health hazards of tobacco use: the three- to four-decade lag between the peak in smoking and the subsequent peak in smoking-related mortality. Based on nearly 100 years of observational evidence concerning the history of widespread cigarette use, a four-stage model of cigarette consumption in developed countries by men and women is proposed. From the model it is clear that, during certain periods, the rate of increase in smoking is to be expected that smoking-attributable mortality will rise at the same time that smoking prevalence is declining.

This is because current mortality is most closely related to previous, not current, levels of smoking. Brief descriptions of geographic classifications of regions are given, according to the stage of the epidemic in which they are currently experiencing. Tobacco control policy implications for countries at each of the four stages of the cigarette epidemic are also discussed.

(Tobacco Control 1994; 3: 242-247)

Tobacco or Health
Programme
World Health
Organization
Geneva, Switzerland
G D Lopez
NE Collishaw
Action Plan for a
Tobacco-Free Europe,
WHO Regional Office
for Europe,
Copenhagen,
Denmark
T Piha

Lopez AD, Collishaw NE, Piha T.

Tobacco Control 1994, 3:242-47

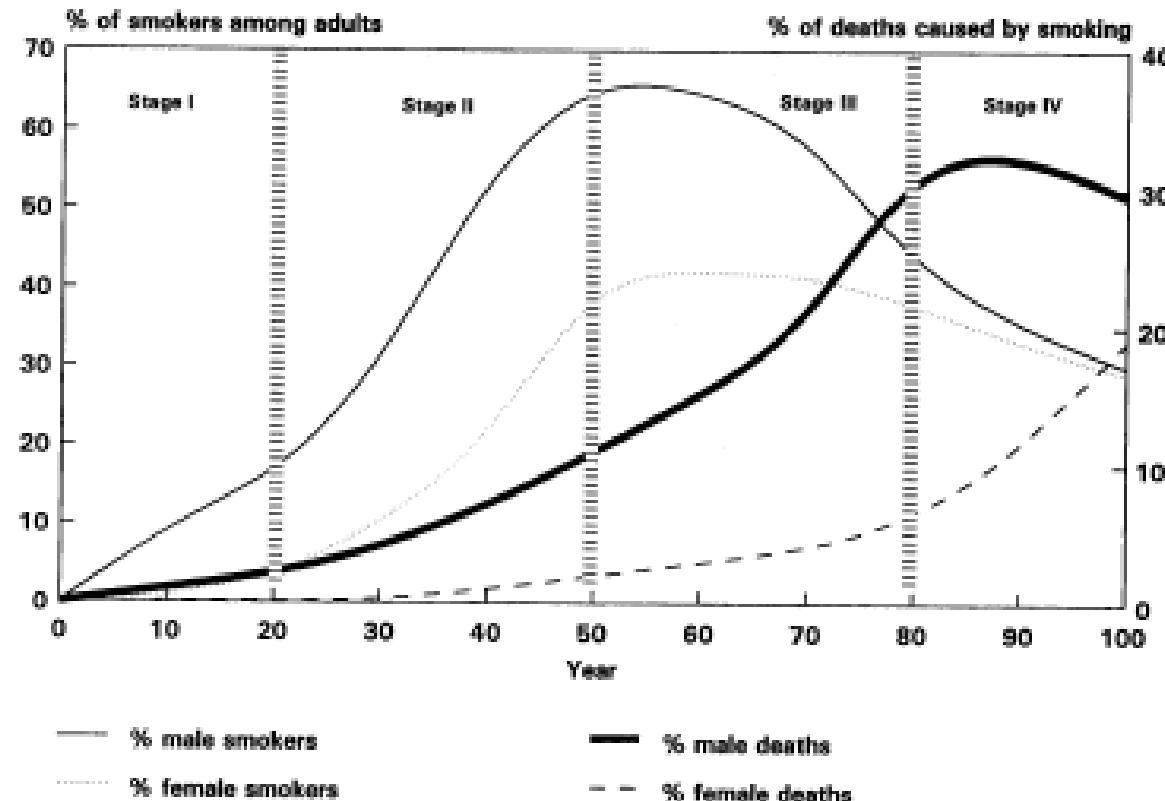


Figure A model of the cigarette epidemic

Marlboro maker Altria to jump into e-cigarettes

April 25, 2013

RICHMOND, Va. (AP) —

- **Altria Group Inc.**, owner of the nation's biggest cigarette maker, Philip Morris USA, announced Thursday that its NuMark subsidiary **plans to introduce an electronic cigarette during the second half of the year**, making it the last of the major domestic tobacco companies to enter the growing category.
- While it's a small market compared with traditional tobacco products, "*there's no denying that adult tobacco consumers have shown some interest in it*," Altria CEO Marty Barrington said in a conference call with investors.

Síntesi

- Fenomen social emergent
- Innovació
- Planteja dubtes en termes de seguretat
- Pot induir regressions respecte a avenços obtinguts recentment (SFL)
- Debat sobre pertinència com estratègia de reducció de danys
- Buit legal
- S'hauria d'accelerar el procés regulació
- Risc “ocult” – maniobra IT

TICS DE FAMÍLIA: RELACIONS NOVES AMB ELS VALORS DE SEMPRE



Moltes gràcies

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