E-ZIGARETTEN

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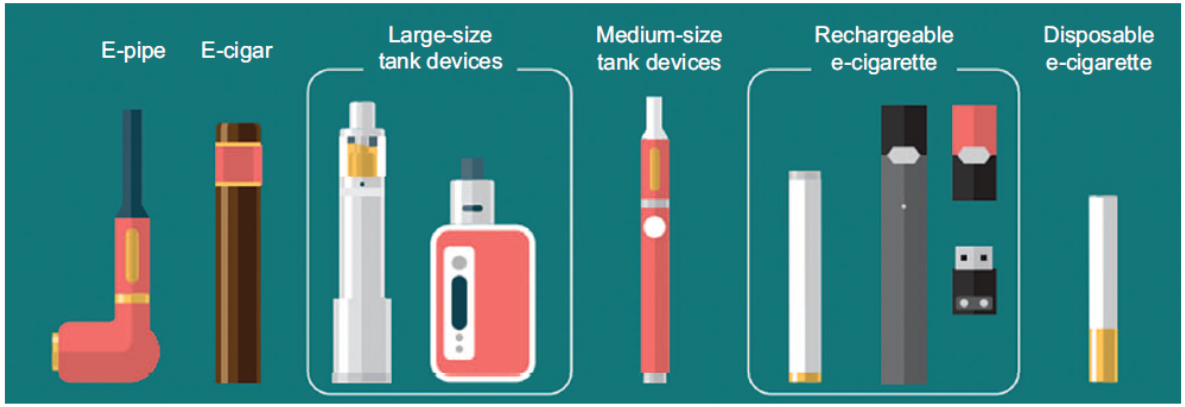
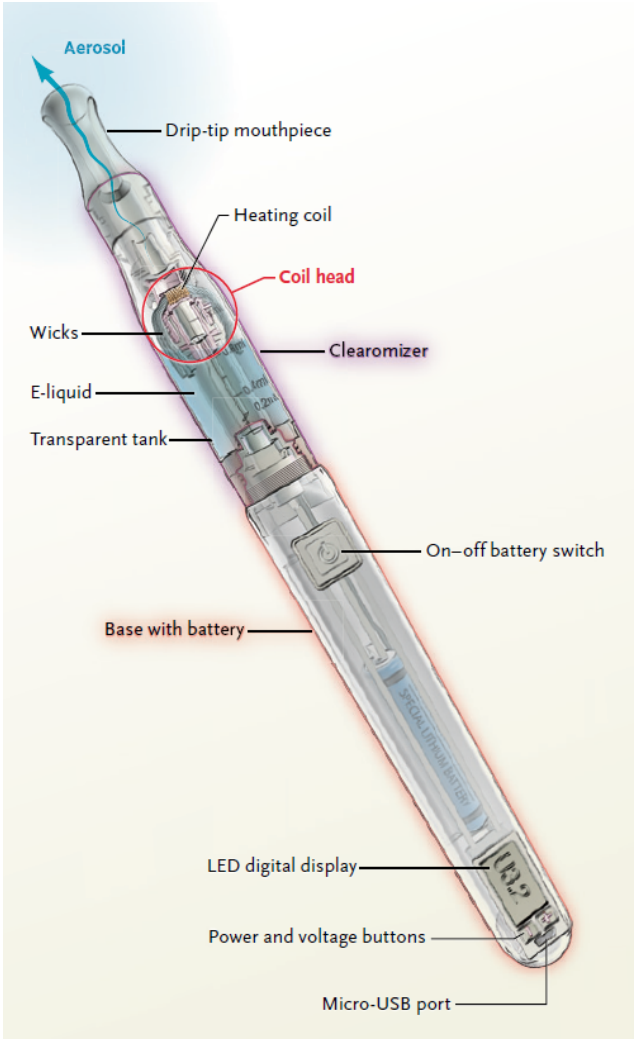
Überblick:

- Was sind überhaupt E-Zigaretten
- E-Zigaretten und Rauchstopp
- E-Zigaretten – Schadensreduktion vs. Schädigungspotential
- E-Zigaretten – Probleme für die Tabakprävention

Die E-Zigarette





Dinakar C, O'Connor GT, NEJM 2016;*Zhu et al, Tob Control 2014;
Eltorai A EM, Respiratory Care 2019; Buchanan ND, Cardiovascular Research 2020

Die E-Zigarette

Liquid

Nikotin

Propylen-glykol

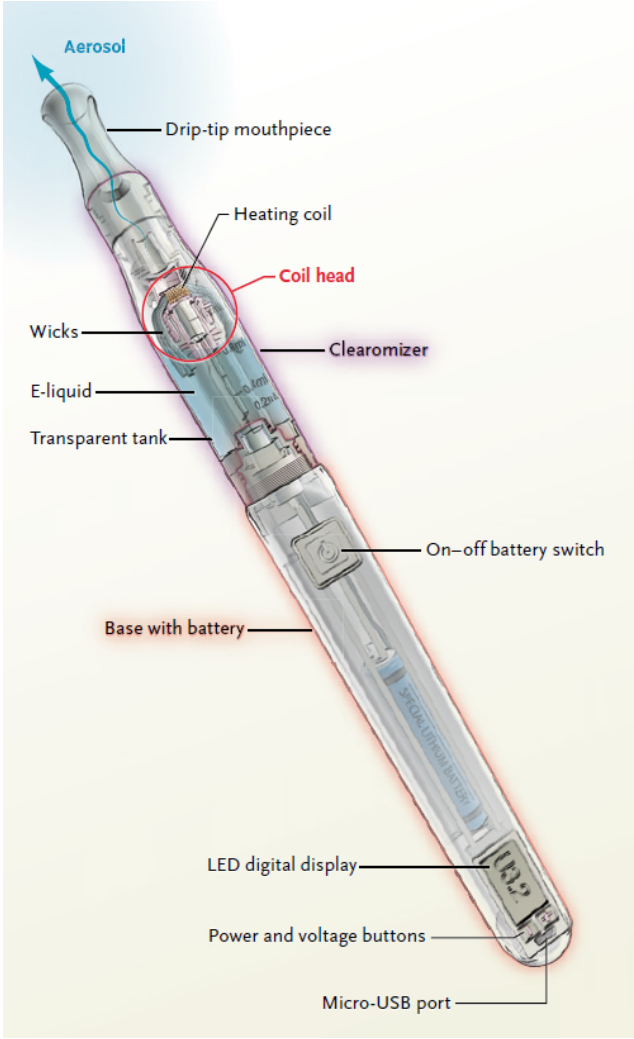
Glycerin

Flavours (>7'770)*

Carbonylverbindungen
- Formaldehyd
- Acetaldehyd
- Acrolein
- ....

Feinstaub-partikel

??????



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Eltorai A EM, Respiratory Care 2019; Buchanan ND, Cardiovascular Research 2020

Smoking Cessation:
E-Zigarette vs. Nikotinersatz über 52 W.

Dual use: 34%

Dual use: 17%

N=439

E-Cigarette: 80%

18%

Nikotinfrei: 20% (3.6%) von allen

N=447

NRT: 9%

9.9%

Nikotinfrei: 91% (9%) von allen

?? Conclusion: E-Cigarettes were more effective for smoking cessation than nicotine-replacement therapy ??

Hajek P. et al. NEJM 2019

Schadensreduktion

NHS Statement

«Vaping is at least 95% less harmful than smoking»

https://www.gov.uk/government/publications/e-cigarettes-and-heated-tobacco-products-evidence-review/evidence-review-of-e-cigarettes-and-heated-tobacco-products-2018-executive-summary

Alles ist relativ……..

Vermögen 2019:
131 Milliarden $

95%
Vermögensreduktion

6.55 Milliarden $

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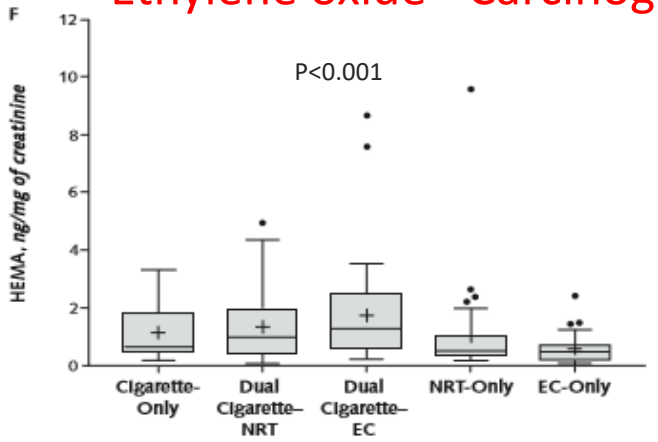
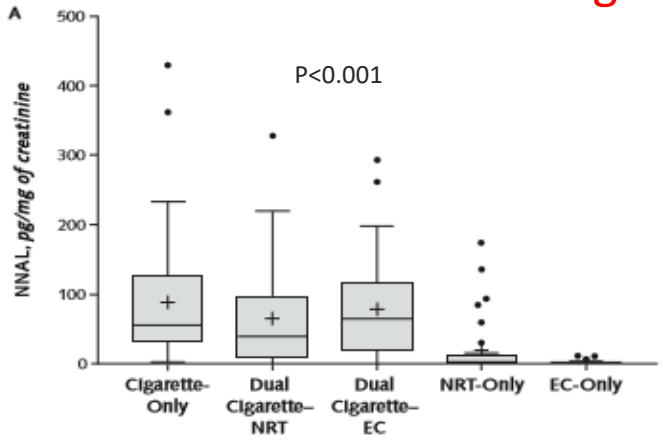
Bildquelle: https://www.welt.de/wirtschaft/article199002407

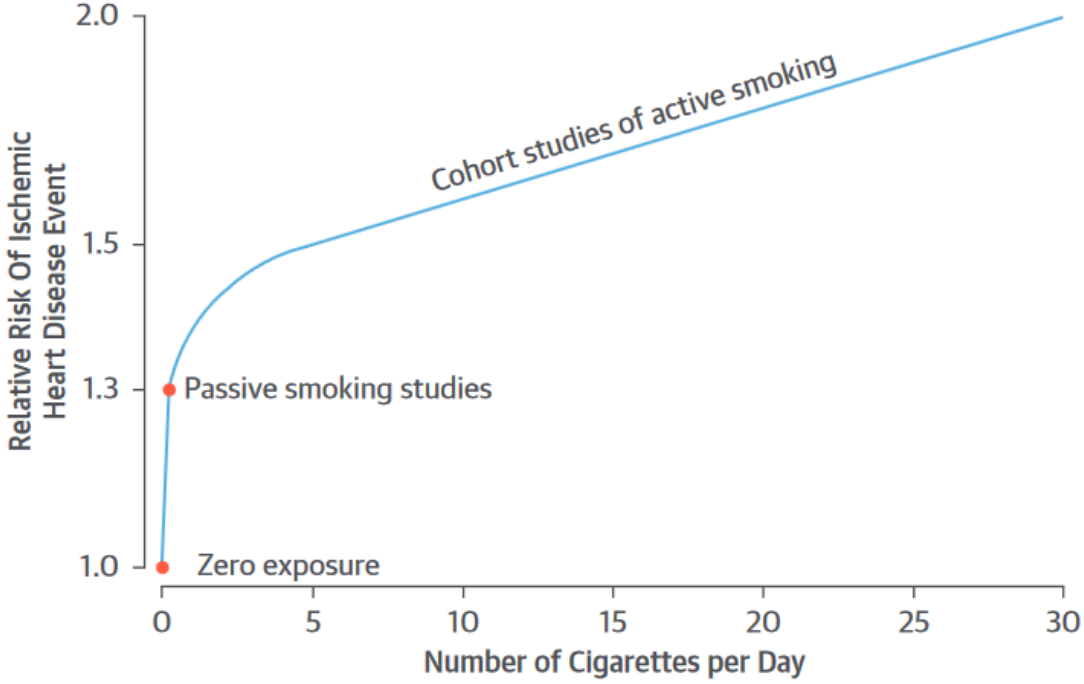
Grundvoraussetzung der Schadensreduktion- KEIN DUAL USE!

Ethylene oxide - Carcinogen



Nitrosamin - Carcinogen





1 Zigarette/Tag:
ca. 50% des KHK/Stroke Risiko von 20/Tag

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Shahab et al, Annals of internal Medicine, 2017; Morris PB, JACC 2015; Hackshaw A, BMJ 2018

Device-spezifische Risiken
2009 – 2016 rund 200 Fälle in USA

Eltorai AEM, Respiratory Care 2019; Brownson EG, NEJM 2016; Katz MG, NEJM 2019

Liquid-spezifische Risiken

The NEW ENGLAND JOURNAL of MEDICINE

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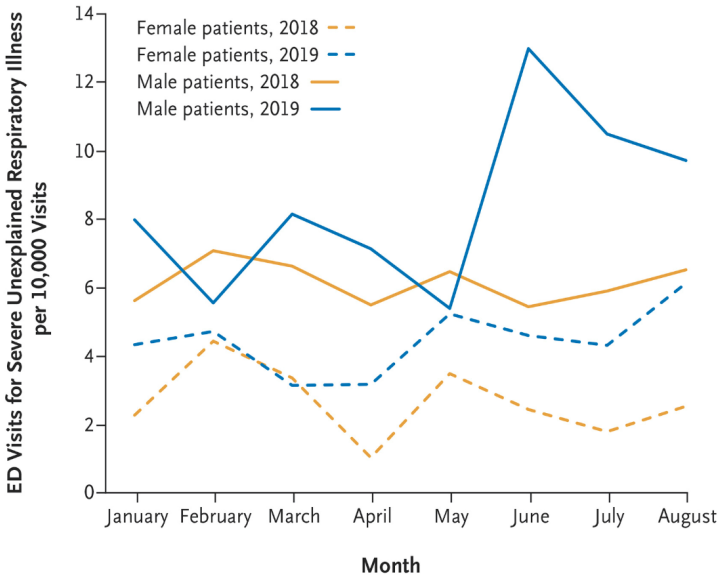
E-Cigarettes and Vaping-Related Disease

The use of e-cigarettes has increased rapidly. Although vaping has been shown to assist with smoking cessation, cases of severe vaping-related pulmonary disease and a number of deaths have recently been reported. Here we present a collection of articles and other resources on e-cigarettes and vaping-related disease, including clinical reports and commentary.



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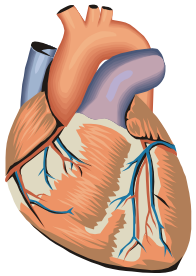
Generelle Risiken - Vaping

Nikotin



Arrhythmie
Herzfrequenz ↑
Vasokonstriktion

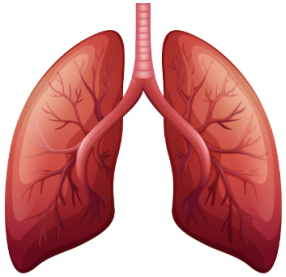
Myokardinfarkt ↑ (OR 2.1)*

Feinstaub-partikel

Blutdruck ↑
Inflammation ↑
Endotheldysfunktion
Vasokonstriktion
Plättchenaktivierung

Carbonyle

- **Formaldehyd**
- **Acetaldehyd**
- **Acrolein**



Schleimhautirritation
Inflammation ↑
Immunantwort ↓

Vaping-related Disease
Resp. Disease ↑ (OR 1.3)**

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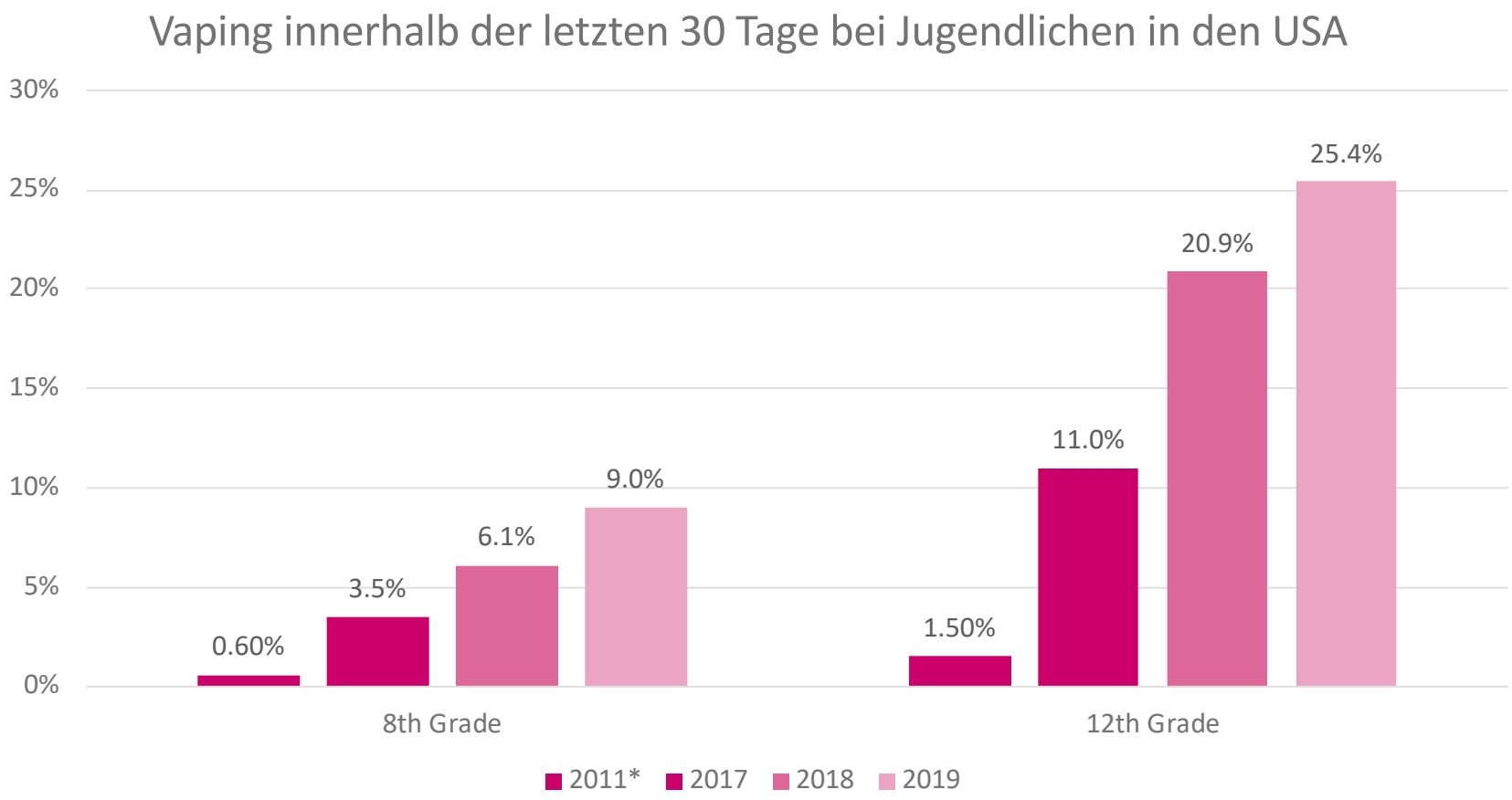
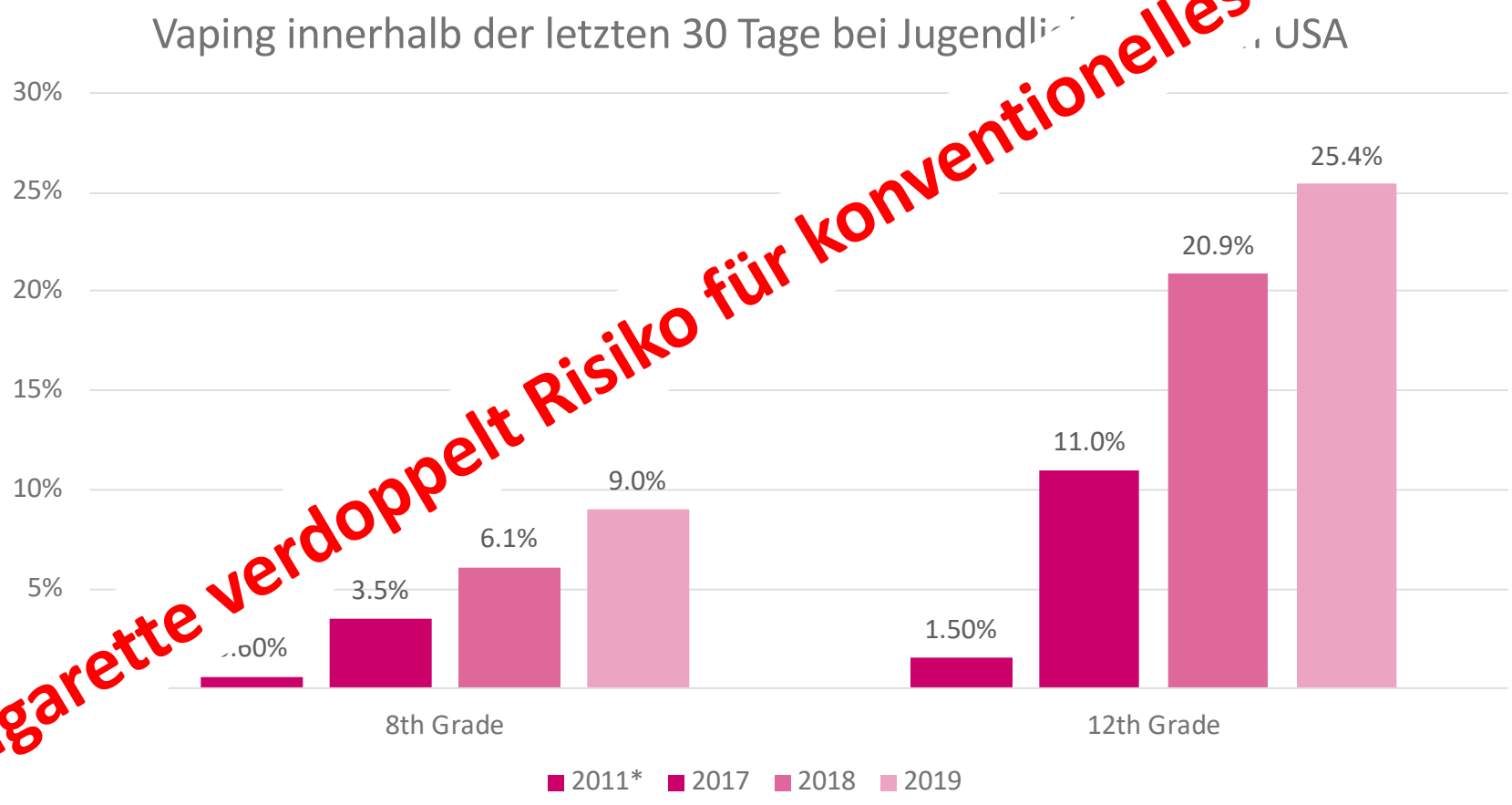
Buchanan ND, Cardiovasc Res 2020; Eltorai AEM et al, Respiratory Care 2019; Benowitz NL et al, Nature Reviews 2017
*Alrahrani T et al. Am J Prev Med 2018 (correction 2019); **Bhatta DN, Glantz SA, Am J Prev Med 2020

Vaping und Jugendliche



Miech R et al, NEJM 2019; Buchanan ND et al, Cardiovasc Res 2020; Eltorai A EM, Respiratory Care 2019
*Gentzke AS et al, MMWR 2019; Bildquelle – Foto Kleinbasel, 29.1.2020

Vaping und Jugendliche



E-Zigarette verdoppelt Risiko für konventionelles Rauchen

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Miech R et al, NEJM 2019; Buchanan ND et al, Cardiovasc Res 2020; Eltorai A EM, Respiratory Care 2019

*Gentzke AS et al, MMWR 2019; Bildquelle – Foto Kleinbasel, 29.1.2020

Fazit und Einsatz der E-Zigaretten

- E-Zigaretten sind nicht harmlos!
- Die E-Zigarette ist aktuell keine Evidenz-basierte Rauchstopp-Methode
- Fernziel: komplette Abstinenz
- Kein Dual-use sondern vollständiger Switch auf E-Zigarette
- Strenge Regulierung der Devices und der Inhaltsstoffe
- Strenge Massnahmen zum Jugendschutz sind essentiell

Vielen Dank für die Aufmerksamkeit
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