



NEXT GENERATION PRODUCTS

Heated tobacco: Evidence supporting its role in tobacco harm reduction

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Conflict of interest statement

- I am an employee of Imperial Brands PLC
- The literature reviews described in this study were funded by Imperial Brands PLC
- The views expressed in this document are of the author and do not necessarily reflect the opinions of Imperial Brands PLC



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Smoking is a cause of serious disease in smokers

Nicotine is not the primary cause of
smoking-related disease

The greatest risk of smoking-related disease comes
from **burning tobacco** and inhaling smoke



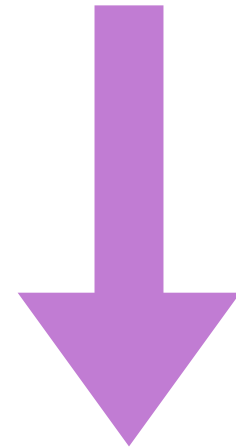
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The best action adult smokers can take to improve their health is to stop all tobacco and nicotine use

However, some adult smokers are uninterested in doing so

Tobacco Harm Reduction refers to strategies designed to **reduce the health risks associated with tobacco smoking**, but which may involve the continued use of nicotine/tobacco



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Heated tobacco is a potentially harm reduced alternative as it does not burn tobacco

A disposable stick containing processed tobacco is heated in a controlled manner
- never burnt -



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Heated tobacco is a potentially harm reduced alternative as it does not burn tobacco

A disposable stick containing processed tobacco is heated in a controlled manner
- never burnt -
producing an aerosol which contains nicotine and flavour aromas



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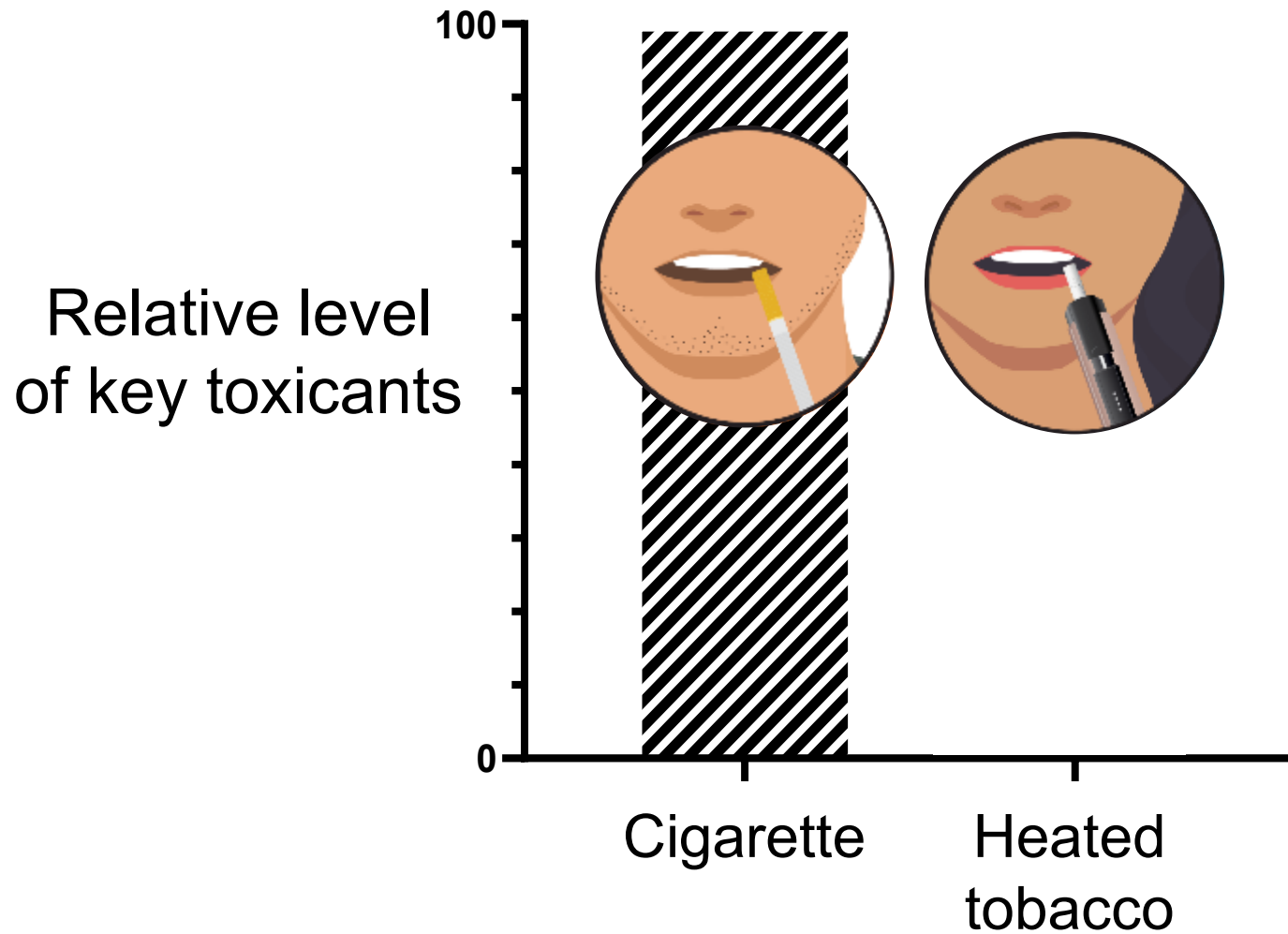
Heated tobacco aerosol contains fewer and substantially lower levels of key toxicants compared to cigarette smoke



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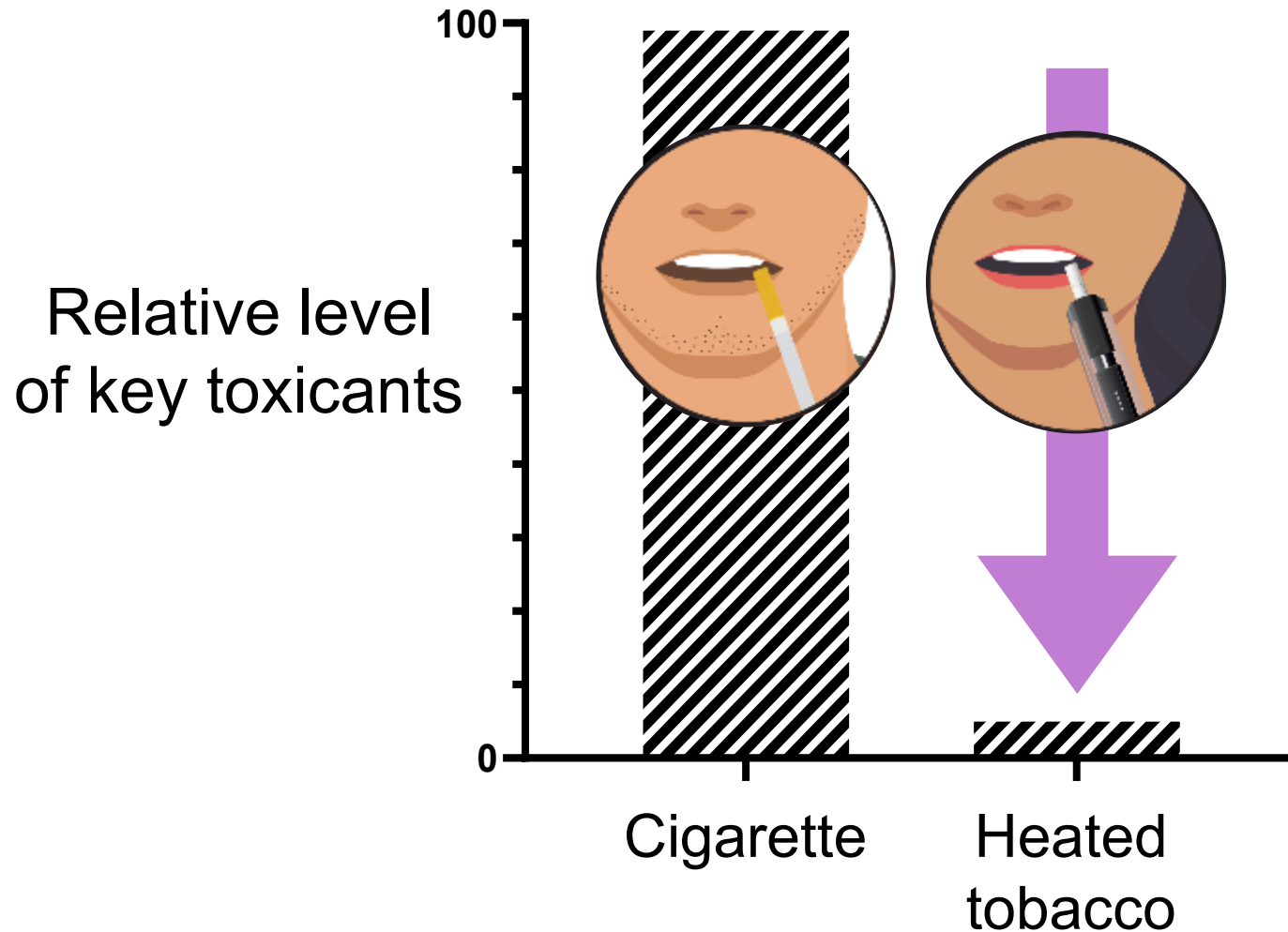
Heated tobacco aerosol contains fewer and substantially lower levels of key toxicants compared to cigarette smoke



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Heated tobacco aerosol contains fewer and substantially lower levels of key toxicants compared to cigarette smoke



**94% less
toxicants***

*Imperial Brands' data for PULZE 2.0 & iD. Average reductions in levels of a selection of harmful chemicals of public health interest e.g. WHO TobReg9, compared to levels in smoke of reference cigarettes; this does not mean that Pulze is risk free.



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But... a harm-reduced product isn't enough

**Tobacco
Harm
Reduction**

=

**Scientificall
proven to be
less harmful
than
cigarettes**

X

**Maximises adult
smoker transitioning
Minimises
unintended use**



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SCIENCE

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**Product
science**

**Behavioural
science**



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SCIENCE

Imperial Brands recently wrote 2 literature reviews

**Product
science**

Covering:
Sep' 2021 to
Aug' 2023

&

**Behavioural
science**

Covering:
up to
Jan' 2024

We reviewed all relevant published evidence on heated tobacco, using defined search terms



It was important our findings were publicly available and free to access



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Our product science review covered 144 studies

Cureus

Part of **SPRINGER NATURE**

Open Access Review
Article

DOI: 10.7759/cureus.61223

The Product Science of Electrically Heated Tobacco Products: An Updated Narrative Review of the Scientific Literature

Review began 03/26/2024

Review ended 05/17/2024

Published 05/28/2024

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Reduced risk profile compared to cigarettes



Product science

Key trends:

Aerosols from heated tobacco products contain **fewer and substantially lower levels** of toxicants than cigarette smoke

A reduction in biological effects and biological markers

Clinical studies indicate the potential for reduced harm after switching to heated tobacco



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Our behavioural review covered 157 publications

Cureus

Part of **SPRINGER NATURE**

Open Access Review Article

A Scoping Review of Behavioural Studies on Heated Tobacco Products

Review began 05/31/2024

Review ended 07/23/2024

Published 07/30/2024

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Also supportive of a role for heated tobacco in tobacco harm reduction



Behavioural science

Key trends:

Primarily used by adult
current/former
smokers

Cigarette use
decreased as heated
tobacco use increased

A significant degree of
dual use was reported

Use by men > women;
some socioeconomic
patterns

Misperceptions of
relative risk common



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As with all scientific studies, there are limitations

Our reviews:

- only included English-language studies
 - assessed the category as a single entity
-

Studies in our reviews:

- time lag between surveys and publication
- association doesn't prove causation
- interpretation of cell/animal results is complex



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The evidence is supportive of a role in tobacco harm reduction

Review of ~300 studies found:

**Heated tobacco can
potentially make a positive
contribution to public health
when used instead of
cigarettes**



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Ian Fearon - whatIF? Consulting Ltd

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Thank you for your attention



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