# Article information:

SGLT2 inhibitor ameliorates endothelial dysfunction associated with the common ALDH2 alcohol flushing variant | Science Translational Medicine
[https://www.science.org/doi/10.1126/scitranslmed.abp9952?url\_ver=Z39.88-2003=ori:rid:crossref.org=cr\_pub%20%200pubmed](https://www.science.org/doi/10.1126/scitranslmed.abp9952?url_ver=Z39.88-2003&rfr_id=ori:rid:crossref.org&rfr_dat=cr_pub%20%200pubmed)

# Article summary:

1. The ALDH2\*2 variant is a common missense variant that affects 8% of the world’s population and has been linked to an increased risk of coronary artery disease (CAD).

2. Clinical assessment of endothelial function showed that human participants carrying ALDH2\*2 exhibited impaired vasodilation after light alcohol drinking.

3. Sodium-glucose cotransporter 2 inhibitors (SGLT2i) such as empagliflozin mitigated ALDH2\*2-associated EC dysfunction, suggesting that SGLT2i may potentially be used as a preventative measure against CAD for ALDH2\*2 carriers.

# Article rating:

May be slightly imbalanced: The article presents the information in a generally reliable way, but there are minor points of consideration that could be explored further or claims that are not fully backed by appropriate evidence. Some perspectives may also be omitted, and you are encouraged to use the research topics section to explore the topic further.

# Article analysis:

The article is generally reliable and trustworthy, as it provides evidence from multiple sources including clinical studies, genome-wide association studies (GWAS), human induced pluripotent stem cell–derived ECs (iPSC-ECs), CRISPR-Cas9–corrected ALDH2\*2 iPSC-ECs, and knock-in mice models to support its claims. The authors also provide detailed information about the methods used in their experiments, which adds to the credibility of the article.

However, there are some potential biases in the article that should be noted. For example, the authors do not explore any counterarguments or alternative explanations for their findings. Additionally, they do not discuss any possible risks associated with using SGLT2i as a preventative measure against CAD for ALDH2\*2 carriers. Furthermore, while they present evidence from multiple sources to support their claims, they do not present both sides equally; instead they focus mainly on presenting evidence in favor of their hypothesis without exploring other possibilities or alternative explanations for their findings. Finally, there is some promotional content in the article as it mentions a specific drug (empagliflozin) as a potential treatment option without providing sufficient evidence or exploring other alternatives.

# Topics for further research:

* Risks associated with SGLT2i use
* Alternative treatments for CAD
* Counterarguments to ALDH2\*2 CAD hypothesis
* Genome-wide association studies (GWAS)
* Human induced pluripotent stem cell–derived ECs (iPSC-ECs)
* CRISPR-Cas9–corrected ALDH2\*2 iPSC-ECs

# Report location:

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