

Identify loci, genes, and DNA regions associated between Eating Speed and DNA Hydroxymethylation: A Scoping Review

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Introduction

- ❖ Previous studies have looked at the association of eating speed and DNA hydroxymethylation with type 2 diabetes mellitus separately.
- ❖ However, there were no reviews synthesizing evidence on specific DNA locations linking eating speed to hydroxymethylation.
- ❖ We aimed to identify candidate hydroxymethylated DNA regions, genes, and loci associated with eating speed from the literature through a scoping review.

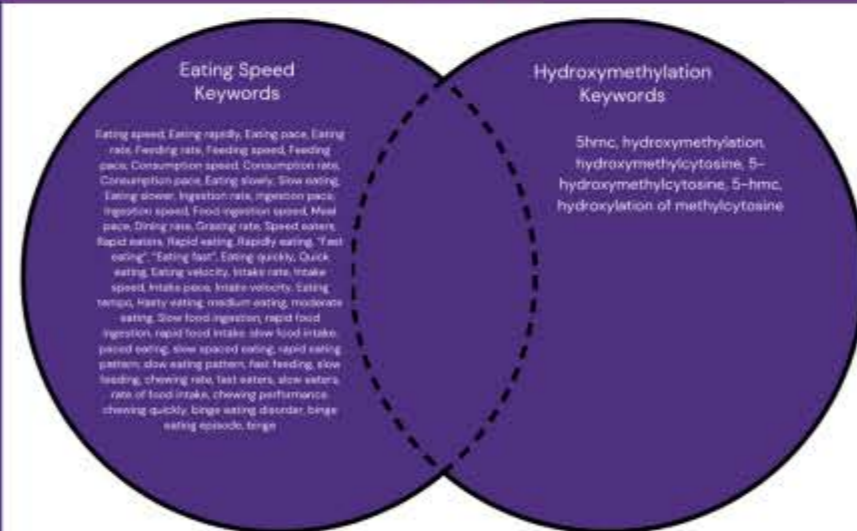
Results

- ❖ A total of 56 keywords for eating speed and 6 for DNA hydroxymethylation were included in the keyword list. Thirty-six studies were found. After reviewing their abstracts carefully, all studies were excluded because none of them investigated eating speed associated with hydroxymethylation.

Methods

- ❖ Using the literature database PubMed, two reviewers independently conducted an exploratory review of the literature and each of them developed one keyword list for eating speed and one for hydroxymethylation.
- ❖ The two reviewers then cross-referenced the keyword list with each other to finalize two sets of the keyword list. The combination of keywords in the two lists was used to search prior studies of the association of eating speed with hydroxymethylation.
- ❖ This method was verified using parallel validation with obesity keywords to confirm its ability to yield prior study results.
- ❖ The searched studies were limited to the English language and published on PubMed prior to August 22, 2023.

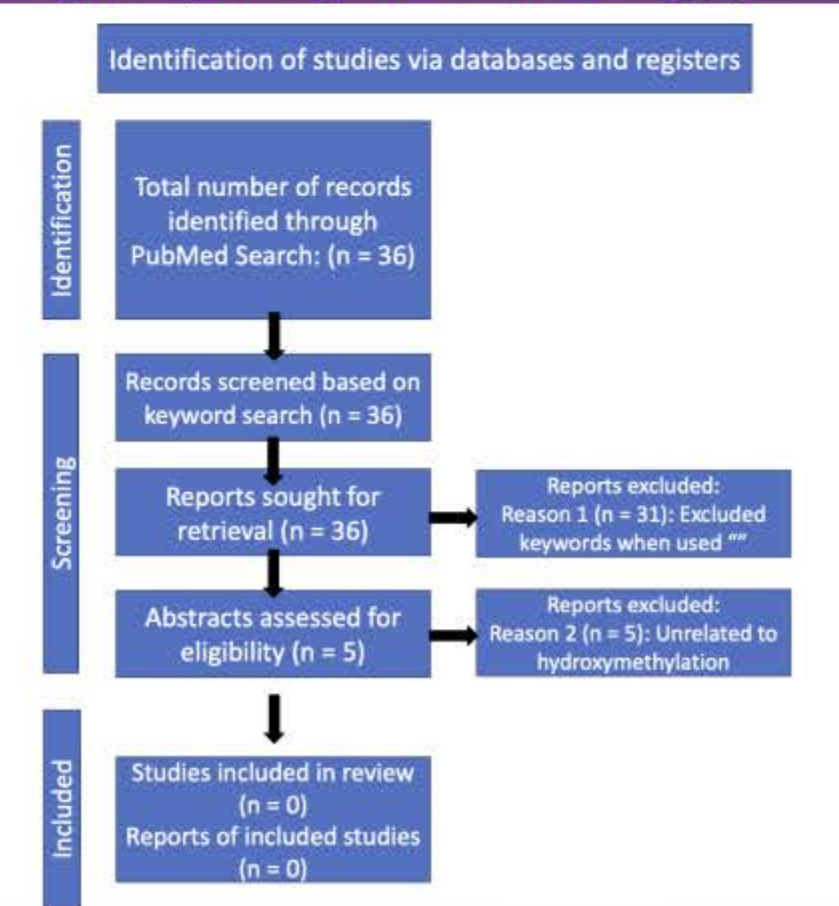
Figure 1. MeSH and Keyword Search Results



5hmc or "hydroxymethylation" or "hydroxymethylcytosine" or "5-hydroxymethylcytosine" or 5-hmc or "hydroxylation of methylcytosine"

("5-hydroxymethylcytosine" [Supplementary Concept]) AND "Binge-Eating Disorder"[Mesh]

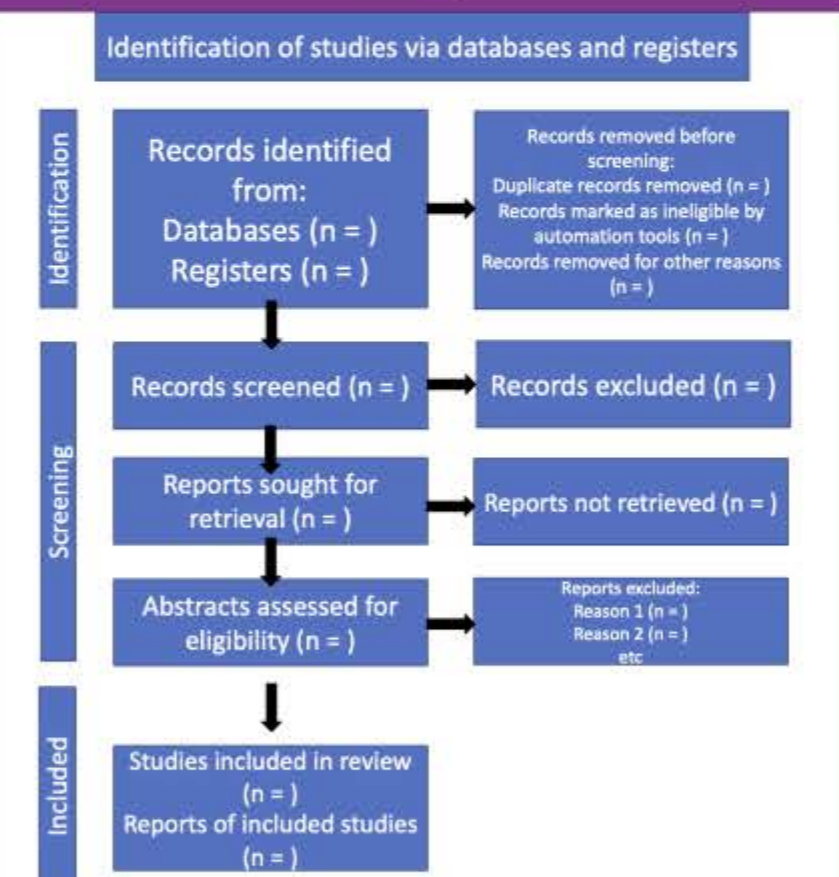
Flow Chart 1. Review Process for Hydroxymethylation and Eating Speed



Conclusion

- ❖ No specific DNA locations linking eating speed to hydroxymethylation were identified from the PubMed literature, suggesting this is a rarely studied area. Future research will focus on eating speed and methylation.

Review Process for Ongoing & Future Study



References

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