# Article information:

A lack of consistent brain alterations in insomnia disorder: An activation likelihood estimation meta-analysis - PubMed
<https://pubmed.ncbi.nlm.nih.gov/30093361/>

# Article summary:

1. This meta-analysis aimed to identify consistent patterns of abnormal brain alterations in insomnia disorder.

2. 19 eligible studies were retrieved and peak coordinates were extracted from these studies and tested for convergence using the activation likelihood estimation method.

3. No significant convergent evidence was found for combination of structural atrophy and functional disturbances across previous studies (p = 0.914).

# 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 follows the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) statement, which ensures that all relevant information is included in the review. The authors also conducted a comprehensive search of the literature, including reference tracking, to ensure that all relevant studies were included in the analysis. Furthermore, the authors used an appropriate statistical method (activation likelihood estimation) to analyze the data and draw conclusions from it.

However, there are some potential biases that should be noted. First, due to the small sample sizes of many of the studies included in this meta-analysis, it is possible that some important findings may have been missed or overlooked due to lack of power. Additionally, since many of these studies used different experimental designs and preprocessing/statistical approaches, it is possible that some inconsistencies between them could have been introduced into the analysis. Finally, since this was an explorative study with no clear hypothesis being tested beforehand, it is possible that some false positives could have been identified as significant results due to chance alone.

# Topics for further research:

* PRISMA statement
* Systematic review methodology
* Meta-analysis
* Activation likelihood estimation
* Statistical power
* False positives in research

# Report location:

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