

# When caution is needed

CAUTION

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## P-Hacking

> Using too many replicates, or incorrect replicates to achieve statistical significance



## Hyperbole

> Authors or media exaggerate the findings



## Poor study design

> Wrong techniques used  
> Under-powered  
> Only technical replicates

## Use this checklist to determine if the preprint is appropriate to share

- |   |  |
|---|--|
| <input checked="" type="checkbox"/> Appropriate statistics                              | <input checked="" type="checkbox"/> Appropriate power (no P-hacking)                               |
| <input checked="" type="checkbox"/> Sufficient replicates                               | <input checked="" type="checkbox"/> The data supports the conclusions                              |
| <input checked="" type="checkbox"/> Appropriate controls used                           | <input checked="" type="checkbox"/> Independently verified   |
| <input checked="" type="checkbox"/> You have sufficient expertise to assess the quality | <input checked="" type="checkbox"/> Positively reviewed by others                                  |
| <input checked="" type="checkbox"/> Methods are appropriate for the questions           | <input checked="" type="checkbox"/> Share preprints along with your opinion and assessment of them |

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