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## **Plausibility**

Plausibility refers to the extent to which a hypothesis, association, or explanation is reasonable, credible, and consistent with existing biological, clinical, or theoretical knowledge.

☐ In Scientific Context A finding is plausible if it aligns with known mechanisms of disease, established pathophysiology, or prior evidence.

Biological plausibility is one of the Bradford Hill criteria for evaluating causality in epidemiological studies.

Plausibility is often what distinguishes a meaningful association from a statistical artefact.

△ Why It Matters In clinical research, a result without plausibility—even if statistically significant—may be spurious, non-causal, or irrelevant in practice.

☐ Example Usage: "The authors claim a protective effect of chemotherapy on stroke mortality, but this lacks biological plausibility given the known vascular toxicity of many cytotoxic agents."

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