

# RESEARCH QUESTIONS

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## Pottenger's Study

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Q: WHAT IS A HYPOTHESIS?

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**A:** A reasonable, educated guess based on what one observes in the natural world. After making an observation and formulating a question, a scientist must create a hypothesis - a potential answer to that question.

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Q: WHAT WAS THE ORIGINAL HYPOTHESIS IN POTTENGER'S CATS STUDY?

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**A:** Originally, Francis Pottenger Jr. was attempting to find a standardized amount/potency of adrenal glandular for his tuberculosis patients. He used adrenalectomized cats as his test subjects.

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Q: WHAT IS AN UNCONTROLLED VARIABLE?

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**A:** Uncontrolled variables are uncontrolled factors that influence the results of an experiment.

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Q: WHAT ARE SOME EXAMPLES OF UNCONTROLLED VARIABLES IN THE POTTENGER'S CATS STUDY?

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**A:** ex., the preparation of the adrenal extract given to the cats (or, at least the reported preparation) as there was no mention of proportions of cortex vs medulla, the preparation of the meat scraps given to the cats (sodium, fat content, etc.), were all cats adrenalectomized?, etc.

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Q: WHAT IS A CONFOUNDING VARIABLE?

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**A:** A confounding variable is a form of bias where the effects of exposure (for instance, dietary change) under study on a given outcome are mixed in with the effects of an additional factor or factors resulting in distortion of the true relationship. (Skelly, Dettori, & Brodt, 2012)

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Q: WHAT IS EXTRAPOLATION?

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**A:** Extrapolation is applying the results or conclusion of one situation (in this case an experiment) to an unknown situation and assuming that existing trends will continue in the unknown situation

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Q: CAN THE RESULTS OF ANIMAL STUDIES BE EXTRAPOLATED TO HUMANS?

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**A:** It depends on the type of intervention, the administration of the intervention, disease complexity, animal model, and other case-specific factors. Ultimately, we must approach all information through critical thinking and question whether extrapolation of information from an animal model to a general human population is logical, or not. (Ioannidis, 2012) (Ericsson, Crim, & Franklin, 2013)

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## CITATIONS

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