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# On establishing a theoretical basis for identifying causal mechanisms

This guy gets it. Addressing the pressing issue of why McDonald's burgers do not appear to rot -- ever -- he establishes the following theoretical framework.

Things we know so far:

1. A plain McDonald's Hamburger, when left out in the open air, does not mold or decompose.
2. In order for mold to grow, a few things need to be present: mold spores, air, moisture, and a reasonably hospitable climate

Given those two facts, there are a number of theories as to why a McDonald's burger might not rot:

1. There is some kind of chemical preservative in the beef and/or bun and/or the wrapping that is not found in a normal burger and/or bun that creates an inhospitable environment for mold to grow.
2. The high salt level of a McDonald's burger is preventing the burger from rotting.
3. The small size of a McDonald's hamburger is allowing it to dehydrate fast enough that there is not enough moisture present for mold to grow
4. There are no mold spores present on McDonald's hamburgers, nor in the air in and around where the burgers were stored.
5. There is no air in the the environment where the McDonald's hamburgers were stored

He then creates a formidable research design.

- **Sample 1:** A plain McDonald's hamburger stored on a plate in the open air outside of its wrapper.
- **Sample 2:** A plain burger made from home-ground fresh all-natural chuck of the exact dimensions as the McDonald's burger, on a standard store-bought toasted bun.
- **Sample 3:** A plain burger with a home-ground patty, but a McDonald's bun.
- **Sample 4:** A plain burger with a McDonald's patty on a store-bought bun.
- **Sample 5:** A plain McDonald's burger stored in its original packaging.
- **Sample 6:** A plain McDonald's burger made without any salt, stored in the open air.
- **Sample 7:** A plain McDonald's Quarter Pounder, stored in the open air.
- **Sample 8:** A homemade burger the exact dimension of a McDonald's Quarter Pounder.

- **Sample 9:** A plain McDonald's Angus Third Pounder, stored in the open air

Read on for the results:

## **The Burger Lab: Revisiting the Myth of The 12-Year Old McDonald's Burger That Just Won't Rot (Testing Results!)**

I was sure it was the salt!

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