

Headline: In the science kitchen: Making the perfect burger

Blurb: The scientific process that produced COVID vaccines is complex, but it doesn't have to be confusing. It's no more confusing than making a hamburger. Find out why in this short video.

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Scientific research is a lot like a hamburger.

The system that produces research has lots of components.

These different parts are like the ingredients of a hamburger.

Here's how the science burger works.

Part one: The burger patty

Ground beef is the star of the traditional burger. But you also need a binder and seasoning.

Its scientific equal?

The raw data that scientists collect during their research.

But getting good quality data needs a well thought out research roadmap and a good clinical trial. The rules scientists use to guide a trial is called a protocol.

Part two: The basting

Basting gives a burger patty extra flavour and moisture.

Similarly, the peer review process enhances the credibility of a clinical trial.

This step elevates the quality of the science produced and the paper is scrutinised by experts in the field.

The more prestigious the academic journal, the more credible the paper becomes.

Part three: The lettuce

A lettuce leaf helps the burger keep its structural integrity and to keep the basting under control.

This is where medicines regulators come in.

These bodies review all the data from clinical trials and in the manufacturing process to make sure that medicines are safe for the public to use.

Our country's medicines regulator is called the South African Health Products Regulatory Authority, Sahpra.

Part four: The burger bun

Burger buns represent the public's safety and their trust in medicines.

All parts of the scientific process are essential to the trustworthiness of research and vaccines.

But the ingredients of the burger rely on the integrity of individual researchers.

Without a carefully constructed burger, the whole thing can fall to pieces in your hands.

And bad science compromises people's trust in medical interventions.