

REPLACEMENT



In experiments, make an effort to replace animals with volunteer humans, computer models, cell cultures, and nonliving materials.



REDUCTION

Attempt to minimize animals used during experiments as much as possible. For example, microsampling can take many samples of blood from just one organism, decreasing number of animals used.

REFINEMENT



Limit any discomfort, pain, or suffering that research animals may face. This includes providing safe and adequate housing and using appropriate anesthesia to limit pain.



THE 3 R'S: REPLACEMENT, REDUCTION, & REFINEMENT

Humane Animal Research!



The 3 R'S were developed 50 years ago to promote more ethical practices in animal research. These practices have minimized animal suffering while allowing for groundbreaking research.



The 3 R'S ensures the humanity of animal testing, and public support of animal relies on the implementation of these practices.



FUTURE

Going forward, the 3 R'S are as important as ever. With scientific models and innovation rapidly increasing, we can work to make sure that animal testing is only used when required!

