# Elastomeric respirator project ideas

Starter · A few weeks · Low-cost kit · Project idea

Online version: https://ai-safety-sandbox.vercel.app/projects/elastomeric-respirator-ideas/

## Summary

Reusable respirators could protect essential workers in a severe pandemic. Many projects here are about evidence, communication and distribution.

## Why it matters

Stockpiles only help if the equipment fits, people wear it correctly and it can reach them in time.

## What you will have at the end

A guide, review, design or plan.

## Ideas to choose from

- A first-hand write-up of buying and using one
- A fit-testing guide
- Evidence review: efficacy, safety, supply chain, scalability
- Common failure modes and how to communicate them
- An emergency distribution plan
- Would an approved “standard” elastomeric work?
- 3D-printed adapters for different face shapes
- Cleaning and maintenance protocols
- Child-sized versions

## How to start (tick each box as you go)

- [ ] **1. Read the list of ideas above and pick the one you would most enjoy.**
- [ ] **2. Check the source to see whether someone has already done it.**
- [ ] **3. Scope it down to something you can finish in your available time.**
- [ ] **4. Do a quick first version and show it to someone.**
- [ ] **5. Write up what you made and share it with the source authors.**

## Key terms

**Elastomeric respirator**
A reusable rubber-faced mask with replaceable filters. Properly fitted, it protects better than most disposable masks.

## Source and links

Hatta & Bazarragchaa — A hundred project ideas in biosecurity (2025)
https://casualphysicsenjoyer.com/Essays+in+progress/Biosecurity/A+hundred+project+ideas+in+Biosecurity

## When you have finished

Write a few paragraphs on what you did, what you found and what you would try next, and share it with a friend, your society or online.

Courses, mentors, small grants and communities:
https://ai-safety-sandbox.vercel.app/next-steps/

Questions? Ask in AI Safety Cardiff University (AISCU): https://aiscu.org/

## Notes