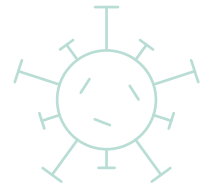


# THE **amazing** **vaccine**

R A C E ★



Hundreds of potential COVID-19 vaccines are being developed in labs around the world. More progress is made each day toward a safe, effective vaccine. In the coming months, many candidates will be tested and, if approved, manufactured. Which vaccine will be ready for distribution first?

## HOW TO PLAY:

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1. Choose up to four vaccines to monitor.
2. Research your selections and fill out the "Vaccine Profile" for each.
3. Add the vaccines to your race track. Check off any phases already completed.
4. Watch for updates on your vaccines. When a vaccine completes a phase, add a check mark.

## CURRENT COVID-19 VACCINE PROFILES

---

Name of Developer: \_\_\_\_\_

Lab Location: \_\_\_\_\_

Current Phase: \_\_\_\_\_

Name of Developer: \_\_\_\_\_

Lab Location: \_\_\_\_\_

Current Phase: \_\_\_\_\_

Name of Developer: \_\_\_\_\_

Lab Location: \_\_\_\_\_

Current Phase: \_\_\_\_\_

Name of Developer: \_\_\_\_\_

Lab Location: \_\_\_\_\_

Current Phase: \_\_\_\_\_

**Note:** This timeline represents the typical process for vaccine development and may not reflect the exact trajectory for every vaccine on the market or in development.

THE

# amazing vaccine

RACE



## EXPLORATORY STAGE

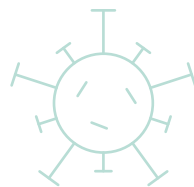
Scientists identify antigens, substances that create an immune response in the body, that could help prevent or treat a disease.

NAME OF DEVELOPER 1:

NAME OF DEVELOPER 2:

NAME OF DEVELOPER 3:

NAME OF DEVELOPER 4:



## CLINICAL DEVELOPMENT PHASE III



## PRE-CLINICAL STAGE

Researchers use tissue-culture or cell-culture systems and animal testing to evaluate if a new vaccine is safe and produces immunity.

Did you know: Many potential vaccines stall in the Pre-Clinical Stage because they fail to produce an immune response.

## CLINICAL DEVELOPMENT PHASE I

First, researchers give the vaccine to a small group of 20–80 adults to evaluate its safety and immune response for humans.

approval.

# REGULATORY REVIEW AND APPROVAL

The vaccine developer submits a Biologics License Application (BLA) to the FDA.

Thousands or tens of thousands of people are tested in this phase to further evaluate the vaccine's safety, possible side effects, and overall effectiveness.

Did you know: The

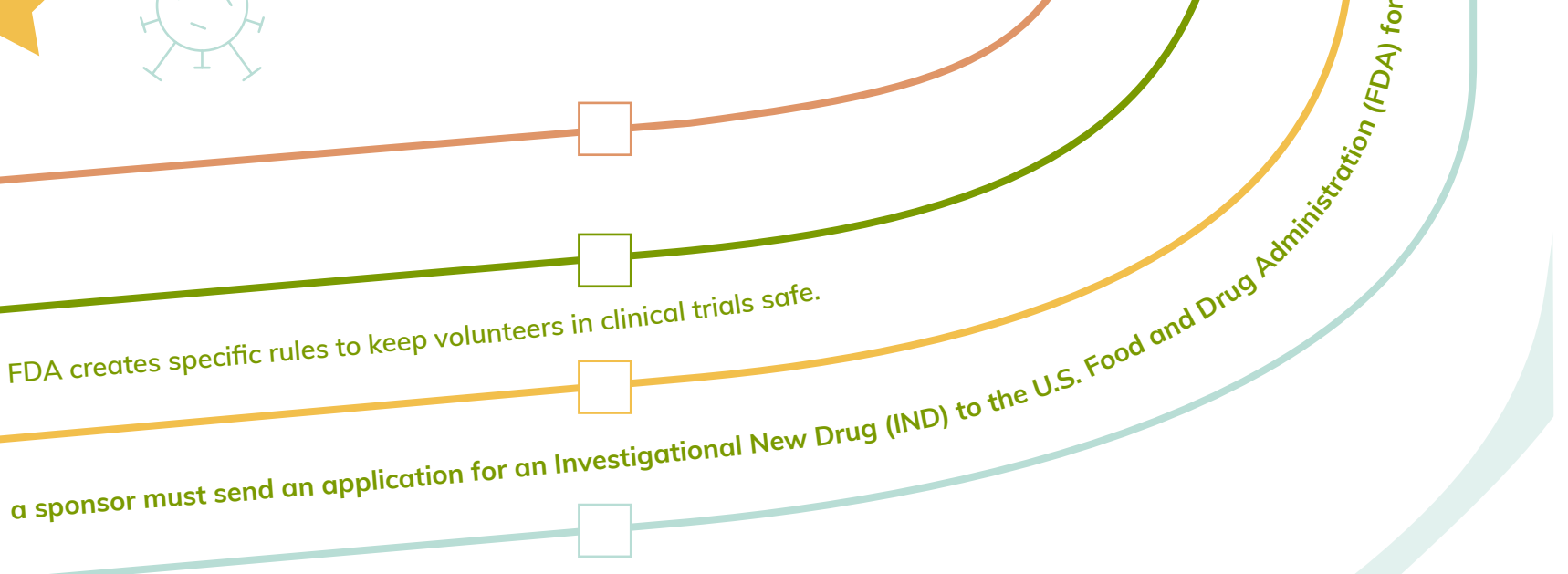
Did you know: Before the Clinical Development Phase can begin,

Did you know: Manufacturers test all lots, or batches, of the vaccine for safety and quality.

# MANUFACTURING

Once a vaccine is licensed, drug manufacturers provide the supplies and personnel for producing mass quantities of the vaccine.





## CLINICAL DEVELOPMENT PHASE II

Next, researchers assess a larger group of several hundred participants to learn more about the vaccine's safety, its ability to produce an immune response, dosage, schedule of immunization, and delivery method.

## FINISHING LINE

After being tested, approved, licensed, and manufactured, a vaccine can be given to those who need it.

## QUALITY CONTROL

A licensed vaccine is continually monitored for performance, safety, and effectiveness.

