HOW DID LADY MONTAGU HELP TO CREATE MODERN VACCINES ?

Have you ever wondered who created vaccines? Maybe not. So today we are going to present you Lady Montagu, the woman who discovered the benefits of vaccines. Concerned about the health of her family, she learned how vaccines can prevent diseases. Her passion for safety highlights her role as a caring mother and an early supporter of public health.

INTRODUCTION

Lady Montagu is the woman who discovered the benefits of vaccines. She was initially motivated by protecting her family's health. Her dedication to safety, her role as a caring mother, and her early support for public health made her a significant figure in medical history.

HYPOTHESIS

Can catching a disease make the immune system immune to that disease?
Does catching a disease help the immune system and make it stronger against future infection?

MAIN ELEMENTS

Lady Montagu saw that smallpox was a huge problem in England and caused a lot of sufferings for families.

The problem : Smallpox was a deadly disease, and she understood that something was needed to stop it.

During her time in Turkey, Lady Montagu saw a procedure called variolation. She thought this method could prevent smallpox in England.
She believed that variolation, by exposing people to a mild form of smallpox, could make them immune to the disease.

BIOGRAPHY

Mary Wortley Montagu, was born on 15 May, 1689 in London, where she died on 21 August, 1762. She gave birth to two children, their names were Edward and Mary Montagu.

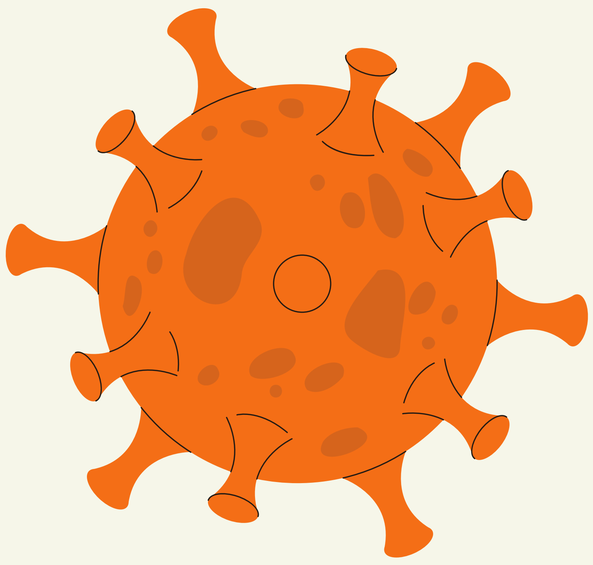
GROUPS OF THE EXPERIMENT

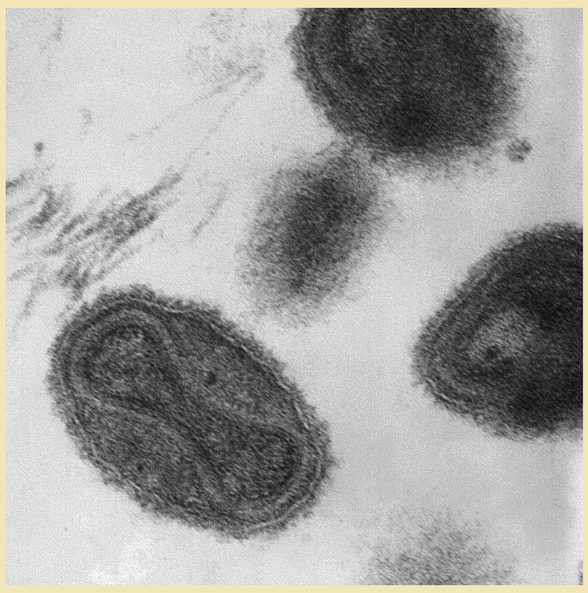
Participants:

Families and children in England who were likely to catch smallpox.
Lady Montagu's own children were included in the study.

There were 2 groups for the experiment:

- **Variolated Group**: People who received the variolation procedure.
- **Control Group**: People who did not receive variolation and were exposed to smallpox naturally.





smallpox virus

METHOD

A small amount of smallpox matter was put into the skin of healthy people, usually through a cut.
This caused a mild case of smallpox and aimed to protect them from a serious case later.
Observation Period:
The health of the people who received variolation was carefully watched.
Control Group Observation:
The health of people who did not receive variolation was also observed.

RESULTS

The results of Lady Montagu's observations are shown in the table below:

Group.	Number of Smallpox Cases.	Severity of Symptoms.	Recovery Rate (%)
Variolated	3	Mild	95
No variolated	10	Moderate to Severe	60

RESULTS

- **Symptoms**: People who received variolation had milder symptoms compared to those who did not.
- **Recovery**: The variolated group had a higher recovery rate (95%) than the non-variolated group (60%).

DATA COLLECTION

The number of smallpox cases was recorded in both groups. The seriousness of symptoms (moderate or severe) was noted. The number of people who recovered or died was also recorded. Lady Montagu shared her observations by writing letters to doctors and scientists.

ANALYSIS

Lady Montagu's experiment showed that variolation could protect people from the worst effects of smallpox. The people who were variolated had fewer and less severe cases of smallpox. The control group, who did not receive variolation, had more severe cases and fewer people recovered.

SOURCES USED

https://www.nationaltrust.org.uk/discover/history/people/who-was-lady-mary-wortley-montagu

https://www.nlm.nih.gov/exhibition/smallpox/sp_variolation.html

https://digital.sciencehistory.org/works/c326vf1

CONCLUSION

Lady Montagu's work was very important for smallpox prevention. Even though variolation had some risks, it was much safer than catching smallpox naturally. This method was later replaced by vaccination, which was even safer and more effective. Lady Montagu's observations helped open the way for future vaccines.

Lady Montagu's use of variolation showed that it could protect people from smallpox and reduce the severity of the disease. Her work helped promote this method in England and influenced the development of modern vaccines.

Although variolation was important in the 18th century, it was replaced by safer vaccines. Lady Montagu's work continues to be important for understanding how we can prevent diseases. It was one of the first steps toward modern vaccination