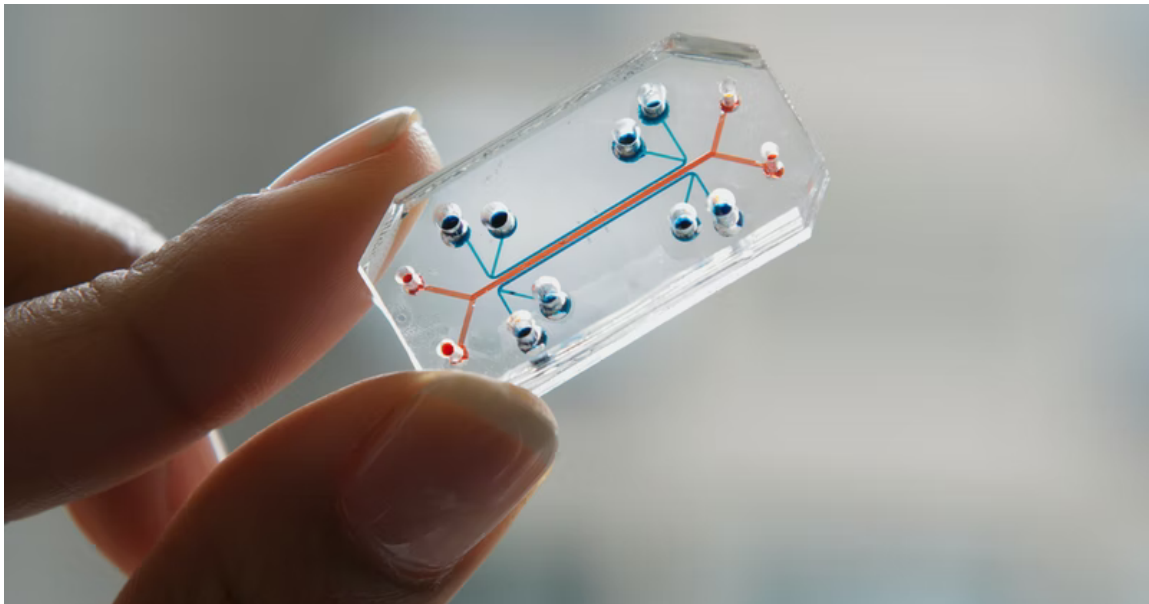


Researchers Say Regular Breathing Creates Immune Responses

VOCABULARY WORDS

1. breath /breθ/ the air that goes into and out of your lungs
Example: His breath smelled sweet.
2. inhale - /ɪnˈheɪl/ to breathe air, smoke, or gas into your lungs
Example: She inhaled the smoke and became sick.
3. exhale /eksˈheɪl/ to send air out of your lungs
Example: Hold your breath for 2 seconds then exhale.
4. mechanical /məˈkæn.i.kəl/ operated by a machine, or connected with machines or their parts
Example: She was trying to operate a mechanical device.
5. suppress /səˈpres/ to end something by force
Example: The government suppressed the news.



The average person will take more than 600 million **breaths** over the course of their life. Every breath stretches the lungs' tissues with each **inhale** and relaxes them with each **exhale**. The basic motions of breathing are known to influence important functions of the lungs, including the maintenance of healthy tissue.

Now, new research from the Wyss Institute at Harvard University has revealed that this constant pattern of stretching and relaxing does even more—it creates immune responses against viruses, such as COVID-19.

Using a 'Human Lung Chip' that copies the structures and functions of the lung air sac, the research team discovered that by applying **mechanical** forces that copy breathing motions, they could **suppress** influenza virus replication, while activating natural protective immune responses.

"This research demonstrates the importance of breathing motions for human lung function, including immune responses to infection, and shows that our lung-on-a-chip can be used to model these responses in the deep areas of the lung, where infections are often more severe and lead to hospitalization and death," said co-first author Haiqing Bai, Ph.D., a Wyss Technology Development Fellow at the Institute. The results were published in Nature Communications. (Good News Network)

DISCUSSION

1. Have you ever thought about your breathing? Do you have any breathing techniques?
2. Have you ever had trouble breathing?
3. How can you improve your breathing?
4. How does the immune system fight viruses?
5. What happens when a person's immune system fails?
6. What can you do to make your immune system stronger?