Advisor
For Members of Heartland Alliance of America

The Powerful Placebo:
Helping the Brain Heal the Body

If you're feeling unwell, you may turn to medicine to find relief. But how do you know it was the drug that made you feel better? Sometimes, when you expect a treatment to work, it will. This phenomenon is called the placebo effect. Scientists are looking for ways to harness this effect for medical treatments.

A placebo is an inactive substance or action that resembles a drug or medical treatment. But it isn't meant to actually fix anything in your body. A pill that doesn't contain any medicine is one example.

Historically, placebos have been a key part of testing if a new treatment works. In some types of clinical trials, participants are given either an active treatment or a placebo. But they aren't told which one they're getting. The treatment must do more to improve the participants' condition than the placebo. If both groups show similar improvement, it may be from the placebo effect, not the drug.

The placebo effect works by turning on the body's natural mechanisms for helping us feel better. Our brains make many substances that can lessen pain, stress, anxiety, and other unpleasant feelings.

Dr. Luana Colloca, a physician-scientist at the University of Maryland, Baltimore, calls this our "inner pharmacy." Just expecting to feel better can cause the release of these substances.

"Our mindset is so critical," Colloca says, "because our thoughts are not independent from our bodies' responses."

The placebo effect can be powerful. It can help with pain, fatigue, depression, anxiety, or nausea. But our inner pharmacy can't treat everything. It can't, for instance, make tumors go away, lower your cholesterol, or get rid of infections.

NIH-funded researchers are trying to understand the brain pathways underlying the placebo effect. They're also looking for ways to use it to improve treatments.

Recent studies have been exploring if placebos can be used to cut down on how much medication people take. People with a chronic disease may need to take a drug for a long time. Researchers are testing if placebos can be used to replace some drug doses. These are called dose-extending placebos. The drug effects might continue working for some time as if the patient had taken a real dose.

Dose-extending placebos may be particularly useful with opioids. Opioids are sometimes used to treat chronic pain. But they can be highly addictive and may pose risk for overdose or even death. Scientists are studying whether dose-extending placebos can reduce the chances of opioid addiction.

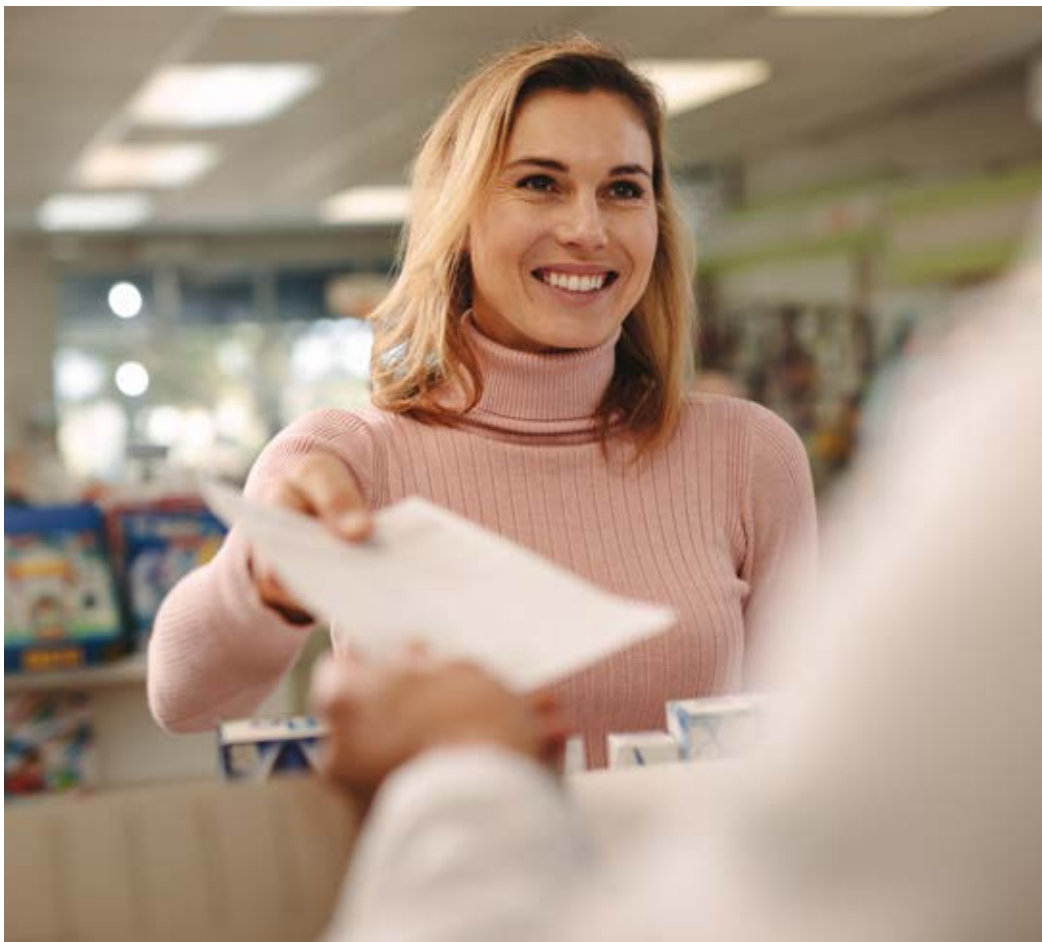
But for a placebo to work, do you need to believe you're taking the real thing? Recent research suggests that may not be the case. That's because your expectations can also affect how well a treatment works.

For instance, if you're given a drug for pain, it may work better if you're told that it's a potent pain treatment. This approach can work for placebos, too—if you're truthfully told that it has been shown to help.

A drug may also be more effective if you've had a good experience with it before. Colloca's research has shown that even seeing someone else get relief from a treatment can make it more effective.

For these reasons, good communication between patients and health care providers is an essential part of treatment. Having a provider you trust, who is supportive and has empathy, can produce better treatment results.

Article reprinted from NIH-News In Health



Your Body's Disease Defenses

Building and Boosting the Immune System

Every day while you eat, sleep, work, and play, battles are being fought throughout your body. You rarely feel it. But bacteria, viruses, and other microbes are constantly invading from the outside world.

Your body has a defense system for such invaders. It's called the immune system. Your immune system is made up of trillions of cells and proteins. These are found in your blood and every organ of your body. The immune system learns and changes over your lifetime—even before birth.

Building Your Defenses

You're not born with a fully equipped immune system. Fetuses can produce some immune protection. But before birth, "the vast majority of protection against infection comes from the mother," explains Dr. Whitney Harrington, who studies immune system development at Seattle Children's Research Institute.

Germ-fighting molecules made by the immune system, called antibodies, are transferred to the fetus through the placenta. They can also be passed to the baby after birth through breastfeeding. Antibodies stick to germs and stop them from infecting cells.

"The peak risk of severe disease from many infections is under six months of life," says Harrington. That's because the baby's immune system is just starting to develop.

Antibodies that are passed along from the mother can last for many months. They help protect a new baby until their immune system starts to develop.

The immune system builds many lines of defense. The cells of the innate immune system provide an early response to danger. They move through the body looking for signs of damage or infection of other cells. Then they destroy those cells.

Another major defense is called the adaptive immune system. It's activated by signals from the innate immune system and the infectious germs and makes a powerful response. The cells of this system keep a long-term memory of the germs they fight. They also respond to vaccinations and make all your antibodies.

Researchers have found that, like antibodies, some adaptive immune cells also cross from the mother to the fetus. These cells may start teaching the fetus's immune system about germs the mother has been exposed to.

Harrington and her team have been trying to learn more about these cells. They want to understand when this transfer happens and to use it to maximize immune protection provided by the mother.

Through infancy and childhood, your immune system matures and continues to build its own disease-fighting cells. Exposure to germs in childhood helps the immune system grow stronger over time, Harrington says.

Protection as You Age

By the time you've reached young adulthood, you've been exposed to many germs. So your immune system is likely to have a strong response to many infections you encounter.

Vaccines further strengthen your defenses. Vaccines expose your immune system to dead or weakened germs, or just pieces of them. That helps your immune cells learn how to fight these threats and remember them without you getting sick.

Certain vaccines are recommended during pregnancy. These boost protection provided by the mother against deadly diseases during a baby's first months of life. Vaccines are then recommended shortly after birth through adulthood.

Some vaccines require additional shots during adulthood to boost your immune system's memory. And some people—depending on their health, job, or other factors—may need extra vaccines to keep them safe. Keep up with current vaccine recommendations(link is external).

But, like other systems in your body, the immune system can begin to decline as you age. These changes can prevent immune cells from working to the best of their ability.

"With age, immune cells lose their ability to respond rapidly and robustly to infection," says Dr. Ronald Germain, an immune system expert at NIH.

Other parts of your body, such as the heart or lungs, can accumulate wear and tear with age, too. This reduced function puts older adults at greater risk for developing more severe disease from many infections.

Even a bit more damage from an infection can cause an older adult's organs and tissues to not perform their jobs well, Germain says. That's why certain vaccines are especially recommended for people over age 50.

Making Better Defenses

Researchers are still learning how to improve immune responses and vaccines. Some microbes are very good at hiding from the immune system. Many avoid detection by mutating, or changing, so that previously exposed immune cells can no longer recognize them.

Dr. Shane Crotty at the La Jolla Institute for Immunology and his team are trying to take advantage of the body's way of keeping up with these changes. They're studying a part of the adaptive immune system called germinal centers. These are areas in the lymph nodes where immune cells go to develop and learn to produce more effective antibodies. Germinal centers form temporarily in response to infection or vaccination. They don't just produce antibodies against the germs that are in your body. They also produce antibodies against different versions (variants) of those germs that you haven't been exposed to. Cells in the germinal centers essentially guess at how the virus may change over time.

"Germinal centers are one of the most amazing things your immune system does," says Crotty. Take the COVID vaccines as an example. The COVID vaccines developed against the original virus caused people to make antibodies that guarded against other variants.

"All the antibodies anybody developed against other variants from vaccination came from germinal centers," Crotty explains.

Germinal centers can last in the body for up to six months. And the longer they're around, the more varied the antibodies they produce.

Crotty and his team are testing if changing the way vaccines are given can help germinal centers last longer. Their recent study tested an experimental HIV vaccine in animals. Researchers gave the vaccine in many small doses over time. This produced antibodies that were more varied and lasted longer than those from the single large vaccine dose.

As researchers continue looking for new ways to protect you from disease, staying current on your vaccines and living a healthy lifestyle are the best ways to boost your defenses.

Article reprinted from NIH-News In Health

How to Help Your Immune System

- **Eat a healthy diet.** Read about healthy eating.
- **Make time for physical activity.** Experts recommend that adults get at least two and a half hours of moderate exercise each week. Find tips for getting more activity.
- **Maintain a healthy weight.** Learn more about weight control.
- **Get a good night's sleep.** Most adults need at least seven hours or more of sleep each night, and kids and teens need even more.
- **Quit smoking.** Get free help at smokefree.gov, call 1-800-QUIT-NOW (1-800-784-8669), or text QUIT to 47848.
- **Manage stress.** See stress reduction tips.
- **Limit drinking alcohol.** Learn more about alcohol's effects on health.
- **Wash your hands often to avoid getting sick**. Use hand sanitizer if soap and water are not available.
- **Stay up to date with the recommended vaccines.** See the CDC's website(link is external).

NOTICE of ANNUAL MEETING of MEMBERS

Heartland Alliance of America
"America's Association for ELITE Benefits"

The Annual Meeting of the Members of the Heartland Alliance of America will be held at 12444 Powerscourt Drive, Suite 500A, St. Louis, Missouri 63131 on Monday, November 20, 2023 at 10:00 a.m. CST for election of Directors and for the transaction of such other business as may properly come before the meeting or any adjournment thereof.

The above notice is given pursuant to the By-Laws of the Association.

PROXY
Heartland Alliance of America
November 20, 2023 Annual Meeting of Members
THIS PROXY IS SOLICITED ON BEHALF OF THE HEARTLAND ALLIANCE OF AMERICA

The undersigned Member of the Heartland Alliance of America does hereby constitute and appoint the President of the Heartland Alliance of America, the true and lawful attorney(s) of the undersigned with full power of substitution, to appear and act as the proxy or proxies of the undersigned at the Annual Meeting of the Members of the Heartland Alliance of America and at any and all adjournments thereof, and to vote for and in the name, place and stead of the undersigned, as fully as the undersigned might or could do if personally present, as set forth below:

1. ( ) FOR, or to ( ) WITHOLD AUTHORITY to vote for the following nominees for the Board of Directors for the terms of office as set forth below:
    a. Dr. Merrill Matthews
    b. Spenser Stevens
2. In their discretion, the proxies are authorized to vote upon such other business as may properly come before the Meeting.

DATED: _____ , 2023

Signature _____

Name (please print) _____

Please date and sign and return promptly to 12444 Powerscourt Drive, Suite 500A, St. Louis, MO 63131 whether or not you expect to attend this meeting. The Proxy is revocable and will not affect your right to vote in person in the event that you attend the meeting.

St. Louis, Missouri
Date: October 16, 2023

(over)

HEARTLAND ALLIANCE OF AMERICA IS AN ASSOCIATION—NOT INSURANCE.

Call for Nominations to the Board of Directors

The Heartland Alliance of America ("Heartland") will be nominating one director to its Board of Directors at its annual meeting on November 20, 2023. Heartland's Board of Directors has appointed a Nominations Committee to nominate successor directors. Heartland members may also propose nominations for the Board of Directors. Heartland members may nominate individuals to the Board of Directors through a written petition. The petition must identify the individual being nominated and must be signed by at least 49 current active Heartland members. All nominations for Directors, including nominations by petition, must be submitted to Heartland no later than November 13, 2023. A sample petition is printed below for your review.

SAMPLE

Petition for Nomination to the Heartland Board of Directors

Individual being Nominated: _____

Heartland Member Signature:	Heartland Member Name:

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The Advisor Newsletter is published by:
Heartland Alliance of America

For information regarding your membership
and association services, call or write:

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