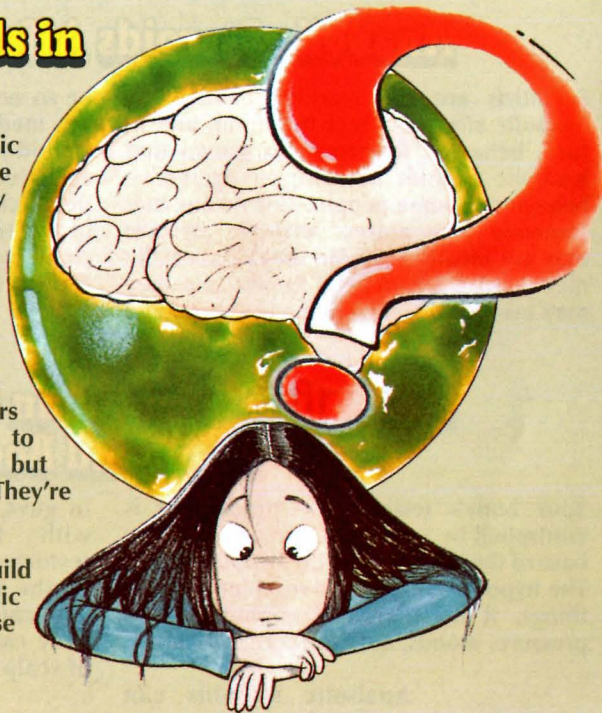


Anabolic Steroids in Medicine

Doctors never prescribe anabolic steroids for building muscle in young, healthy people. (Try push-ups instead!) But doctors sometimes prescribe anabolic steroids to treat some types of anemia or disorders in men that prevent the normal production of testosterone.

You may have heard that doctors sometimes prescribe steroids to reduce swelling. This is true, but these aren't anabolic steroids. They're corticosteroids.

Since corticosteroids don't build muscles the way that anabolic steroids do, people don't abuse them.



STEROIDS

True or False

- 1) Anabolic steroids can affect the hypothalamus.
- 2) Anabolic steroids strengthen the immune system.
- 3) Anabolic steroids can cause males' breasts to grow and females' breasts to shrink.

(1) True, 2) False, 3) True.

The Search Continues

There's still a whole lot that scientists don't know about the effects of anabolic steroids on the brain. Maybe someday you'll make the next big discovery.

Until then, join me—Sara Bellum—in the other magazines in my series, as we explore how drugs affect the brain and nervous system.

To learn more about anabolic steroids and other drugs of abuse, or to order materials on these topics, free of charge, in English or Spanish, visit the NIDA Web site at www.drugabuse.gov or contact the DrugPubs Research Dissemination Center at 877-NIDA-NIH (877-643-2644; TTY/TDD: 240-645-0228).



For more information, visit:
www.teens.drugabuse.gov

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MIND OVER MATTER

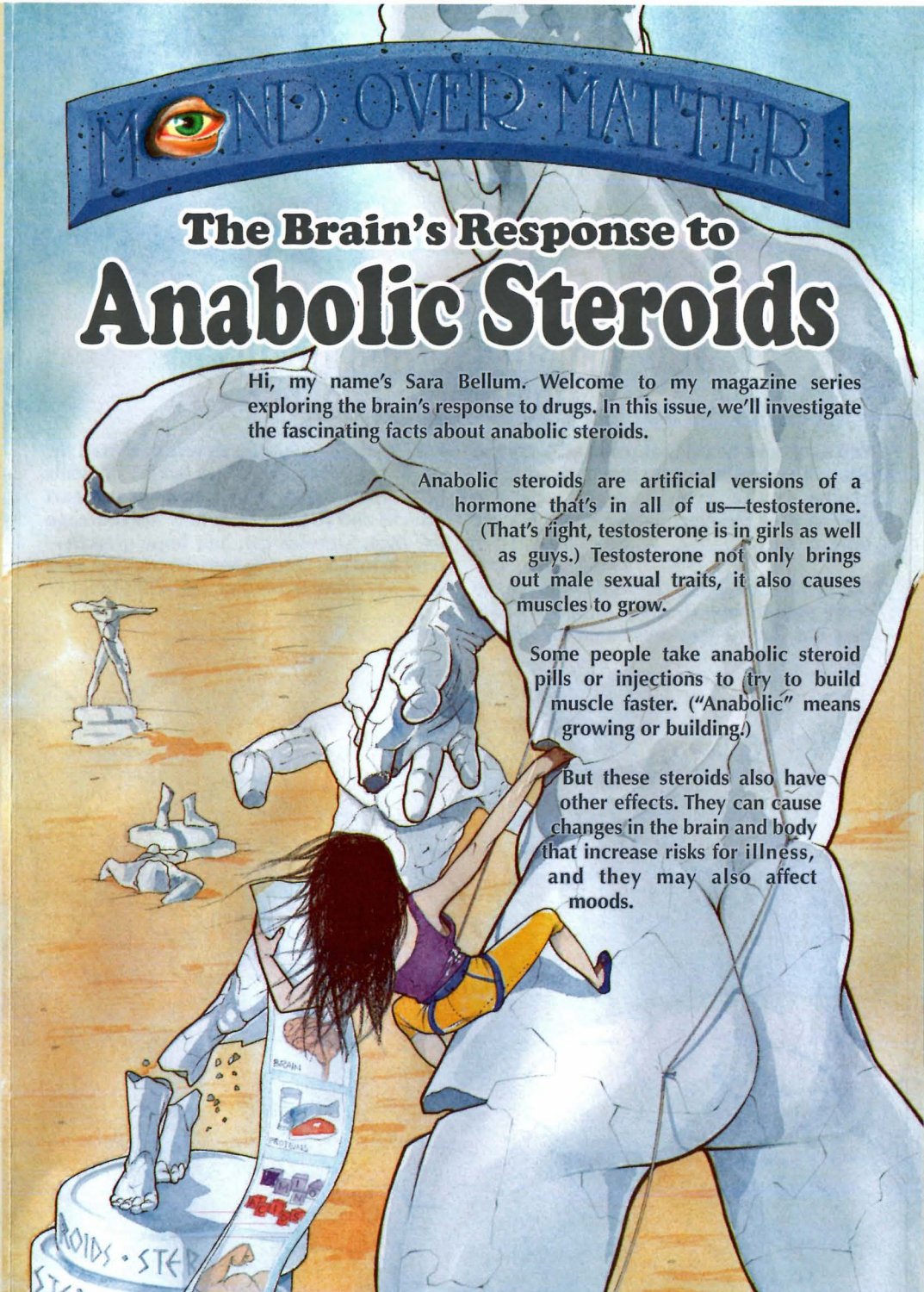
The Brain's Response to Anabolic Steroids

Hi, my name's Sara Bellum. Welcome to my magazine series exploring the brain's response to drugs. In this issue, we'll investigate the fascinating facts about anabolic steroids.

Anabolic steroids are artificial versions of a hormone that's in all of us—testosterone. (That's right, testosterone is in girls as well as guys.) Testosterone not only brings out male sexual traits, it also causes muscles to grow.

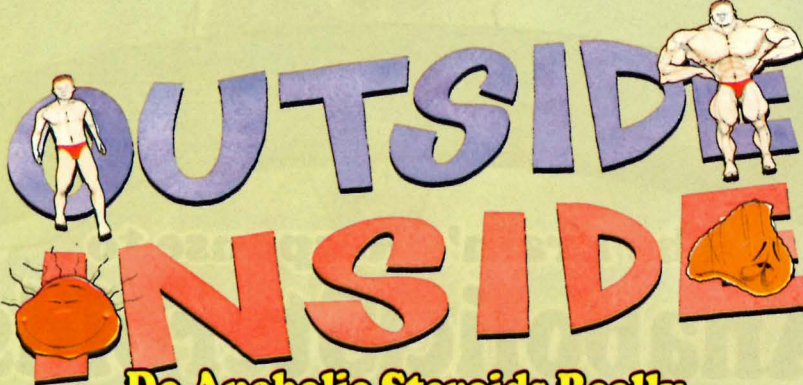
Some people take anabolic steroid pills or injections to try to build muscle faster. ("Anabolic" means growing or building.)

But these steroids also have other effects. They can cause changes in the brain and body that increase risks for illness, and they may also affect moods.



National Institute on Drug Abuse

OUTSIDE INSIDE

An illustration at the top of the page shows two figures. On the left is a normal-looking person in a red brief. On the right is a muscular bodybuilder in a red brief. The word 'OUTSIDE' is written in large, blue, 3D letters above the normal person, and 'INSIDE' is written in large, red, 3D letters above the bodybuilder. There are also small icons of a brain and a liver.

Do Anabolic Steroids Really Make the Body Stronger?

You may have heard that some athletes use anabolic steroids to gain size and strength. Maybe you've even seen an anabolic steroid user develop bigger muscles over time.

But while anabolic steroids can make some people look stronger on the outside, they may create weaknesses on the inside.

For example, anabolic steroids are bad for the heart—they can increase fat deposits in blood vessels, which can cause heart attacks and strokes. They may also damage the liver. Steroids can halt bone growth—which means that a teenage steroid user may not grow to his/her full adult height.

Anabolic Steroids Affect the Brain

Scientists are still learning about how anabolic steroids affect the brain, and in turn, behavior. Research has shown that anabolic steroids may trigger aggressive behavior in some people. This means that someone who abuses anabolic steroids may act mean to people they're normally nice to, like friends and family, and they may even start fights. Some outbursts can

be so severe they have become known in the media as "roid rages." And when a steroid abuser stops using the drugs, they can become depressed, even suicidal. Researchers think that some of the changes in behavior may be caused by hormonal changes that are caused by steroids, but there is still a lot that is not known.

Anabolic Steroids Can Confuse the Brain and Body

Your body's testosterone production is controlled by a group of nerve cells at the base of the brain, called the hypothalamus. The hypothalamus also does a lot of other things. It helps control appetite, blood pressure, moods, and reproductive ability.

In guys, anabolic steroids can interfere with the normal production of testosterone. They can also act directly on the testes and cause them to shrink. This can result in a lower sperm count. They can also cause an irreversible loss of scalp hair.

Anabolic steroids can change the messages the hypothalamus sends to the body. This can disrupt normal hormone function.

In girls, anabolic steroids can cause a loss of the monthly period by acting on both the hypothalamus and reproductive organs. They can also cause loss of scalp hair, growth of body and facial hair, and deepening of the voice. These changes can also be irreversible.

