Rats get hooked on testosterone

Teenagers and others looking to sculpt the perfect body often abuse anabolic steroids, compounds that mimic the body’s natural hormone testosterone in their ability to promote muscle growth. About a decade ago, scientists suggested that users of the drugs may become addicted to them, much like cocaine or heroin.

Now, for the first time, researchers have shown that rats will self-administer testosterone, one of the traditional signs that a compound is addictive. In one experiment by Luke Johnson of the Yale University School of Medicine and his colleagues, rats that liked either a grape- or an orange-flavored drink gradually switched preference if the less-favored drink was laced with testosterone. In a second test, rats given the choice of two holes quickly learn to place their nose in the one that triggers an infusion of testosterone into their bloodstream via a catheter.

Like other addictive drugs, testosterone and its anabolic relatives may activate pleasure pathways in the brain, although perhaps not to as great an extent, suggest the researchers. “It’s not as rewarding as cocaine, obviously,” says Johnson. —J.T.