Do those electronic muscle toners do squat? [1]

Dear Alice,

I know most of us have seen the ads to buy various muscle toning equipment that uses electric pulses to "build more tissue" (hypertrophy), and I was wondering what you thought about this way of "toning muscle." Also, if you knew where else I could go to further my research on these sorts of devices?

Thank you very much for your help in advance.

Answer

Dear Reader,

The buzz about electric muscle toners (EMTs) makes them sound like an easy, pain-free way to build muscle. However, according to the United States Food and Drug Administration (FDA), the gossip about these gadgets provides more hype than hope for those looking to strengthen and tone muscles. In fact, the FDA has approved these devices for use under the supervision of a health care provider. These devices are approved for those with various conditions, such as muscle spasms or atrophy and having a limited range of motion. In addition to learning more about electronic muscle toners in this Q&A, you can check out the FDA's site on electronic muscle stimulators [2] (another term for EMTs).

Applying an electric current to the muscle may cause muscle contractions, and when applied repeatedly, they may begin to strengthen. However, there's no evidence that EMTs are able to sculpt and strengthen muscles, help people lose weight or burn fat, or develop "muscles of steel." Typically, EMTs are used as a temporary fix to help people who have had a serious injury or some underlying medical problem or condition (such as a stroke or recent major surgery) rebuild or retain muscle strength and function. When used as directed by physical therapists and rehabilitation specialists, these machines may help those with muscle injury through their recovery by increasing strength and flexibility in the muscle. There's also evidence that these devices may help maintain bone health for those experiencing bone atrophy, since bones and muscles work together to support the human body.

Ultimately, current research indicates that these devices won't change a person's appearance
without the addition of a balanced diet and regular physical activity. Keep in mind that there have been reports of people receiving electronic shocks, burns, skin irritation, and in more extreme situations, electrocution from improperly made or unregulated EMTs. Additionally, it's been reported that they have interfered with devices such as pacemakers. As a medical device, the FDA can regulate them to ensure their safety before hitting the market and being used by consumers. However, even with FDA approval, any products claiming to tone and increase muscle mass or provide weight loss are likely overstating the product’s abilities, as no EMTs have been FDA approved for this purpose, nor has research backed these claims. If you’re interested in learning more, your health care provider may be able to provide information about these machines, as well as ways to tone muscle without using EMTs.

In the meantime, if you're looking for the buzz that leads to better muscle tone, you may consider trying the slower, but endorphin-filled, alternative: physical activity at home or in the gym.

Alice!
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Resources
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[16] https://goaskalice.columbia.edu/resource/medical-services-cuimc