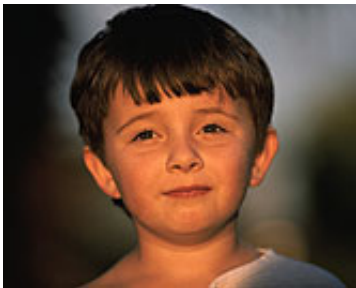


# Viagra, cialis may help duchenne muscular dystrophy patients

May 7 2014, by Steven Reinberg, Healthday Reporter

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Small study finds impotence drugs improved blood flow to muscles in boys with the progressive disease.

(HealthDay)—Drugs normally prescribed to treat erectile dysfunction in adult males may help boys who have a muscle disease called Duchenne muscular dystrophy, according to a new study.

In the small study including just 10 boys with the disease, researchers found that the popular drugs Viagra and Cialis improved blood flow to the boys' weakened muscles.

"Boys with Duchenne muscular dystrophy have a blood flow abnormality—delivery of blood and oxygen to their muscles—that does not increase the way it should during mild exercise," said lead researcher Dr. Ronald Victor, the associate director of the Cedars-Sinai Heart Institute in Los Angeles.

Because the blood vessels do not enlarge in a normal way in Duchenne muscular dystrophy, muscles are starved for oxygen, according to Victor. Cialis and Viagra work by enlarging blood vessels, thus increasing blood flow, which is the same way these drugs help men with erectile dysfunction.

The report was published online May 7 in the journal *Neurology*.

Duchenne muscular dystrophy is a genetic disease that affects boys and young men. It causes a progressive loss of muscle function to the point where those who have the disease end up in a wheelchair. The disorder causes the body to produce little or no dystrophin, a protein needed to make the chemical nitric oxide. Nitric oxide signals blood vessels to relax during exercise, increasing blood flow.

Until recently, boys with Duchenne often didn't live much beyond their teens, according to the Muscular Dystrophy Association. Advances in care have increased survival for many of those with the disease into their 30s. There are even some who have lived into their 40s and 50s.

Current treatments, such as steroids, can slow muscle degeneration and protect heart and lung function, but they don't correct the abnormal blood flow, according to Victor. And, more than a quarter of patients cannot tolerate steroids or their side effects, the researchers noted.

For the new study, Victor's team compared 10 boys with Duchenne muscular dystrophy, aged 8 to 13, who were taking steroids, with 10 healthy boys of the same ages.

All of the boys with muscular dystrophy could still walk, but some also used a wheelchair or a scooter.

The researchers measured the blood flow in all the boys when they were

at rest and when they were doing a handgrip exercise. The tests showed that the boys with Duchenne had abnormal blood flow, even though they were taking steroids.

After giving Cialis or Viagra to the boys with Duchenne, the tests were repeated. After two weeks, the boys who received Cialis were given Viagra and those given Viagra were given Cialis, then all were retested.

Victor's group found that both drugs improved blood flow in boys with Duchenne to the point where it was equal to that of healthy boys.

As for side effects, "A few boys in our study had erections after taking these drugs," Victor noted. "The erections were not painful and not dangerous and resolved spontaneously without treatment."

What's not yet clear is if correcting the abnormal blood flow to the muscles will slow the progress of the disease in any way. But Victor hopes a larger trial will answer that question.

"The findings in this small study led to a large clinical trial, which is enrolling now in the U.S. and abroad, to see if 48 weeks of treatment with once-daily Cialis will slow the decline in walking ability in 7- to 14-year-old boys with Duchenne," he said.

"The findings offer some hope, but we need to wait for the results of the large treatment trial to see if daily treatment with Cialis has a clinically meaningful benefit for boys with this form of muscular dystrophy," he added.

Dr. Migvis Monduy, a pediatric neurologist at Miami Children's Hospital, said: "It's exciting to see new treatment options available for Duchenne. It's not like we have any cure or any effective treatment."

Monduy said that these new findings are very preliminary. The researchers showed that blood flow is improved, she said. "But that doesn't translate to slower disease progression. That's what needs to be proved."

The results of this study won't change clinical practice for the time being, Monduy said.

"We are not going to have anybody prescribing this until we see the results of larger studies, and I wouldn't tell anybody to stop their steroids yet," she said. "We have good evidence that steroids slow down disease progression. But we don't know if these drugs [Cialis or Viagra] will improve outcomes for patients."

**More information:** To learn more about Duchenne muscular dystrophy, visit the [Muscular Dystrophy Association](#).

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Citation: Viagra, cialis may help duchenne muscular dystrophy patients (2014, May 7) retrieved 7 May 2024 from

<https://medicalxpress.com/news/2014-05-common-drug-effects-muscle-disease.html>

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