MSF

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enzyme that destroys the critical substance.

However, cholinesterase inhibitors as a whole are a stopgap measure and only help some people, said Marcelle Morrison-Bogorad, an official with the National Institute on Aging.

"Really, these drugs don't do anything to stop Alzheimer's disease from taking its toll," said Morrison-Bogorad, associate director of the institute's neuroscience and neuropsychology of aging program. "Sometimes they provide a family with a little bit of relief. It's given them a little bit of breathing space where the person has remained more or less themselves."

Moss said patients using MSF showed a five- to six-point improvement on the 70-point Alzheimer's Disease Assessment Scale, which is used to grade performance on a memory test.

Each point represents a mistake. A person with normal brain function might score as low as 0.

Patients taking drugs already approved for Alzheimer's have typically shown about a one-point improvement, Moss said.

Tests also have shown that MSF does not cause the side effects — vomiting, nausea and diarrhea — associated with similar drugs.

"It's early to say that this is a drug that makes a lot of changes, but what we have seen is that it works well," said Dr. Patricia Berlanga, whose patients participated in Moss' study. "Quality of life can be stabilized and degeneration does not progress as quickly."

She said many of the 15 patients who completed the study are still taking the drug and doing well. Under Mexican law, patients who test a new drug can continue receiving it after the study is over.

While Moss concedes that a large-scale trial, such as those required before FDA approval, could determine the drug is not as effective as it has initially appeared, he doesn't believe that will be the case.

"I actually expect the results

Zinc lozenges ineffective in treating cold symptoms in children

Zinc lozenges may provide relief to adults suffering from colds, but they don't help children, researchers say.

CHICAGO — The controversial researcher who started the zinc lozenges craze says a new study indicates they are ineffective against cold symptoms in children and teenagers.

But the researcher, Dr. Michael L. Macknin of the Cleveland Clinic Foundation, said that the amount of zinc in the lozenges studied may have been too small or the cherry flavoring somehow inactivated the zinc.

The zinc fad began in 1996, when Macknin's study of 100 adults was published in the Annals of Internal Medicine. Cold sufferers who took the lemon-lime lozenges got over their symptoms more quickly.

The pediatrician later made $145,000 on the sale of stock in Quigley Corp.,. the Doylestown, Pa., maker of Cold-Eeze zinc lozenges.

His latest study was also supported by a grant from Quigley and was published in the most recent Journal of the American Medical Association.

The findings were quickly challenged by Quigley.

A total of 249 suburban Cleveland students in grades one through 12 were recruited within 24 hours of developing a cold. Half took 10-milligram zinc lozenges five or six times a day; the other half took placebos.

The sneezing, coughing, headaches and other symptoms were no different between the two groups, and the duration of the illness was the same.

Studies with adults used dosages higher than 10 milligrams, but the strength was reduced for the youngsters.

In an accompanying editorial, a researcher said the lack of any theoretical basis for why zinc might work "is troublesome and reminiscent of prior attempts to cure the common cold" with substances such as vitamins C and A.

"The search for the 'magic bullet' that will relieve the multitude of symptoms associated with the common cold continues," wrote Dr. Anne Gadomski of the Research Institute at Bassett Hospital in Cooperstown, N.Y.

In 10 previous studies among adults, five found that zinc helped relieve symptoms, while the other five showed no effect.

In a statement Tuesday, Quigley said Macknin violated controls set up before the research, invalidating the findings.

"The data that resulted from the study provides no meaningful conclusion," Quigley said.

It said 83 of the 249 students in the study should have been disqualified because they were on other medication, had illnesses in addition to or other than a cold, or in violated the research guidelines in other ways.

The company said it plans to repeat the study.

A spokeswoman for Cleveland Clinic would say only that researchers are confident of their work.

"We stand behind the study," said Holli Birrer.

Gene appears to affect risk of getting hooked on smoking

By MALCOLM RITTER
ASSOCIATED PRESS Science Writer

NEW YORK — Scientists say they have identified a gene that helps protect some people from getting hooked on cigarettes. If confirmed, the finding might lead to medications that help smokers cut back or quit.

About one-fifth of the nonsmoking population carries a protective version of the gene, said Rachel Tyndale, one of the study's authors. The gene's influence might have saved some 7 million residents of North America from nicotine addiction, she said.

It is at least the second gene thought to play a role in vulnerability to nicotine addiction. But genetics experts warned that the case for the new gene is far from proven.

Tyndale and colleagues at the University of Toronto in Ontario, Canada, report their findings in a recent issue of the journal Nature.

Dr. Neal Benowitz, a nicotine researcher at the University of California at San Francisco, said the result makes sense biologically. But he cautioned that in the past, similar initial findings of addiction genes have not been confirmed by further research.

Nonetheless, he called the finding an important early step in finding out why some people are more vulnerable to nicotine addiction than others. Only about a third of young people who experiment with cigarettes get hooked, and "we don't know why," Benowitz said.

He and others said the answer will be much more complex than one or two genes.

Prior research has implicated a gene involved in the brain's dopamine communication system. People with a certain variant of the gene start smoking at a younger age, get hooked earlier and find it harder to quit.

The gene in the new study tells the body how to make an enzyme called CYP2A6 that breaks down nicotine. Defective forms of this gene lead to a defective version of the enzyme, impairing the body's ability to process nicotine.

Everybody inherits two copies of the gene, and the study suggests that getting even one bad copy offers some protection against getting hooked.

Researchers studied 244 nicotine-dependent smokers and 184 people who had tried smoking but never got hooked.

The researchers found at least one bad copy of the gene in 12 percent of dependent smokers vs.19 percent of the others. The difference suggests that bad copies discourage people from getting hooked.

The study also found that among the 164 smokers who were hooked on tobacco but not alcohol, those with even one bad copy of the gene smoked fewer cigarettes, an average of 129 a week vs. 159.

This suggests that if scientists can come up with pills that block the action of the CYP2A6 enzyme, the medications could help smokers cut back, Tyndale said. Such pills might also help smokers avoid relapse if they've quit already, she said.

Tyndale said defective copies of the gene could reduce cigarette consumption by making smokers break down nicotine more slowly. Since the nicotine sticks around longer, smokers need fewer cigarettes to maintain a satisfying nicotine level, she said.

As for why the genetic defect would make a person less likely to get hooked, Tyndale noted that nicotine initially makes a neophyte smoker dizzy and nauseous. People get hooked only if they persist in smoking despite the discomfort, she said. If a person breaks nicotine down unusually slowly, it will stick around and make those initial experiences more uncomfortable, making it more likely the person will give up, she theorized.

The hearts own hormone could fight congestive heart failure

By JANET McCONNAUGHEY
THE ASSOCIATED PRESS

NEW ORLEANS – One of the heart's own hormones shows promise in a preliminary study as a drug to fight congestive heart failure, a researcher says.

Dr. David Vesely, who discovered the hormone, dubbed it "vessel dilator," because it widens blood vessels much more than several related hormones. The dilation reduces blood pressure and makes it easier for the heart to pump out blood.

But it's also a diuretic, increasing the amount of urine two to 13 times, and tripling or quadrupling sodium excretion in the few patients it's been tested on so far, he told The Endocrine Society.

People with congestive heart failure often have puffy legs and abdomens. Fluid builds up there because the heart is too weak to pull the fluid through the lungs and into the left side of the heart.

Vessel dilator is stronger than the most potent diuretic now on the market, Vesely, who presented his findings last week, said Friday.

It's only been tested on six patients so far, with six more used as controls.

And, cautioned Dr. Jay Cohn, a cardiologist at the University of Minnesota, "It's a long, long way from identifying a substance to determining whether it can be used to treat a patient."

He said the study is interesting, like those of the related hormones.

Vesely said vessel dilator has an important difference from its three relatives, two of which he also discovered.

The others' effects are much less in congestive heart failure patients than in normal adults. But this one, he said, is just as effective during heart failure as in normal health.

All four are parts of prohormone, which is created in a number of organs but mostly in the heart. Vessel dilator is from the middle of the amino acid sequences which make up prohormone, he said.

"The heart makes more when you have congestive heart failure, but not enough to have the congestive heart failure go away," Vesely said. But extra vessel dilator, given intravenously, "makes the congestive heart failure markedly improve and go way over a short period," he said.

If larger studies show the same effects, it could be an excellent drug, said Dr. Pramilla Subramaniam, a cardiologist and associate professor at Louisiana State University Medical School.

"We have so many patients who have heart failure ... anything we can do to improve heart failure conditions is exciting," she said.

Giving one drug instead of two "would be a great plus," she said. And, because it doesn't act in the same way as drugs now in use, it could be used in addition to them, she said.

Another advantage, Vesely said, is that it's made by the human heart, so allergies are unlikely. In addition, it leaves potassium in the body. Most diuretics increase excretion of potassium as well as sodium, so patients have to take one more pill each day to replace the potassium.

A big disadvantage is that it can only be given intravenously or in shots, like insulin, another protein.

It might be possible to develop a skin patch, Vesely said. "And here at the meetings, some people are claiming they can coat peptides so the stomach doesn't chew them up. If you could take it orally, that would be ideal."