



Dr. Deborah Yurgelun-Todd

Professor of Psychiatry and Director, Cognitive Neuroscience at the Brain Institute, University of Utah

You run a neuroimaging lab; what do you study?

I'm interested in the extent to which citicoline can enhance cognitive function and information processing in the brain. It had been known to improve brain function for those who had strokes. I wanted to see whether it could help in the absence of trauma.

What is citicoline?

It is a substance found naturally in foods, but in low concentrations, not high enough concentrations needed for a therapeutic effect. It is bioavailable in the brain and enhances mental functions.

What have your studies found?

We did a series of studies in healthy middle-age individuals before and after supplementation with citicoline. We gave the agent for six weeks at two doses, 500 mg and 2,000 mg. We saw increased availability of phospholipids. There is good reason for this substance to be working—it changes brain chemistry.

What functional effects does it have?

Paying attention is not just a matter of focusing but of inhibiting extraneous information. It helps people filter out distracting information. And it improves spatial memory processing and retrieval. In a more recent study, we proved that a lower dose—250 mg—works and that four weeks is sufficient to get an effect on increasing attentional focus.

Exactly where does it work in the brain?

It acts in the frontal limbic system, especially the cin-

gulate cortex, areas known to play a role in sustained attention. This is a dopamine system, although we have not yet measured dopamine changes.

What is the need for citicoline?

If there has been brain trauma, there is a deficiency. Also, during normal aging, not enough citicoline is kept in the system. It's not clear why. But under both circumstances, people need more available.

What is unique about this product?

It is the only approved supplement that includes a pyrimidine. Pyrimidines are known to stimulate the synthesis of two major neurotransmitters, dopamine and norepinephrine. They are also critical for the production of phospholipids, key components of brain cell membranes. Cognizin citicoline impacts both cell membranes and neurotransmitter systems.

What is the market for products like this?

It is growing rapidly because there is increasing understanding of brain health and greater awareness

Did you know?

At least 82 percent of all human genes are expressed in the brain, highlighting its tremendous complexity.

.....

Children who exhibit more self-control, an executive function of the brain, achieve more.

.....

Within five minutes of waking, you forget half of a dream; after ten minutes, you forget 90 percent of it.

that cognitive function can be enhanced. Taking supplements to maintain a healthy body has been accepted for decades; only more recently have supplements been recognized for benefits to the brain.

What is the most surprising thing you've learned from the research on this agent?

Even at very low doses (250 mg daily), there is significant improvement in attention and focus.

