Aggiornamento studio di J. James sul Glutathione

IMPORTANTE NUOVO STUDIO DI J. JAMES - 2005/04/03 21:34 Jill James e colleghi continuano lo studio,:ora lo hanno ampliato ed ecco i risultati: http://www.boston.com/news/nation/articles/2005/04/03/research_yields_ autism_clues/

Research yields autism cluesMolecules seen harming cells By Robert Lee Hotz, Los Angeles Times | April 3, 2005

LOS ANGELES -- molti bambini autistici hanno un difetto cronico nelle difese naturali contro i radicali liberi, molecole corrosive che possono danneggiare seriamente le cellule cerebrali che si sviluppano.Lo dicono alcuni scienziati a San Diego. La distruzione molecolare causata dai radicali liberi--un sottoprodotto naturale metabolico--è uno dei maggiori fattori di danno cellulare che è alla base dell'invecchiamento. Ricercatori della University of Arkansas for Medical Sciences hanno trovato che una singola malfunzionamento del metabolismo potrebbe essere alla base di molti sintomi dell'autismo,. Normalmente il corpo si protegge da questo danno con una sostanza prodotta da ogni cellula chiamata glutathione, che neutralizza i radicali liberi. Analizzando campioni di sangue di 95 bambini autistici e 75 normali, i ricercatori guidati da J James hanno determinato che i livelli di glutathione erano anormalmente bassi in molti bambini autistici. Presenteranno il loro lavoro all' Experimental Biology 2005 conference in San Diego.

Il ritrovamento è indicativo, dicono molti esperti, perche il glutathione è cruciale anche per neutralizzare i metalli pesanti tossici come il mercurio. dice j james" quando il glutatione disponibile è poco, è più facile che si creino sbilanci e i radicali liberi diventano ancora più dannosi.Una interpretazione di questi ritrovamenti è che i bambini autistici sarebbe meno capaci di detossificarsi e eliminare questi metalli pesanti"

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LOS ANGELES -- Many autistic children share a chronic flaw in the body's natural defenses against oxygen free radicals -- corrosive molecules in the body that can severely damage developing brain cells, scientists said yesterday in San Diego. ADVERTISEMENT var zflag_nid="410"; var zflag_cid="1"; var zflag_sid="1"; varzflag_width="160"; var zflag_height="800"; var zflag_sz="17";

The molecular havoc caused by free radicals -- natural byproducts of metabolism -- is believed to be a major factor in the cell damage that underlies aging.

Researchers at the University of Arkansas for Medical Sciences in Little Rock found that a single breakdown in the body's metabolism might underlie many of the puzzling symptoms of autism, a complex developmental disability with a spectrum of behaviors.

''This is a very promising thing to look at because it gets at the actual metabolic processes in the brain,'' said George Bartzokis, a University of California, Los Angeles, neurologist who did not participate in the research. ''The brain is especially vulnerable to damage from free radicals.''

Those with autism typically have difficulty communicating and interacting with other people. It strikes some in infancy. Other children may develop normally for several years before falling into a private world where normal social interaction and behavior becomes impossible.

The new findings also may help shed light on the condition's range in severity because maturing neurons and synapses are especially vulnerable to this biomolecular bombardment. Autism could therefore cause different symptoms and severity in children depending on when the disorder is triggered.

Normally, the body shields itself from such damage with a chemical produced by every cell called glutathione, which neutralizes oxygen free radicals.

By analyzing blood samples from 95 autistic children and 75 healthy ones, researchers led by biochemist S. Jill James at the University of Arkansas determined that levels of this protective antioxidant were abnormally low in many autistic children.

They presented their work at the Experimental Biology 2005 conference in San Diego.

The finding is suggestive, several experts said, because glutathione also is crucial for neutralizing toxic heavy metals such as mercury, which is found in food, the air and, at one time, a vaccine preservative called thimerosal.

''When glutathione is less available, then it is easier for things to get out of balance and the free radicals can cause more damage,'' James said. ''One interpretation of this finding is that children with autism would be less able to detoxify and

eliminate these heavy metals."