Energy centers of immune cells decreased in children with autism

Children with autism experience deficits in a type of immune cell that protects the body from infection. Called granulocytes, the cells exhibit one-third the capacity to fight infection and protect the body from invasion compared with the same cells in children who are developing normally.

The cells, which circulate in the bloodstream, are less able to deliver crucial infection-fighting oxidative responses to combat invading pathogens because of dysfunction in their tiny energy-generating organelles, the mitochondria.

“Granulocytes fight cellular invaders like bacteria and viruses by producing highly reactive oxidants, toxic chemicals that kill microorganisms. Our findings show that in children with severe autism the level of that response was both lower and slower,” said Eleonora Napoli, lead study author and project scientist in the Department of Molecular Biosciences in the UC Davis School of Veterinary Medicine. “The granulocytes generated less highly reactive oxidants and took longer to produce them.”

Read the full, original story: Mitochondrial deficits in children with autism confirmed