

Statins don't prove useful for general pediatric lupus population

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Lupus puts children at higher risk for coronary artery disease when they become adults, but routinely using statins doesn't provide enough benefit to warrant their regular use in children and adolescents, according to the largest study of pediatric lupus patients to date.

Lupus is an autoimmune disease that causes widespread inflammation and organ damage. Children with lupus show early signs of atherosclerosis -- the [fatty tissue](#) buildup that is the precursor to [clogged arteries](#). Previous research also indicates risk for heart attack and stroke in premenopausal women with lupus is 50 times greater than women the same age without the disease.

"As treatments for lupus improve and kids live longer, they are more likely to develop significant heart disease," says Laura Schanberg, MD, a professor of pediatrics at Duke University Medical Center who presented the findings at the American College of Rheumatology meeting in Atlanta. "We wanted to find a way to lower their risk."

Statins were the obvious choice for investigation since they have proven effective at decreasing heart disease incidence in many adult populations. "We thought every child with lupus should routinely be put on statins," Schanberg says. "This study proves that's not the case."

"The statins had positive effects on CRP and [lipid levels](#), and they appear to be safe and well tolerated," says Schanberg, "But their effect on atherosclerosis was not significant enough to warrant routine use."

Schanberg, of the Duke Clinical Research Institute, and Stanford University professor Christy Sandborg, MD, were the co-principal investigators of the Atherosclerosis Prevention in Pediatric [Lupus Erythematosus](#) (APPLE) trial. It randomized 221 participants with pediatric lupus (ages 10 to 21) from 21 sites within the Childhood Arthritis and Rheumatology Research Alliance (CARRA) to two groups. One group received atorvastatin (Lipitor), the other received placebo for 36 months.

The researchers set out to determine if the use of statins resulted in a significant clinical difference that outweighed any potential risks. They used ultrasound techniques to detect thickening of the arterial wall of carotid arteries. They also studied blood lipid levels, inflammation markers including C-reactive protein (CRP), and lupus disease activity measures.

"There are rare long-term risks associated with statins that outweigh the risks of using them routinely without proof of clinically significant benefit," Schanberg says.

Further analysis is needed to determine whether sub groups of the study participants might derive more benefit from statin therapy.

"We're not saying statins should never be used in kids with lupus," she says. "Rather, we showed that statins should not be routinely prescribed to children with [lupus](#). A lot more information has to go into the decision, and further investigation will help us arrive at a more definitive answer."

Provided by Duke University Medical Center

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