

Why Exercising While You're Pregnant May Make Your Baby Smarter

Moderate **exercise** during **pregnancy** may boost your baby's brain development, according to new research.

The study involving 18 moms-to-be and their babies found that "at 10 days, the children have a more mature brain when their mothers exercised during the pregnancy," says study researcher Elise Labonte-LeMoyne, a Ph.D. candidate in kinesiology at the University of Montreal.

Other studies have found health benefits for **newborns** and older children whose mothers worked out during pregnancy, the researcher says. And while animal studies have shown that exercise during pregnancy alters the fetal brain, she believes this is the first study to look at exercise's effect on human brain development.

For the study, which was scheduled for presentation Sunday at the Society for Neuroscience annual meeting in San Diego, the researchers randomly assigned 10 pregnant women to an exercise group and eight to an inactive group at the start of their second trimester. The active group was told to engage in at least 20 minutes of cardiovascular exercise three times a week at a moderate intensity—meaning it should lead to at least a slight shortness of breath. They typically walked, jogged, swam or cycled, Labonte-LeMoyne says.

On average, the workout group clocked 117 minutes of exercise a week; the sedentary group 12 minutes weekly. Using an EEG, which records the brain's electrical activity, the researchers measured the newborns' brain activity while sleeping when 8 to 12 days old. They focused on the ability of the brain to recognize a new sound, Labonte-LeMoyne says, noting this

reflects brain maturity.

The babies whose mothers exercised showed a slight advantage, the investigators found. “The **brain** is more efficient; it can recognize the sound with less effort,” she explains.

The differences may translate to a language advantage later in life, she speculates. The researchers are continuing to track the children’s development until age 1 to see if the advantage remains.

It’s possible that exercise speeds up a process known as synaptic pruning, whereby extra nerve cells and connections are eliminated, helping brain development, Labonte-LeMoyne says.

The study findings didn’t surprise Dr. Raul Artal, professor and chair of obstetrics and gynecology and women’s health at Saint Louis University School of Medicine. He has long touted the value of **exercise** for healthy pregnant women.

“It’s known that babies respond to stimuli in utero,” he says. The new research reinforces the belief that “pregnancy is not a state of confinement or indulgement.”

“It has been documented that pregnant women who lead a normal life, exercise and eat judiciously have better pregnancy outcomes,” Artal says, while a sedentary lifestyle, obesity and some diseases can hurt the unborn baby.

The American Congress of Obstetricians and Gynecologists states that women with uncomplicated pregnancies who are recreational and competitive athletes can remain active during pregnancy, modifying their routine when medically necessary. Women who were inactive before getting pregnant or who have medical or pregnancy-related complications should be evaluated first by their doctor, the guidelines say.

Research presented at meetings is considered preliminary until

published in a peer-reviewed medical journal.