

Poop Scoop

New baby? Feeling like you're waist deep in dirty diapers? Forget diaper-collection services; just volunteer your infant for a poop study and researchers will take them off your hands for free. Dirty diapers, it seems, hold the key to measuring infant hormone levels.

Sex hormones, such as estrogen, are important for babies' healthy development. But some endocrinologists worry that children are exposed to too much additional estrogen via soy formula, plant fertilizers, and even plastics, which could cause faster-than-normal development and future problems with reproduction. However, few infants tolerate a frequent finger or heel prick, and so "very little is known about hormone levels in infants," explains Michelle Lampl, an anthropologist at Emory University in Atlanta.

Diapers, however, can be collected frequently and over a long period of time, perfect for a longitudinal study. Practicing on eight to 10 diapers collected from each of 32 largely breast-fed infants over 6 months, Lampl's group perfected a technique for extracting hormone levels from the poop, they reported online last month in *Frontiers in Systems Biology*.

They also perfected their diaper-collection technique. "It took years to find the right nappy and work out how you get the diaper fresh from the home to the lab," says Lampl. The secret: a cotton diaper, a Ziploc bag, and an ice pack.

The Sound of Science

Two years ago, particle physicists at the European laboratory for particle physics (CERN) near Geneva, Switzerland, rapped about the start up of their enormous new atom smasher, the Large Hadron Collider (LHC). Now, they're taking it up a notch: On 6 December, scientists from the collaboration that takes data with LHC's ATLAS detector will be releasing a double album featuring everything from classical and medieval music to blues and heavy metal.

Resonance will be released on homegrown label Neutralino Records (named after a hypothetical subatomic particle) and includes a song about the detector's workings by physicist Steven Goldfarb's Canettes Blues Band. In another tune, guitar band the TLAs (Three Letter Acronyms) laments that "when black holes destroy the Earth, I'll be in a meeting." Besides raising money for an orphanage in Nepal, Goldfarb

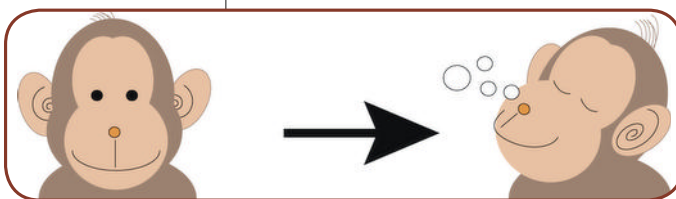
hopes that the record will highlight how science, like music, is a creative enterprise. "We are not trying to compete with the Beatles or Motown," he says, "but to try and interest young people in physics." Imagine Paul McCartney's relief. www.atlas-resonance.ch

Thanks for Sharing

The phrase "copyright-free repository of neuroscience data" doesn't exactly roll off the tongue. So when he decided to share his data, Naotaka Fujii of RIKEN Brain Science Institute in Wako City, Japan, dubbed his collection "Neurotycho" (<http://neurotycho.org>). The term pays homage to the 16th century Danish astronomer Tycho Brahe, whose collected data inspired Johannes Kepler's laws of planetary motion.

Fujii's own data combines multielectrode recording and motion capture to study adaptive behavior in primates.

Many animal researchers who put data online cloak it in technical jargon or hide it behind academic firewalls to forestall attacks by activists. Neurotycho, by contrast, highlights the information with simple explanations and cartoon illustrations. "I thought the benefit of starting Neurotycho was much larger than the risks," Fujii says. "We need new ideas from different fields for understanding neural mechanisms." The site's



usefulness is catching on: In the first 10 days after it was launched last month, 150 neuroscience experts from around the world signed up.

GOOOOOO SCIENCE!

It was just another Monday night for patrons gathered at a Philadelphia sports bar on 15 November to watch the Eagles play the Washington Redskins. And then a squad of cheerleaders burst through the door and, armed with megaphones and pompoms, explained football in terms of vector physics.

The Science Cheerleaders strike again. Like all superheroes, they lead double lives: All of them are either professional cheerleaders working on a scientific degree or former cheerleaders who switched to science-related careers. "I am very fortunate that I have the opportunity to fulfill both passions—science and dance," says Alyson, a Tennessee Titans cheerleader who plans to start medical school next year. (Like pro cheerleaders, squad members don't use their full name as a precaution against stalking.) In October, they performed at the U.S.A. Science & Engineering Festival on the National Mall in Washington, D.C. "Some people feel we are trying to improve the reputation of cheerleaders, while others feel this is helping scientists," says Darlene Cavalier, a former Philadelphia 76ers cheerleader who manages the Science Cheerleaders (www.sciencecheerleader.com) and other science outreach programs. "I just hope it inspires as many people as possible!"

