**Pets good for kids' immune systems, researchers find**

By Janice Neumann, Special to the Tribune
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Terri and Joe Sparks were thrilled to learn they were expecting twins eight years ago but worried about exposing the future newborns to germs from their menagerie of dogs and cats.

Terri's obstetrician, however, told the two pet lovers what a recent health study now confirms — their animals' germs may actually be a good thing because they help build up the immune system. The researchers used a prospective birth cohort study of Finnish parents, examining the frequency of their babies' respiratory symptoms and infections, along with dog and cat contacts, during the first year of life. Their study, which is published in the August issue of Pediatrics, found that in 397 children, those with dogs at home had fewer respiratory symptoms or infections and less frequent ear infections. The babies also needed fewer courses of antibiotics than other babies.

In tracking animal contact, the study showed that 1-year-olds with no dog or a dog that was not inside were classified as "healthy" about 64 percent of the time. However, 1-year-olds with a dog that was most often inside were rated "healthy" about 81 percent of the time.

The researchers are affiliated with Kuopio University Hospital in Finland, the National Institute for Health and Welfare in Finland, and the University of Ulm in Germany.

Dr. Todd Mahr, who chairs the American Academy of Pediatrics' section on allergy and immunology, said the study was impressive because it studied babies from pregnancy onward. He said the results were from parents' diary entries.

"I think a number of these studies are really telling us there's not a reason to kick the dog out of the house and it actually might be a good thing for a baby to be born into the home," Mahr said.

The research did show that "cat ownership seemed to also have an overall protective effect, although weaker than dog ownership." Babies in homes where the dogs spent some time outdoors had the lowest risk of infection.

Dr. Mary Tobin, who directs the allergy division at Rush University Medical Center, said one reason that dogs might provide greater protection than cats is because babies spend more time cuddling or pulling on a dog's fur or letting it lick them. Cats aren't as socialized, often living exclusively indoors, she noted. Tobin's baby niece uses the family dog to try to stand up.
Tobin said the current study was an offshoot of British researcher David B. Strachan's "hygiene hypothesis," which theorizes that declining family size and modern (sometimes excessive) sanitation has led to an increase in allergies.

"It's kind of exposing the immune system at an early age to all kinds of proteins the dogs would be exposed to in the environment, which somehow leads to a tolerance of the environment versus being more allergic to it," said Tobin, adding that a little less sanitation could actually help build tolerance.

Most infants have three to six respiratory infections during their first year, the authors note. Contributing factors include day care attendance, older siblings and lack of breast-feeding, studies have shown. Other research showed parental history of asthma and smoking may have the greatest impact on a child's susceptibility.

"I think this is the first study that really showed as far as infection is concerned, it is diminished among children who have dogs and cats," said Dr. Baltazar Espiritu, associate professor of medicine and pediatrics at Loyola University Stritch School of Medicine.

Espiritu said he was usually only concerned about having pets around newborns if the baby had an allergy. Other pediatricians noted that only gentle dogs should be allowed around babies and that the baby and animal should be supervised when together.

Kenneth Fox, a pediatrician at NorthShore University HealthSystem, said not all germs have a positive impact on toddlers and, "You don't want people to think, 'Oh the dirtier the household the better off the child will be.'" He noted that kids and caretakers should wash their hands, especially during food preparation and after going to the bathroom.

"I think the idea is that exposure to the pet increases what we would call subclinical doses of germs, germs that are not invasive and are of low virulence, and so this exposure had some impact on immune regulation," said Fox, also a senior clinician educator at the University of Chicago Pritzker School of Medicine.

That's been the case for the twins, said Terri Sparks, marketing and public relations manager for the Animal Welfare League. The youngsters continue to be healthy, even as the Alsip family fosters pets and allows the kids to help socialize the animals.

"We never had too much of anything; we were pretty lucky, no infections or allergies," said Sparks.