Childhood Bugs May Protect Women Against RA

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Healthy female babies might not make such healthy adults, at least when it comes to rheumatoid arthritis, according to a group of British researchers.

Exposure to infection in early childhood may help protect women from developing rheumatoid arthritis (RA), reported Dr. C.J. Edwards and colleagues from the University of Southampton and the Southampton General Hospital, United Kingdom.

"It appears that a developing immune system exposed to fewer infectious microorganisms through improved standards of hygiene may be more likely to produce [rheumatoid factor] and perhaps begin the pathological process that leads to [rheumatoid arthritis]," reported Dr. Edwards and colleagues (Ann. Rheum. Dis. 2006;65:401-4).

The researchers' study measured rheumatoid factor (RF) levels in 675 men and 668 women aged 61-69 years and investigated the association of RF with markers of exposure to childhood infection. These markers included sharing a bedroom during childhood, social class, and birth order.

"Reduced exposure to microorganisms is thought to result from higher social class, fewer siblings, having your own bedroom during childhood, and living in an urban environment," the authors reported.

A positive RF level—defined as 6 IU/ml or higher—was present in 16.6% of the men and 11.8% of the women in the study.

Although no significant relationship was found between markers of childhood infection and the presence of RF in men, women who shared a bedroom during childhood had a significantly lower risk of being RF positive (odds ratio 0.48), they noted.

There also was a trend that associated lower birth order and lower social class with a reduced likelihood of RF positivity in women.

The presence of RF has been shown to confer a risk of developing RA—although RF may be present for up to 10 years before clinical disease onset, the authors noted.

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Up to 80% of people with RA also have RF; however, 10% of the normal population tests positive for RF, and prevalence increases with age. It is not clear why the association of RF positivity and increased childhood exposure to infection was found in women and not in men.

The epidemiology of RA, however, is markedly different for the two groups, noted the authors. "Women are three times more likely to have RA than men and have a peak incidence in middle age. In contrast, men have an increasing incidence that becomes equal to that of women later in life."

The authors noted a parallel between the "hygiene hypothesis" linking decreased infectious exposure and allergy.

"Epidemiological evidence has now shown that autoimmune diseases such as type 1 diabetes are more likely in subjects exposed to a 'cleaner' environment during childhood and that atopy has an increased incidence in subjects with autoimmune diseases, including RA," Dr. Edwards and colleagues noted. ■

Web Site Offers Handy Mnemonics

The Medical Mnemonics Web site offers a free, online, searchable database of medical mnemonics to help remember important details. The hip's lateral rotators will come to mind with the mnemonic: **P**iece **G**oods **O**ften **G**o **o**n **Q**uilts: **P**iriformis, **G**emellus superior, **O**bturator internus, **G**emellus inferior, **O**bturator externus, **Q**uadratus femoris. The database is also available for PalmOS, PDF, AvantGo, and WAP, and is customizable. For more information, visit www.medicalmnemonics.com. The Web site is funded in part by an educational grant from HealthFrontier, Inc. ■