

ScienceDaily

Your source for the latest research news

News

Articles

Videos

Images

Books

Search

Health & Medicine

Mind & Brain

Plants & Animals

Earth & Climate

Space & Time

Matter & Energy

Computers & Math

Fossils & Ruins

Science News

[Share](#) [Blog](#) [Cite](#)
[Print](#) [Email](#) [Bookmark](#)

Children Under Stress Develop More Fevers

ScienceDaily (Mar. 7, 2007) — Children whose parents and families are under ongoing stress have more fevers with illness than other children. Published this month in the Archives of Pediatric and Adolescent Medicine, the study also shows the unanticipated conclusion that children's natural killer cell function, part of the body's innate immune system, increases under chronic stress, unlike adults, whose function is decreased.

See Also:

Health & Medicine

- Mental Health Research
- Children's Health
- Workplace Health

Mind & Brain

- Mental Health
- Stress
- Depression

Reference

- Heat shock protein
- Pediatrics
- Emotional detachment
- Fatigue (physical)

"These findings are somewhat surprising to me but also exciting because they show us possible new avenues for improving children's health," said Mary Caserta, M.D., principal investigator of the study and associate professor of Pediatrics in the division of Pediatric Infectious Diseases at the University of Rochester Medical Center. "I figured families under stress might think their children were sick more often when they actually weren't, but fevers are not subjective. These kids living with chronic stress in their families really were sick more often."

While an illness with a fever isn't necessarily any worse than an illness without one, it does point to an objective sign of illness, often an infection, Caserta said. This suggests an association between family stress and susceptibility to infectious diseases.

Caserta undertook the study with collaborator Peter Wyman, Ph.D., associate professor of Psychiatry at the University of Rochester. Wyman, who designed one of the stress surveys used in this study, has led other studies of urban families and their children under stress and his research has shown links between chronic parent stress and children's emotional well-being. This new study is innovative because it links stress to objective health and biological indicators of immune function. The study is one of the few that have examined the effects of stress on children's immune function.

One of the more surprising findings of the study is that children's natural killer cell function increases under chronic stress. Previous research with mostly older adults has shown that chronic stress decreases their natural killer cell function. (Natural killer cells are part of the immune system that exists before a new germ is introduced; it is the first line of defense for the body until the immune system adapts to fight a specific bacteria or virus.)

"It may have something to do with the fact that children's immune systems are still developing," Caserta said. "Or maybe they're compensating for a defect somewhere else. More research is needed to figure out why."

The study followed 169 diverse 5 to 10 year olds for 3 years. Children and their parents were recruited from a population already participating in a study of childhood infections at the University's Golisano Children's Hospital at Strong. The study involved seven visits about six months apart. Parents were given digital thermometers and they were asked to record their children's health status every week and every time their children were ill.

Parents also completed surveys to assess their own and their family stress over the course of the study. They were asked about psychiatric symptoms, such as depression and anxiety,

Ads by Google

Cerebral Palsy Treatment

Innovative CP stem cell treatment. First clinic in Europe! www.XCell-Center.com/CerebralPalsy/

Psychotherapy in English

Experienced psychotherapist Donna Deane - Oslo and Bærum ge-te.no/default5.aspx

Ask a Psychiatrist: Stress

17 Psychiatrists Are Online Now. Ask a Question, Get an Answer ASAP. JustAnswer.com/Stress

Stressmestring, yoga etc

Stressmestring læres på Halvorsbøle Unikt kurssted. Kvalifiserte ledere www.halvorsbole.no

Related Stories

Does Stress Of Being A Parent Lead To Decay In Children's Teeth?

(Apr. 6, 2009) — A team of scientists has examined the stress levels of parents whose young children either had no cavities or so many cavities that the children had receive anesthesia before undergoing dental ... [read more](#)

Mysterious Fevers Of Unknown Origin: Could Surgery Be A Cure?

(Mar. 29, 2008) — A child spikes a high fever like clockwork every 3-6 weeks, sometimes as high as 104 or 105 degrees, and sometimes causing seizures. No infection or any other cause is ever found. Yet, according to a ... [read more](#)

Stressed-out Skin Loses Its Antimicrobial Defense Mechanism

(Nov. 19, 2007) — It is well known that being stressed increases our susceptibility to infections by impairing the function of our immune system, but the molecular links between stress and diminished immune function ... [read more](#)

Children Distressed By Family Fighting Have Higher Stress Hormones

(Nov. 18, 2008) — A new study found that children who are very distressed when their parents fight have higher levels of the stress hormone cortisol. Distress, hostility, and level of involvement parental arguments ... [read more](#)

Too Stressed To Think?

(May 17, 2005) — Chronic stress can be harmful - to your health and also to your brain, according to researchers at the Douglas Hospital Research Center. Their findings, published in a recent issue of ... [read more](#)

Ads by Google

Ayurveda + Yoga in Kerala

Activities, Relaxation, Retreats at Traditional Indian Health Resort www.ayurvedayogavilla.com

Pharma Market Access

Strategic pricing and market access consulting for the life sciences www.creativ-ceutical.com

Just In:

Warmer Climate: Less Carbon Uptake by Trees?

Science Video News



Science Of Stress

Dermatologists know that stress can cause hair to fall out, acne to break out, and many other problems. These manifestations of stress can cause even. ... [full story](#)

Psychobiologists Find Genetic Component in Children's Food Preference

Pediatricians Reduce Ear Infections By Vaccinating Children

Ergonomists Reduce Repetitive Stress with Computer-Mouse Alternative

[more science videos](#)

Improve Your Brain

Memory

Spatial Reasoning

Attention

Problem Solving

Focus

Fluid Intelligence

Speed

Stress

Language

Reaction Time

Visual Perception

General Health

New ways to help

[Play Games](#) >

www.lumosity.com

Ads by Google

Breaking News

... from NewsDaily.com

Cocaine changes how genes work in brain

Report calls for research on nanoparticles in food

NASA hauls shuttle to launch pad, despite cold

Study turns up 10 autism clusters in California

Tombs to lift lid on Egypt's ancient middle class

[more science news](#)

REUTERS

Ads by Google

Psychotherapy in English

Experienced psychotherapist Donna Deane - Oslo and Bærum ge-te.no/default5.aspx

Lær stressmestring nå

Kurset Arbeid og avspenning 15-17 mars. Kvalifiserte ledere www.halvorsbole.no

Ask a Psychiatrist: Stress

17 Psychiatrists Are Online Now. Ask a Question, Get an Answer ASAP. JustAnswer.com/Stress

schizophrenia

Alternative Mental Healthcare It will change your mind and

and they were asked about their relationship with their children, such as whether they felt detached from their child or overwhelmed by their parenting responsibilities. In addition, parents reported on external stressors such as exposure to violence and unemployment.

Building on this study, the researchers hope to determine what types of parental and family stress lead to increased illnesses and what biological processes control susceptibility to infections. "Once we understand these connections we can design interventions that lower family stress, or help families to better manage stress in their interactions -- and lead to healthier kids," she said

Email or share this story:

| More

Story Source:

Adapted from materials provided by [University of Rochester Medical Center](#).

Need to cite this story in your essay, paper, or report?
Use one of the following formats:

- APA University of Rochester Medical Center (2007, March 7). Children Under Stress Develop More Fevers. *ScienceDaily*. Retrieved January 8, 2010, from <http://www.sciencedaily.com/releases/2007/03/070305202905.htm>
- MLA

Note: If no author is given, the source is cited instead.

Har Du Angst ?

Prøv Dr.Bach Blomstermedisin
Reduserer Angst plager Effektivt
www.myrra.no

Cure Diabetes Stress Now

The 'Diabetes Psychologist' teaches you easy solution: claim free info
www.positivediabetes.com

factory shooting

U.S. intel failed to focus resources on al Qaeda threat
U.S. contractors charged with killing 2 Afghans

A goodbye kiss triggered New Jersey airport scare

Pelosi says Congress close to health deal
[more top news](#)

life
www.earthhouse.org

Pharma Pricing Strategies

Pricing, reimbursement & market access strategy and services.
www.creativ-ceutical.com

Copyright Reuters 2008. See [Restrictions](#).

Free Subscriptions

... from ScienceDaily

Get the latest science news with our free email newsletters, updated daily and weekly. Or view hourly updated newsfeeds in your RSS reader:

[Email Newsletters](#)

[RSS Newsfeeds](#)

Feedback

... we want to hear from you!

Tell us what you think of the new ScienceDaily -- we welcome both positive and negative comments. Have any problems using the site? Questions?

Your Name:

Your Email:

Comments:

Click button to submit feedback:

Search ScienceDaily

Number of stories in archives: 79,724

Find with keyword(s):

Enter a keyword or phrase to search ScienceDaily's archives for related news topics, the latest news stories, reference articles, science videos, images, and books.

[About This Site](#) | [Editorial Staff](#) | [Awards & Reviews](#) | [Contribute News](#) | [Advertise With Us](#) | [Privacy Policy](#) |
[Terms of Use](#)

Copyright © 1995-2009 ScienceDaily LLC — All rights reserved — Contact: editor@sciencedaily.com
Part of the [iVillage Your Total Health Network](#)