

"DC" On-Line

Editorial Staff

Gene Mutations Associated With Smoking

A John Hopkins University study published in the March 16, 1995 issue of the New England Journal of Medicine has found a high incidence of mutation in the genetic material of smokers. The gene p53, which appears to protect the body from some types of cancer, was mutated twice as often in smokers as non-smokers.

Persons who both smoked and used alcohol increased their risk to three times that of the control group.

The "I Forgot My Lithium" Defense

In Boston recently, a man attacked and injured the chauffeur of the police commissioner. The chauffeur, who had been waiting in the car with the commissioner's wife and child, suffered cuts, loosened teeth and a black eye.

In court, the attacker was declared innocent because he had not taken his lithium medication for the past two months.¹ A police spokesman said that the acquittal was disappointing.

Most of us know patients who get very irritable when they need an adjustment. I wonder how the "I was out of adjustment" defense would work?

Stunted Fetal Growth Hurts Boys' Academic Chances

Researchers in Israel have discovered that adolescent boys who were born weighing less than normal for their gestational age were much less likely to do well academically. The study involved over 1700 children and showed an increased likelihood of poor school performance of nearly two and one-half times compared to those born at normal weights. The researchers think that males are more vulnerable to developmental trauma, an idea that apparently has been suggested by previous studies.²

Sugar Triggers Childrens' Adrenaline

A study at Yale University School of Medicine has found an explanation for the hyperactive effects many parents have observed when giving refined sugar to their children.

Researchers gave children the sugar equivalent of two cans of soft drinks and watched their blood

sugar levels rise and fall. As the sugar levels peaked and began to drop, they found large surges of epinephrine in the bloodstream. The amounts they found were about twice what they would expect to see in an adult.³

In February, 1994 a study published in the New England Journal of Medicine concluded that sugar has no effect on childrens' behavior. However, that study used aspartame and saccharin in the control groups, substitutes that may produce their own problems.

Low Blood Pressure Causes Chronic Fatigue

Researchers from John's Hopkins Children's Center in Baltimore report a study that finds a lack of proper blood pressure regulation in chronic fatigue syndrome sufferers. The hypothesis is that insufficient blood pressure is responsible for the ongoing fatigue.

This very small study, done on seven teenagers, found that each suffered from neurally mediated or orthostatic hypotension.⁴

Tiny Particles in Air Increase Death Rate

Cities with high amounts of small particle air pollution may be raising their citizens' death rates by as much as 17 percent, according to a newly published study.⁵ Researchers from Harvard, Brigham Young University and the American Cancer Society tracked half a million men and women in over 150 metropolitan areas during the 1980s.

The study correlated death rates with concentrations of tiny particles no more than 1/40th the diameter of a human hair in the environment. The deaths were due for the most part to increases in heart and lung disease.

Cities with an average pollution rate, while complying with federal standards, still showed a death rate of five percent above cities with the cleanest air.

A separate study by the California EPA has concluded that smog causes 275 deaths annually in Riverside and San Bernardino counties alone.⁶

High Blood Pressure Drugs May Cause Heart Attacks

At the American Heart Association's annual epidemiology meeting, Dr. Bruce Psaty presented a report that certain anti-hypertensive medications appear to increase a patient's risk of heart attack by 60 percent. The drugs in question are calcium-channel blockers and are sold under the brand names of Adalat, Calan, Cardizem, Dilacor, Isoptin, Procardia and Verelan.

While he stressed that no one should abruptly discontinue their medication, he recommended that patients consult their doctors about alternatives. In many cases, patients are taking these drugs in an attempt to prevent heart attacks.

Dr. Jeffrey Cutler of the National Institutes of Health says that there is a "possibility that calcium

channel blockers don't prolong life but actually increase risk."⁷

I'm not an expert in cardiac physiology, but if the blood supply to a given portion of heart muscle is compromised and the area already prone to hypoxia, I can see how lowering the blood pressure could trigger an infarction.

Cholesterol Screens for Children

In 1992, the National Cholesterol Education Program (established by the National Heart Lung and Blood Institute) published guidelines recommending cholesterol screenings for certain children. Those to be tested had a parent or grandparent diagnosed with coronary heart disease before age 55, or high blood cholesterol levels. This would include about 25 percent of all American children.

Researchers at the University of California are taking issue with these recommendations in an epidemiological study published in the Archives of Pediatrics and Adolescent Medicine. They say that the heightened sensitivity to cholesterol levels can lead to diets or drugs that are potentially dangerous to the children. In addition, these treatments do not appear to offer any significant benefit.

According to one researcher, "Given current evidence, any screening and treatment of children for high blood cholesterol levels is, at best, premature."⁸

Day Care Centers Increase Susceptibility to Infection

A Finnish study has concluded that children who are kept in large day care centers are 36 times more likely to suffer from pneumococcal infections than those who stay at home.

Streptococcus pneumoniae is commonly present in the nasal mucosa of healthy children. It is blamed for up to one half of all pediatric middle ear infections and many cases of pneumonia and meningitis.

Besides putting large groups of children into a closed environment, other factors that decrease resistance to such infections are lack of breast feeding and good hygiene.⁹ That may help to explain these findings.

Equifax Getting into the Medical Records Business

Equifax, a company notorious for consumer credit reports, is working with AT&T to create a computerized medical records system. The arrangement, according to one industry analyst, "is a step toward giving managed care groups the kind of information that would extend their control of the care patients receive."¹⁰

Equifax promises to act "as a responsible steward" for patients' medical histories. Patients will be able to review their records, for a fee, but not correct errors. Corrections will have to be submitted by their physician.

More Reasons to Breastfeed

The Shriver Center for Mental Retardation and Harvard Medical School report that chondroitin sulfate in breast milk blocks the binding of an HIV component to its host cell receptor, interfering with the replication process. This is seen as a mechanism that may help prevent a baby from becoming infected by an HIV-positive mother, though controversy remains as to whether the virus is passed in breast milk.¹¹

New York University School of Medicine researchers report that the lactoferrin supplied by breast milk helps to inhibit the spread of bacteria and fungi, as well as tumor growth.¹²

Short Children Usually Grow into Average-Sized Adults

Researchers at the University of Naples have followed 450 unusually small and thin children from age 7 until age 23 to determine their ultimate size. They found that less than one-third exhibited the same characteristic as an adult. Children with obvious medical reasons for stunted growth were excluded from the study.

This study may be of interest to parents who are considering growth hormone treatment for their children.¹³

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