was found in Neutraderm Dry Skin Lotion or Diaparene Cradol Shampoo.

The range of concentrations of NDELA among the 27 products tested ranged from 48,000 parts per billion to less than 1 part per billion. "It is likely, therefore, that if the mechanism of contamination were identified, technology might exist for eliminating the carcinogenic impurity," the researchers conclude. □

U.S. children give families high marks

Although American children worry about their home and family environment, the vast majority of them view their family as a cohesive, "happy" force, according to preliminary results of a nationwide study of 7 to 11-year-olds. The youngsters' reflections do "not support the position that the American family is in decline," reports Nicholas Zill, project director for the National Survey of Children and senior staff scientist for the Foundation for Child Development, which sponsored the research.

More than 2,200 children and 1,700 of their parents were interviewed in late 1976 by researchers from Temple University's Institute for Survey Research, which conducted the survey for the foundation. The sample is designed to represent the country's 17.7 million children.

"We wanted to give kids a chance to speak for themselves," Zill explains. "In the past, most studies have focused on parents, teachers, doctors . . . with no input from the children. We see this survey as a benchmark—we're trying to see what effects social changes are having on kids, and would like to see [similar] surveys done in the future."

In the youngsters' views, the researchers see an overall positive picture of the family unit, although some children say they are "worried" and "afraid" of aspects of their life both in and out of the home. More than 9 of 10 children pointed to a happy face to convey how they feel about their families. Ninety percent of the youngsters agreed with the statement, "I like being the way I am," and over 75 percent said they were "lucky."

But 8 of 10 also said they worried about their families—that figure rose to nearly 100 per cent in families where the mother described the marriage as "not too happy." "People talk about the increase in separations and divorce in this country—and we do see a detrimental effect on kids in some of these households," Zill says. However, the survey also suggests that having both parents together does not guarantee a child's happiness. In families with both husband and wife present, nearly half of the children wished their fathers would spend more time with them, and more than one-third expressed the same desire about their mothers.

"Apparently it's not the absence of a parent *per se*" that has negative effects on a child, Zill says. The data suggest that a single parent may be better than two in some cases if he or she has adjusted well to that role. But if the single parent felt depressed or nervous about the separation, the child tended to feel bored and lonely. In double-parent families, one of five youngsters in marriages described as "not too happy" by the mother got into fights at school, as opposed to one of ten youngsters from well-adjusted marriages. The most influential factors in a child's well-being hinge on the relationship between husband and wife in two-parent families, or the single parent's own well-being and ability to cope, Zill says.

Parents' education levels have risen steadily during the last decade, Zill says, and this has had a positive influence. Among the children surveyed, the proportion of those reporting they had "interesting things to do most afternoons" (about one-third of the total children questioned) rose steadily with the parents' educational level. "But I am also concerned with the growing percentage of kids whose mothers never married and dropped out of high school," the psychologist says. "These mothers tend to describe their kids in very negative terms."

The researchers will pull together all the data and begin analyzing the results later this spring, according to Zill. Among the other results of the survey are:

- More than two-thirds of the children expressed fear "that somebody bad might get into my house."
- One-fourth said they are afraid that someone might "hurt" them when they leave their house.
- One-fourth reported being afraid of "TV programs where people fight and shoot guns." Frequent young viewers were twice as likely to express that fear as occasional (less than four hours daily) TV watchers.
- In all types of American communities, a majority of the children surveyed described their neighborhood as less than a "very good" place to grow up in. □

Child abusers: Signaling for help

Ever since the battered child syndrome was first described in 1962, more and more cases have been reported. In one of the more recent ones, a couple actually killed their child. Researchers have been gaining more insight into the causes of child abuse. Child abuse, it appears, is usually inflicted by parents who were themselves beaten as youngesters. They identify with an aggressive, authoritarian parent, yet are also angry at the parent for this treatment and take their wrath out on their own children.

How can this destructive family behavioral pattern be broken? Two 1976 studies described factors in infancy, at birth or even in the womb, that may identify children at risk of being beaten. As a result, doctors and nurses engaged in prenatal and postnatal care can keep a lookout for such factors and intervene before parents start striking their children. Now evidence reported in the March 14 JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, by R. Peter Mogielnicki and his colleagues at the University of Colorado Medical Center and Colorado General Hospital in Denver, shows that child abusers or potential abusers may suffer weakness, paralysis or other physical symptoms as a result of their psychological trauma over beating, or thinking about beating, their youngsters. Thus doctors and nurses in hospital emergency rooms and in private practices can be on the alert for such parents and try to help them stop battering their children or even keep them from doing so in the first place.

The evidence reported in JAMA consists of three case histories from the Colorado General Hospital. In one, a 24-year-old woman came to the hospital's emergency department with chest pain, headaches, weakness, dizziness, appetite loss, numbness on her right side and transient blindess of her right eye. No physical cause for these symptoms could be found. Psychiatric examination was arranged and showed that she had recently thrown her two young daughters against a wall. She agreed to psychiatric hospitalization; her children were sent to live with her sister-in-law.

In a second case, a 31-year-old man came to the hospital's emergency department with complaints of chest pain and weakness in the legs. No physical cause for these symptoms was discovered. Nor did the patient show much concern about them. Mogielnicki and his co-workers suspected that the patient was suffering from psychologically induced symptoms, and psychiatric probing revealed that he had gained custody of his six-year-old son two weeks before the start of his symptoms. He described his son as "hateful" and "obstinate" and admitted that he was afraid of inflicting injury on the boy. Once he became aware of the link between his fear and his symptoms, and arrangements were made for someone else to care for his son, his symptoms went away.

In the third case, a 23-year-old man came to the hospital emergency department with right-sided weakness, visual blurring, numbness and weakness of his right arm and both legs. No physical cause could be discovered. When the patient

was asked about his family life, he admitted to abusing a stepdaughter two years previously and to now being afraid of beating up his six-week-old son as well. As he talked about his feelings, his symptoms gradually subsided.

These three cases, Mogielnicki and his colleagues conclude, indicate that child abusers and potential abusers may use physical symptoms, especially weakness or paralysis, as a signal for help. When no physical cause for such symptoms can be found, they advise doctors and nurses in hospital emergency rooms and in private practices to probe patients' lives to determine whether they are child abusers or potential abusers. Such probing, they declare, "may prevent the tragic outcome to which the syndrome of the battered child often leads." □

Press named science adviser, busy on job

President Jimmy Carter has officially nominated MIT geophysicist Frank Press to become the next presidential science adviser, but Press has already been hard at work performing many of the duties of the job since his appointment became a subject of speculation more than a month ago (SN: 2/19/77, p. 119). The mandatory Senate confirmation hearing for Press to become the director of the White House Office of Science and Technology Policy (OSTP) has tentatively been scheduled for April 7, and in the meantime he is nominally serving as a consultant to the office.

Despite his unofficial status, Press is beginning to make his mark on OSTP. He is leading the agency to take a new look at energy matters, particularly the conflicting reports on the nation's uranium resources. (The likely availability of uranium is one of the key factors in determining the need for breeder reactors—see SN: 1/24/76, p. 58.) The office is also reportedly heavily involved in helping prepare President Carter's environmental message, expected next month.

Press has also met with the new Assistant Secretary of State for Oceans and International Environmental and Scientific Affairs, Patsy Mink (SN: 1/8/77, p. 21), to set up a panel to review existing international agreements affecting science. Some 40 bilateral agreements will be examined, although no major shift of policy is expected. Eugene B. Skolnikoff, a science policy expert at MIT, has been asked to be a consultant for OSTP to coordinate work with the new panel.

Meanwhile, Press has been doing the rounds of meeting fellow agency heads and trying to establish rapport with the senior presidential staff members. He has, for example, attended some cabinet meetings and met with Zbigniew Brzezinski, Carter's national security adviser. No details of this meeting are available, and the perpetual question of the science adviser's role in national security affairs is expected to come up at the confirmation hearing.

Press has also met the advisory panel charged with coordinating federal science policy with the needs of state and local governments. Bert Lance, director of the Office of Management and Budget, attended the meeting and reportedly talked about how the panel could be used in setting up budget priorities for various technical programs. □

Psychologist Atkinson to head NSF

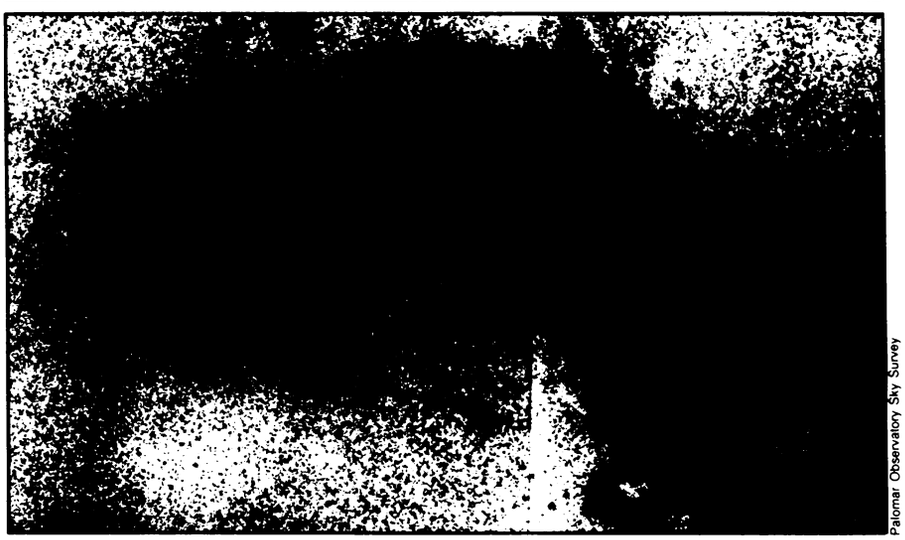
SCIENCE NEWS learned this week that President Carter will soon nominate psychologist Richard C. Atkinson to head the National Science Foundation. Atkinson has been acting director of NSF since August 1976, when H. Guyford Stever left the foundation to become President Ford's science adviser. The President met with Atkinson last week to discuss the appointment.

Before coming to NSF in 1975, Atkinson was a professor and dean at Stanford University and headed the psychology department from 1968 to 1973. His research concerned the psychology of memory and he transformed many of the intuitive ideas about memory into a theory that could be formulated into mathematical terms. This theory serves as the basis for much current experimental research into memory and cognition and has also helped scientists understand the correlation between brain structure and psychological phenomena.

Atkinson also designed computer-aided instruction devices for use in the classroom. His work has helped optimize the learning process, and it is the basis for the design of some commercial teaching units.

He is a member of the National Academy of Sciences and has received the distinguished Research award of the Social Sciences Research Council. Atkinson is generally well respected on Capitol Hill and once his nomination is officially submitted, little problem is expected in securing Senate confirmation. □

Supernova: Trigger for new stars?



Palomar Observatory Sky Survey

Mosaic of photos from the Palomar Observatory Sky Survey shows an apparent supernova remnant, believed to be about 600,000 years old, in the constellation Canis Major. A group of young stars in the remnant's vicinity are also of about that age, possible observational support for the theory that expanding supernova shells trigger star formation. *See p. 222.*

20-billion-year universe

Cosmological dating can be done by making use of the radioactive decay of certain unstable elements. To date the universe, however, one needs a longer-lived decay process than the 600-year half-life of carbon-14. Some years ago Donald Clayton of Rice University suggested for cosmology the use of rhenium-187, which has a 40-billion-year half-life. To make the method possible, precise calculations of the rate of rhenium production in stars during the evolution of our galaxy were necessary. Such calculations were done at the Lawrence Livermore Laboratory, and at the time some Livermore physicists used them to calculate an age of 20 billion years for the universe (SN: 7/10/76, p. 19). Now the National Science Foundation and the University of Chicago report that two UC scientists, David N. Schramm and Kem L. Hainebach of UC's Enrico Fermi Institute, have used the same figures on rhenium production, and have arrived at a similar age estimate: 20 billion years. □