

# BIOMEDICINE

## Hysterectomy and hysteria

Some retrospective studies have suggested that women nearly always suffer from depression or other psychiatric symptoms after they've had hysterectomies. Not so. A recent prospective study supports two previous ones in this conclusion: If women have psychiatric difficulties after a hysterectomy, it is generally because they had them before the operation as well.

In 1976 two investigators reported in *PSYCHOSOMATICS* that they had found that women were not depressed after a hysterectomy unless they had been depressed before as well. In 1977 two other scientists reported in *DISEASES OF THE NERVOUS SYSTEM* that they had found that women were generally no more depressed after a hysterectomy than they had been before, and that they were generally no more depressed after their operation than control subjects were. The follow-up in these two prospective studies, though, was only three months. So Ronald L. Martin and his colleagues at Washington University School of Medicine in St. Louis psychiatrically evaluated 44 women before they had a hysterectomy, then did a one-year follow-up.

As they report in the July 25 *JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION*, most of the 27 women in their study did not suffer from depression or other psychiatric problems after a hysterectomy. In fact, this group had fewer psychiatric problems after their operation than before. And as far as the 17 women in the study who did have psychiatric difficulties after surgery, 15 of them had had similar problems before surgery as well. And of these 15, most suffered from hysteria, which is characterized by depression, nervousness and medically unexplained symptoms in many parts of the body. "Thus, it is not surprising that the hysterics continued to be symptomatic in the follow-up year," Martin and his colleagues conclude.

## Interferon versus obesity

The protein interferon has made the news in recent months because it is a known antiviral agent, because it may fight cancer and because it may soon be possible to make large batches of it for clinical use (SN: 1/26/80, p. 52). Now it looks as if interferon may be capable of fighting obesity and aging as well, according to a report in the July *PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES* by Susan Keay and Sidney E. Grossberg of the Medical College of Wisconsin in Milwaukee.

The researchers have found that interferon can inhibit the conversion of fibroblasts (connective tissue cells) into fat cells—at least in tissue culture. Fibroblasts are known to change into fat cells as people gain weight or grow older. Thus Keay and Grossberg speculate that interferon may be capable of countering obesity or aging in people, provided enough of it can be made for drug use.

## Herpes and cervical cancer

Herpesviruses are a suspected cause of cervical cancer because they have been found inside cervical cancer cells (SN: 11/25/72, p. 345). But one of the reasons herpesviruses have not been pinned down as a definite cause of cervical cancer is that levels of antibodies against herpesviruses are generally low, not high, in women with advanced cervical cancer. One would expect such levels to be high if herpes were truly the cause of the women's cancer. Now an explanation for this apparent paradox may have been found by Pradeep Seth and N. Balachandran of the All India Institute of Medical Sciences in New Delhi.

The researchers report in the Aug. 7 *NATURE* that they have found herpes-specific antibodies in cervical cancer tissue. Thus it is possible that the reason so few herpes antibodies are found in the blood of women with advanced cervical cancer is that the antibodies are in the cervix, attacking herpesviruses.

# BIOLOGY

## A taste bud for all flavors

Sweet, salty, sour and bitter are no longer confined to different areas of the tongue. Swedish researchers report that a single human taste bud can sense more than one taste quality, and they have one case in which a single taste bud senses all four. Kristina Arvidson and Ulf Friberg of the Karolinska Institute in Stockholm applied test solutions to single papillae (the visible protuberances) on subjects' tongues. Of 110 papillae tested, 46 responded to at least one taste quality, 39 responded to more than one taste and 14 responded to all four. The investigators then excised the papillae with a fine scalpel and determined by microscopy the number of taste buds in each. No taste buds were found in 62 of the 64 papillae that never responded. The other papillae contained one to 15 taste buds (the mean was 4, the median 3). The number of taste qualities identified generally increased with taste bud number, but in at least 10 cases a papilla was able to sense more tastes than the number of taste buds it contained. For instance, six papillae with only one taste bud sensed two, three or four taste qualities, Arvidson and Friberg report in the August 15 *SCIENCE*.

## Mushroom worker lung: Fungal cause

Many mushroom farmers suffer from a respiratory disease characterized by chest pain, breathing difficulties, headaches, nausea and fever. It strikes the workers who, several times a year, manually remove 80 to 100 tons of spent compost from mushroom houses.

A Department of Agriculture scientist in Beltsville, Md., has tentatively identified the organism responsible for the disease. It is *Aspergillus fumigatus*, the most common fungus in the compost examined by Kenneth L. Deahl in a five-state study. Deahl suspects that the disease is an allergic reaction to the fungal spores rather than an infectious disorder. He and Richard Calderone at Georgetown University in Washington are exposing laboratory rabbits to the fungi to test that hypothesis. Meanwhile, Deahl recommends that mushroom growers decrease exposure to fungal spores by removing compost material as rapidly as possible after it has been steam-heated to reduce its microbial population. Growers should also wear respirator masks to avoid inhaling fungal spores. Deahl says that once persons are sensitized to the fungus, the disease may recur after each new exposure.

## Behind a good tree may be a fish

Fish with large molars and strong jaws are the key to success for many Amazonian trees. Brazilian scientist Michael Goulding has identified 200 instances in the Amazonian flood-plain forest area in which fish and tree species are dependent on each other for survival. The fruits and nuts of the trees are the primary food for the large fish, and the fish, by defecating viable seeds, are the trees' means for seed dispersal. Such interdependence is common among land plants and birds or mammals, but the Amazonian trees are the first to be found dependent on fish.

## Tule goose nest mystery solved

For more than 60 years waterfowl researchers have wondered about the summer home of the rare white-fronted goose that winters at Tule Lake in central California. The nesting grounds have now been located in the marshes of Redoubt Bay, 80 miles southwest of Anchorage. According to the Alaska game department, determining the nest location was necessary to figure out whether the Tule goose is a distinct subspecies or just a large version of the more common Pacific white-fronted goose.