

# BEHAVIOR

## Alcoholic recovery — it's all relative

Family support has long been thought valuable, if not necessary, to an alcoholic's recovery. Now that belief has been at least partially verified by scientific study.

In examining 580 alcoholism patients at the Veterans Administration Hospital in Topeka, Kan., researchers William T. Bowen and Stuart W. Twemlow identify relatives as measurably beneficial to the alcoholic in treatment.

Bowen and Twemlow divided their sample group into patients who had been accompanied by a relative to the hospital for the admission procedure, and those who came alone or with a community worker. The researchers then measured the dropout rate from the hospital's group treatment program.

They report in the December *HOSPITAL AND COMMUNITY PSYCHIATRY* that persons accompanied by a relative had a dropout rate of 24 percent — 10 percent lower than that of the other group. Interestingly, those accompanied by a community worker had a slightly *higher* dropout than those who entered alone. Variables such as age and social class were found to have no significant connection with treatment dropout.

"The implications of these findings for treatment are considerable," say the researchers. "The point at which relatives are first seen is a critical one." Relatives who accompany the patients to admission are more than twice as likely than those not present at admission to participate in the family workshop portion of treatment, according to the study.

Bowen and Twemlow recommend that "a hospital should build into its admission practices the feature of encouraging or requiring that each alcoholic patient be accompanied by a relative at admission."

## Good prognosis for hysterical non-eaters

Anorexia nervosa, a condition marked by prolonged inability to eat, occurs predominantly among children and adolescents. The syndrome eventually fades away in most cases, but its effects in later life are not fully known.

Now, a followup study of 30 anorexia patients contacted from five to twenty years after treatment indicates that their subsequent social adjustment varies widely, according to personality type. The findings were reported in the October *AMERICAN JOURNAL OF ORTHOPSYCHIATRY* by Children's Hospital of Pittsburgh researchers Patricia L. Goetz, Ruth A. Succop and John B. Reinhart.

The patients ranged in age from nine and one-half to 16 when they were originally treated between 1954 and 1970. They were classified as one of three personality types: hysterical, obsessive or schizoid. In the followup, all 14 in the hysterical category were rated "good" in social adjustment. However, only 4 of 12 in the obsessive group and none of the 4 schizoids achieved a "good" rating. Measures of social adjustment included medical, educational, occupational, family and psychiatric factors. The investigators conclude that personality type is critical in the prognosis of anorexia nervosa.

## Drunk walking

Drunk driving is considered a major culprit in many traffic accidents, but now it appears that drunk walking may also be a factor. In a six-year study of pedestrian fatalities in an English metropolitan area, a Birmingham (England) University team reports that almost a third of all pedestrians killed in road accidents had been drinking. And more than a quarter of the male pedestrians who were killed had blood alcohol concentrations at least 150 percent higher than the legal limit for drivers, according to a report in the Nov. 10 *NEW SCIENTIST*.

DECEMBER 10, 1977

# BIOLOGY

## More to vision than seeing



Some blind people may be fooled by an optical illusion, even though they cannot identify a face or read a page. Herschel Leibowitz of Pennsylvania State University has demonstrated that several patients with large blind spots felt themselves moving when a striped drum around them rotated. They reported the motion even when the "seeing" portions of their visual fields were masked with cardboard. Although he has not yet examined any totally blind people (his sample came from an ophthalmology clinic), Leibowitz suspects some blind people are using their eyes more than they are aware.

Two separate areas of the brain seem to use input from the eyes for different purposes. The visual system we are all aware of allows us to focus on objects. Focal vision is processed in the brain's outer cortex. The other system uses visual input subconsciously to specify a person's position in the environment. This "ambient" vision appears to originate deep inside the mid-brain. Leibowitz implicates a disparity between focal and ambient vision in night automobile accidents (*SN*: 8/6/77, p. 85).

Although these visual systems ordinarily interact, Leibowitz finds that they can operate independently. Brain injury may destroy focal, but not ambient, vision. "In many cases these people are not aware of their sight ability," Leibowitz says. "If you ask whether they see a wall to their side they will say 'no.' Yet, they can move around without walking into it."

The input to the ambient vision system comes from the periphery of the retina. Normal subjects sense little motion in the rotating drum when they are allowed to use only the center of the visual field. But masking only the central area had little effect on the illusion of motion.

Leibowitz employed other gadgets to further demonstrate the second visual system. For example, the body of a sighted person sways more in total darkness than in the light, because people use visual cues to maintain their posture. Leibowitz measured body motion on a platform equipped with sensitive force detectors. With the "seeing" portions of their visual fields masked, some patients still sway less in the light.

In March, Leibowitz will return to Germany where he worked last year in collaboration with Johannes Dichgans. "I want to test more patients and try to refine the procedure to use in clinics for everyday screening of patients," Leibowitz says. "When a doctor tests someone's vision he's primarily looking at the focal system, with only scant attention to the ambient system." Analysis of both visual systems could identify brain problems and might eventually lead to more specific treatments.

## Sniffing out the first meal

It is smell that first cues newborn rat pups to attach to their mother's teat and suckle. Research at Johns Hopkins University indicates that a substance is either secreted or placed by the mother on her nipple to elicit suckling in the offspring. Martin H. Teicher and Elliott M. Blass slowly carried each of 180 newborn rat pups to a teat of its mother, who was anesthetized. The pups readily attached to an unwashed nipple, but not to one that had been washed with alcohol. If the nipple was first washed and then coated with an extract of the wash, amniotic fluid or the mother's saliva, the pups did attach. Saliva from a virgin female, salt solution, amyl acetate and vanilla extract failed to induce suckling. The data reported at the meeting of the Society for Neuroscience in Anaheim indicates that rats possess and use the ability to distinguish smells within two hours of birth.

393