PSYCHOLOGY

Oxygen Affects Learning

Lack of oxygen affects learning and relearning ability. Individuals vary in the degree to which oxygen lack affects them.

➤ EXPOSURE to oxygen lack equivalent to 30,000 feet altitude causes a loss of learning ability and relearning ability. The loss increases as the exposure time increases from one-half hour to six hours.

This is indicated by experiments with rats reported in State College, Pa., to the American Psychological Association by Dr. William P. Hurder of Louisiana State University.

After being deprived of oxygen, the rats were trained or retrained to find their way through an alley maze. One hundred days later the rats were killed and their brains examined.

Brain changes were found, consisting of a decrease in cellular density with increasing exposure to oxygen lack.

Not all individuals are affected alike by oxygen lack. There is increasing variability in learning loss with increasing exposure to anoxia. But with the brain changes, there is no similar variability, it was found.

Smothering during the process of birth varies in effect with different individuals, Dr. R. Frederick Becker, of Jefferson Medical College, said, reporting to the same meeting on experiments on guinea pigs delivered by Caesarian operation.

The animals were asphyxiated at birth and later resuscitated with oxygen. Later they were killed and their brains examined.

The site, as well as the degree of injury, varied. With some it was the thalamus, in others the brain stem, for some the frontal cortex, and others, the lumbo-sacral cord.

Some animals smothered for a short time suffered more than others asphyxiated longer.

Severe cyanosis of the "blue-baby" type did not always result in severe nerve damage.

Smothered animals as compared with litter-mates not asphyxiated were apathetic, less active, less frustrated under stress, were poor learners with limited memories and made repeated mistakes.

Science News Letter, September 9, 1950

PSYCHIATRY

More Mental Hospitals

➤ More hospital facilities and personnel are needed to care for emotionally disturbed children, Edgar C. Hayhow, director of the East Orange, N.J., General Hospital and member of the board of regents of the American College of Hospital Administrators, declared at a planning meeting in Washington of the Midcentury White House Conference on Children and Youth.

Extremely few institutions in the country are suitable for inpatient observation and treatment of emotionally disturbed children, he stated.

The parents of all but a very few children, whose emotional problems are serious enough to warrant short term but continuous observation or treatment, must forego such treatment for their children or send them to entirely unsuitable mental hospitals for adults. And very few such hospitals will accept children.

Parents of children whose mental illnesses may require long-term treatment are confronted with a similar situation.

Even children's hospitals and general hospitals need increased facilities and personnel for caring for the child patients.

These two situations plus expansion of hospital facilities and institutions for mentally deficient and crippled children are four problems which Mr. Hayhow declared urgently need consideration by the Conference.

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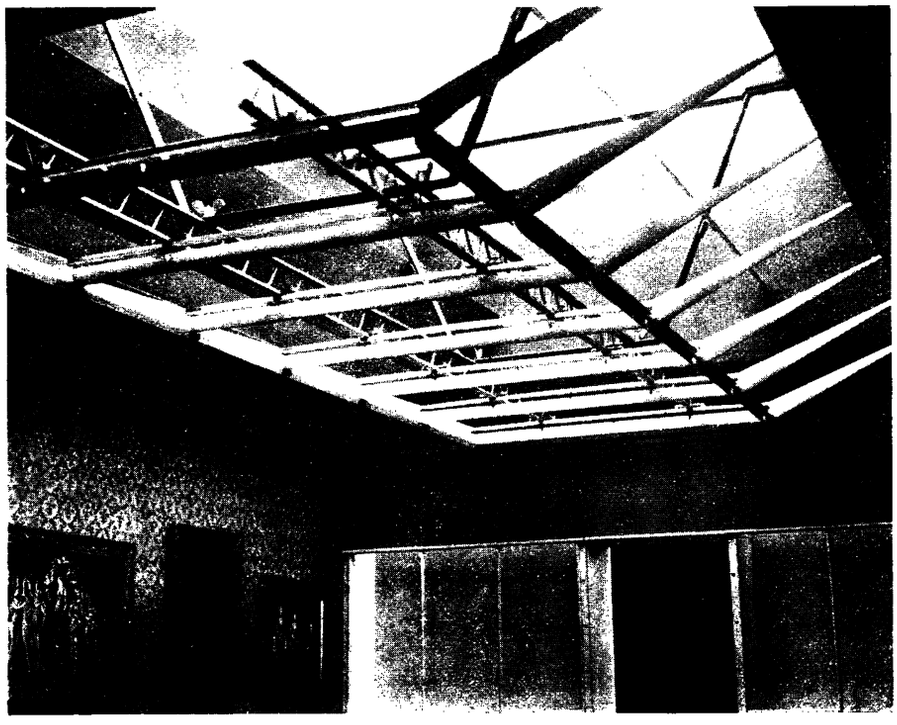

UNIQUE LAYLIGHT—A view in the Birmingham, England, art gallery looking up to the roof light. The strongest light falls on the paintings which seem to stand out from the wall.

ENGINEERING

Upside-down Skylight Lights Art Gallery

➤ WHEN the city art gallery at Birmingham, England, was rebuilt after the war, engineers installed a unique means of bringing daylight indoors.

Called a "laylight," the upside-down skylight casts the strongest light in the gallery directly upon the surface of the paintings. From all other points, both above and below the pictures, the light is diffused. The paintings thus seem to stand out from the walls, and the public sees them in light which gives greatest possible emphasis to natural color and contrast.

As shown in the picture, frosted glass at the bottom of the lay-light has been removed. Behind it, when the work is complete, will be a combination of fluorescent and tungsten filament lights for night illumination closely approximating daylight.

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