

## TECHNOLOGY

# Gaudy Air Rescue Suit

► GAUDY YELLOW coveralls complete with built-in water wings now are being used by the U. S. Air Force to protect its pilots against exposure after airplane crack-ups.

Worn during flights, the suit has a sponge-rubber neck and water-tight zippers in front to keep water and icy winds from getting inside. Wrap-around rubber straps seal water out at the wrists.

If a pilot bails out of his plane while flying over water, trapped air in the suit keeps him afloat for about three minutes. That gives him time to blow up his water wings. The suit's bright yellow color is easily spotted against murky waters.

Rubber boots vulcanized to the suit-legs lend a sort of Frankenstein monster air to the outfit. But they permit the pilot to wear two pairs of heavy wool socks to protect his feet if he must bail out over land.

Developed at the Air Force Aero Medical Laboratory, Dayton, Ohio, the suit usually goes over woolen flying pants, a wool jacket and a miniature radio transmitter. It transforms large pilots into small giants, the Air Force says.

Outside the suit the pilot also wears a life preserver and a back-type parachute which has a built-in survival kit containing everything from food to a .22 caliber rifle.

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*ANTI-EXPOSURE SUIT—Fliers of the U. S. Air Force's 117 Tactical Reconnaissance Wing wear this type of suit for transatlantic hops to increase their survival chances in case of bail-out.*

## MEDICINE

# Drug Lengthens Lives

► SOME CHILDREN who formerly would have been doomed to death within a few months after contracting acute leukemia, cancer of the blood, now live happy, healthy normal lives for as long as two and one-half years.

They take a pill once a day of amethopterin. It is one of the few tasteless medicines known to physicians. With this anti-vitamin of the folic acid class, 30% to 50% of children with leukemia have responded to treatment, so that temporarily there are remissions of the disease.

Dr. Joseph H. Burchenal, head of the leukemia section at Sloan-Kettering Institute, New York, said that of 150 leukemia victims, young and old, before the treatment was discovered, 138 were dead within nine months, 10 more died before the end of the year. The two remaining victims were dead in a year and a half. Of 154 young and old patients who were treated with amethopterin, 61 are still alive at the end of nine months, 46 at the end of a year, 12 after one and a half years, and six at the end of two years. One or two children not in this series, said Dr. Burchenal, have lived as long as two and one-half years.

Children can live normally up to the last few weeks of the disease, Dr. Burchenal said. They come to the out-patient clinic once or twice a week for a general examination. However, they take their pills at home. Once every two weeks the doctors check the bone marrow to watch the count of leukemia cells.

This way they can catch a relapse about two weeks before it would be evident in the general health of the child. The pills are taken only during periods of relapse. Unfortunately, after eight, 10 or 12 relapses, leukemia cells become resistant to amethopterin. Then ACTH and cortisone are given. If this creates a remission, there is a slim chance that amethopterin would work for the next relapse. If not, sometimes two or three remissions may be achieved with ACTH and cortisone.

Dr. Burchenal reports that all the parents are grateful for this longer time with their children who they know are going to die. One father wrote that he got to know his son better during the last few years of his life than he might have if he had not realized he was going to die.

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## PHYSIOLOGY

# Crossed Eyes Can Be Cured But Early Treatment Best

► CROSSED EYES can be corrected. The earlier this is done, the better, so that the child does not lose part or all of his eyesight.

It is best to start treatment before the age of four, but older children and even grown-ups can have their eyes straightened. It may be too late to improve the eyesight, but at least the older child or grown-up can be saved from feeling ugly, different and unwanted.

"Don't assume, as many do, that a child will just outgrow crossed eyes. He won't," warns the National Society for the Prevention of Blindness. In a pamphlet published by the society it is explained that the brain of a cross-eyed child "receives two images. The youngster sees double because his crossed eyes view an object from widely different angles."

"The child is disturbed but often too young to explain his difficulty. He squints his eyes and tilts his head, unconsciously trying either to combine the two images into one, or simply to ignore one image altogether. But neither attempt succeeds. So he finally gives up trying to see with both eyes. He subconsciously eliminates the image in one eye, now sees only one image, and actually becomes accustomed to 'one-eyed' sight."

The pamphlet lists these four methods used by doctors to correct crossed eyes:

1. Glasses—if the youngster is near- or farsighted. In some few cases, glasses alone will do the job.

2. Placing a patch over the good eye. This forces the youngster to use the weak eye; with increased work, its vision will increase.

3. Exercises for the eye muscles (orthoptics). These do not take the place of surgery or glasses, but are a valuable help.

4. Surgery—which is not dangerous; its effect on the child is equivalent to a tonsil removal. One operation may be all that's needed, but it sometimes takes two or three before the eyes are exactly straight.

Science News Letter, May 31, 1952

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