

PUBLIC HEALTH

How To Keep Cool

Seven rules are offered for keeping cool in hot weather. Body's heat control unit, acting as a thermostat, is located in the brain.

► HERE ARE some rules for keeping cool in hot weather—and the scientific principles behind them:

1. Wear loose fitting clothing of porous or mesh weave.
2. Take frequent baths or sponge baths.
3. Drink lots of water, taking a cup or glass regularly every hour.
4. Eat cold foods if you like, but eat regular nourishing meals.
5. Rest even if you cannot sleep a full eight hours.
6. Watch for sudden stopping of sweating—a danger sign of heat stroke.
7. Stop talking about the heat—it doesn't help to get hot at the weather.

Now, for some of the principles, or reasons, for these rules:

To keep cool in hot weather, you must help your body lose heat. The body has a heat control center located in the brain. It is made up of three parts. One unit regulates the temperature of the blood. One subordinate unit acts to raise the blood temperature when it drops. Another subordinate unit acts to cool the blood when its temperature is too high.

These units, acting as a thermostat, help to keep the body at a relatively constant temperature of 98.6 degrees Fahrenheit. When body temperature drops below this, the control center in the brain counteracts this by increasing heat production and by contracting blood vessels in the skin and near the skin. When body temperature gets high, the heat control center reverses the process.

When body temperature gets high, the heat control center also, in most persons, starts the sweat glands working harder. As the perspiration evaporates from the skin heat is taken away from the body. When the air is humid and full of moisture, less evaporation can go on, and there is less cooling of the body. Fans which help evaporation, and air conditioning apparatus which also dries the air, make us more comfortable for this reason.

Loose fitting clothing of porous or mesh weave helps this process by letting the perspiration on the skin evaporate more easily.

Frequent baths and sponge bathing help through the same mechanism of putting water on the skin which, when it evaporates, takes up heat and thus cools the body.

When you perspire, some water is lost from the body and also some salt. In very hot industries, workers are given salt tablets to replace the salt they lose. Under most work conditions, however, salt tablets are not needed. Studies a few years ago, however, showed that taking a drink of

water regularly every hour, to replace the water lost in perspiration, helped people keep up efficiency and avoid fatigue during hot weather.

About the third or fourth day of a heat wave, watch out for sudden stopping of sweating. This has been called the most important warning sign of impending heat stroke. If this appears, get the person to bed, make him as cool as possible, urge him to drink lots of water and, if sweating does not start soon, call a doctor. Heat stroke may be fatal.

Eat your normal, nourishing diet even during heat waves. If you are eating only light snacks, you may feel tired and dragged out because you are not getting enough nourishment. Cold foods and beverages are more tempting than hot ones, but be sure you get the protein, from meat, poultry, eggs, fish, milk or cheese, that your body needs regularly and also enough calories.

Even if you cannot sleep, try to get a full eight hours of rest each night and see

that the children get a mid-day rest even if they do not sleep.

You will feel cooler if you stop watching the thermometer and talking about the heat. Keep normally busy and try to keep a calm, cool attitude. Even though you cannot control the weather, you need not let it control you.

Science News Letter, July 11, 1953

TECHNOLOGY

Aircraft Camera Big as Two Rooms

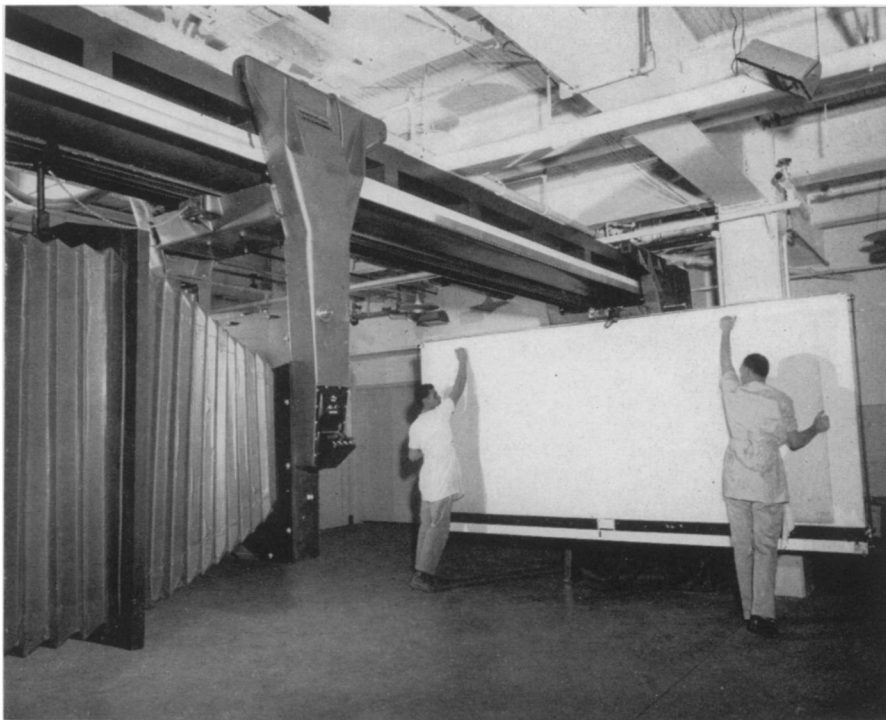
► A GIANT-SIZED camera that clicks pictures on film three and a half feet wide and four feet high has been designed, built and put to work in the Consolidated Vultee Aircraft Corporation plant, San Diego, Calif.

The big camera, used to reduce and enlarge wall charts and blueprints, is 29 feet long, 10 feet high and has a copy board 12 feet wide and five feet high. The camera is so large that the front is in one room and the rear is in another.

The rear room is designed to double as a darkroom so that film can be transferred directly from the camera to the developing trays.

Serving also as an enlarger, the camera can reproduce drawings with less than two one-thousandths inch deviation per 12 feet from the original.

Science News Letter, July 11, 1953



GIANT CAMERA—A 200-pound sheet of steel is shown here being positioned on the copyboard of a big, two-room camera. The operator controls movement of the camera by push buttons shown on the side of the camera. The lighted periscope on the control panel enables the operator to see the scale readings registered above.