

GENERAL SCIENCE

How to Keep Cool

**By Slightly Changing Their Habits as Science Indicates
People Can Be More Comfortable in Hot Weather**

ONE of the first rules for keeping cool in very hot weather is to take things easy, including this business of getting or keeping cool. Keeping cool involves fighting both the heat of the air around your body and the heat your body itself is constantly producing. Scientists can tell you many ways to reduce the heat from both sources, however.

What to Do

For example, physical exertion makes your body's fires burn faster and produce more heat. That is why you should avoid it or do the heaviest physical labor early in the morning during a warm spell. Beyond a certain point, the heat production of your body cannot be reduced, since the heat is the accompaniment of the vital changes that are constantly going on in your body.

This heat production is at its lowest when you are resting in bed before breakfast. At this time the effects of food and physical activity are reduced to a minimum. The closer you can keep them that way during the day, the cooler you will be. Rest and light foods that are easily digested without producing much heat are in order when the temperature begins making hot weather records.

After you have kept your own heat production down to a minimum, you want to get the rest of it out of your body, in order to keep as cool as possible. When water evaporates it absorbs heat, and nature has given you an efficient aid to keeping cool in the sweat glands of your body. Men can stand higher temperature better than dogs, for instance, because men are able to perspire. At high temperatures, especially when working hard, the body gives off large amounts of water in perspiration.

If you want to augment this natural cooling process, apply lukewarm water to your skin and let it dry by evaporation. Take your summer bath lukewarm. The icy shower feels good and refreshes you, but at the same time it heats you up because it stimulates your body to produce more heat, just as heat production is stimulated to meet the challenge of an icy winter wind. The cooling

Your Comfort

DEPENDS ON
YOUR ANSWER

Lukewarm OR icy water?
Skirts OR trousers?
Ice cream OR fruit?
Salty OR fresh water?
Stiff straw OR Panama?

WHICH TO DO IN ORDER
TO KEEP COOL IN THE
SUMMERTIME, AND WHY,
IS EXPLAINED IN THIS
ARTICLE

effect of the lukewarm bath lasts longer.

Another aid to keeping cool is to keep the air moving by means of fans. This makes water or perspiration evaporate more quickly from your skin.

A muggy day with high humidity is uncomfortable because the air already holds all the water it can take up and the body cannot get cool by sweating off the heat.

What to Drink

Take your hot weather drinks warm or cool, but not iced, is the advice of scientists. In fact, physicians generally do not approve of iced drinks at any time of the year and one eminent surgeon does not allow his patients any ice or iced food or drinks at all.

As a matter of keeping cool, the hot drinks win because they make you perspire and the evaporation of the perspiration reduces the temperature of your body. Cold drinks, on the other hand, stimulate your body's heat production.

The normal temperature of the human body is 98.6 degrees Fahrenheit. The body is supplied with a regulatory mechanism to keep its temperature as nearly normal as possible. You will have better results in your keeping cool efforts if you work with this mechanism

rather than against it. Since cold starts it working to warm up the body and heat directs its activity in the cooling direction, take your drinks rather warm than too icy, to get the best effect.

Besides the temperature of your summer beverages, consider their contents. Alcohol, for instance stimulates the body to increased activity and this is accompanied by increased heat production. Rich frappés, malted milks and the like, are full of sugar and fat which are high fuel foods and make the body's fires burn altogether too hot for comfort on a hot day.

For cooling purposes, drinks made from water and fruit or vegetable juices, such as tomato and sauerkraut juices, have the most lasting effect.

A pinch of salt in your glass of water is another thing that will help you to stand the heat. Scientists found that workers in hot coal mines and steel plants could bear the high temperatures better when they drank their water with this salt added. In hot weather your body loses not only water but salt by perspiration. You are reminded to replace the water by feeling thirsty, but you may not have realized that a large part of the exhaustion in hot weather was due to the loss of salt.

What to Eat

Certain foods when burned in the body produce more heat than others, just as coal burns with a hotter fire than wood. So for comfort during the hot spells this summer make up your menus from the groups that burn with less heat. Dietitians call them low fuel or low calory foods.

Foods that burn with a high heat production are sugars and starches, fats, meats and nuts. Vegetables and fruits produce much less heat when they are consumed in the body, so they are good to fill up on during the dog days. These foods, especially when served in salads have a cool, refreshing appearance.

Not everyone's digestive tract, however, can stand large amounts of raw vegetables and fruits. Cooked vegetables, and stewed fruits, the delectable compotes of European meals, add pleasantly to the variety of hot weather menus that will keep you feeling cool.

Ice cream, on the other hand, is a

very nourishing dish but not so cooling as it at first appears. Since it is made largely from sugar and cream it belongs in the group of high fuel foods that heat you up after you have eaten them. Water ices and sherbets are not so bad, for they lack the cream or milk fat of ice cream, frozen custards or puddings.

Sandwiches are another food commonly eaten in summer which is cooler to prepare than to eat. The bread and butter are both heating foods. The sandwich fillings are apt to be sliced or devilled meats or cheese which are high fuel foods. And the salad sandwiches have lots of heat in the fat or oil of their mayonnaise dressings.

What to Wear

Panama hats and loosely fitting clothing made of porous material, preferably cotton or linen, make up the ideal summer costume. At least, they do according to the dictates of science for comfort, regardless of what fashion has to say.

Women who go in for beach pajamas, slacks or other feminine forms of the trouser are giving up part of their costume which added much to their coolness. Skirts, if they are not too numerous or too voluminous, are much better hot-weather garments than trousers. This is evidenced in part by the ancestral lines of the two types of garment. Trousers were invented, apparently, in the cooler parts of the world, such as the cold northern lands around the Baltic and the uplands of Persia and China.

Skirts were worn by both men and women in ancient and torrid Egypt and Babylonia, and they are still worn by brown and black peoples in the tropics who take the trouble to wear any clothes at all. Even the burnoose of the Bedouin, while not exactly a skirt, does embody the idea of getting the principal garment as loose as possible, catching quantities of cooling air under its folds.

Women's clothing, with its lack of tight collars and belts and its thinner materials, has always been envied by the sweltering men. The men can at least be even in the matter of headgear without being the least unconventional, however. A Paris scientist has now found that the cool, well-ventilated crown of the Panama hat is, like the movie theaters, "Twenty degrees cooler inside."

This Parisian actually measured the temperatures inside different kinds of headgear on a day when the mercury stood at 97 degrees Fahrenheit. Inside the Panama it was only 77 degrees. The stiff straw hat ran second with an inside temperature of 79 degrees. There was a wide difference between this and the soft felt hat, however, which reduced the temperature only about half as much as the Panama, to a level of 86 degrees. At the bottom of the list was the jaunty sports cap which actually raised the temperature of the head a degree and a half to 98.6 degrees. This is because the cap places a layer of cloth, generally non-ventilating wools, flat on the head without the ventilating space that even a derby allows.

Science News Letter, July 23, 1932

ZOOLOGY

Frogs of Mexican Forests Learning to Fly and Climb

A CURIOUS species of frog which can fly, or, to be more accurate, glide through the air by spreading its elongated hind legs, thus coming gracefully to earth from heights of as much as 90 feet, is among those found in the tropical forests of Mexico by Dr. Remington Kellogg of the United States National Museum and described by him in a Smithsonian Institution report.

These tree frogs are difficult to find, for they keep out of the way of the human explorer and can even change the color of their bodies like chameleons to match their surroundings.

Various members of the family of tree frogs show different stages of evolutionary adaptation to their home in the trees. Besides the "flying" species, there is another which is learning to climb and cling to limbs of trees through the development of adhesive disks on the ends of the fingers and toes.

Science News Letter, July 23, 1932

The green outer leaves of California iceberg lettuce are found to be 30 or more times richer in vitamin A than the whitest leaves from the center of the same heads.

GENERAL SCIENCE

Foreign Scientists To Join Chicago Fair Meetings

OVER 70 eminent foreign men of science have been invited to come to Chicago next summer to join with American scientists in celebrating the Century of Progress World's Fair at the time of the meeting of the American Association for the Advancement of Science, June 19 to 30, 1933.

A committee of the American Association for the Advancement of Science, in cooperation with the officials of the exposition, have issued invitations. Funds to defray the travel expense of the foreign scientists have been provided by the exposition.

The Century of Progress will display to the public through dynamic exhibits the basic contributions of science to industry and civilization. The scientific meetings in June, 1933, are expected to reveal new research results upon which future progress will be built.

Science News Letter, July 23, 1932

PALEONTOLOGY

100,000-Year-Old Woman And Child Found in Hungary

BONES of a woman and child who lived in the days of Neanderthal man have been found in a mountain cave near Eger, Hungary. Discovery of these cave dwellers of 100,000 years ago was made by the chief state geologist, Dr. Ottokar Kadics.

Dr. Kadics was led to excavate when stone implements were found near the cave about a year ago. He named it the "Cave of the Hor Valley."

Describing his discovery, Dr. Kadics told of finding in the cave the bones of cave bears, cave lions, wolves, polar foxes, and other polar animals. These were animals of the ice age.

"Working on," he continued, "we found bones of a woman and child. Examining them, I concluded that I had found remains of the Homo primigenius. The woman and child lived about 100,000 years ago and were contemporaries of Neanderthal man.

"The remains of the woman are a breast-bone, part of the skull, a jaw with 14 teeth, a chin, and shin bones. We are working on, of course, hoping to find more remains of the Homo primigenius. Meanwhile, my Budapest colleagues examine the skeletal remains."

Science News Letter, July 23, 1932