

# Food Sense

BY RANDALL C. ROLFE

Cooking methods can greatly influence both the nutritive value and the taste of foods.

Though a slight loss of a vitamin here or a mineral there seems negligible in light of all we eat, such small losses add up quickly over days and years of careless cooking.

We should be able to rely on taste to determine whether the full nutritive value has been cooked out of foods but many of us have become accustomed to poor cooking methods and do not always realize that taste has been reduced. Often we assume instead that sugar or salt has to be added to a particular type of food for it to taste good.

Good cooking methods preserve taste and nutrients, and as we learn how to save the latter, we can reeducate ourselves with respect to the former.

Except for microwave cooking, about whose effects on food and nutrition we know very little, cooking involves applying heat to foods.

The heat breaks down cell walls, so that nutrients inside are more accessible with less chewing and digesting; it alters some proteins and starches, in what is believed to be a valuable way for some purposes; it destroys bacteria, which may have gotten into the food since it was harvested or killed; and it destroys enzymes natural to the food, which if left at room temperature would proceed to decompose the food.

But heat can have many negative effects depending upon the care taken in cooking. At temperatures above 185 degrees F. or so, vitamins break down at a rapid rate, particularly the B-vitamins B-1, B-6, and folic acid, and vitamin C. At such temperatures also, the cell structure disintegrates so completely that natural moisture begins to leak out of the food, leaving it dry. The same effect is created by cooking too long.

With the moisture may go the water-soluble vitamins, of the B and C groups, valuable trace minerals, such as magnesium and potassium, and natural sugars.

At high temperatures too, certain fats may be evaporated—the aromatic oils which make the kitchen smell nice, but if they reach your nose they are no longer in the food.

Finally, at high temperatures, above about 170 degrees F., proteins become hard, making protein foods tough. Meanwhile, in meats, the connective tissue becomes liquid and leeches out of the meat at such temperatures.

The value of vitamins and minerals is of course well accepted. The value of connective tissue and aromatic oils is less obvious, but they are likely to have various trace nutrients useful to the body.

Natural sugars are important for balanced metabolism. All of these are necessary for taste. High temperatures are known to damage the amino acid lysine, and perhaps others, when protein foods are cooked.

And of course burning foods destroys all nutrients. Burned fat is suspected of being carcinogenic.

In light of these effects of heat, we can consider the various cooking methods and how to use them to best advantage. Cooking experts vary in their classifications of methods, but with respect to their manner of applying heat, the methods can be grouped as either baking, broiling, frying, deep-drying, steaming, boiling, or stewing.

Baking ("roasting" of meats) heats by the circulation of dry air in a closed space around the food. The air is usually around 300 degrees F., hotter than the food should ever get. Therefore, foods should never be left too long in the oven, allowing the internal temperature to exceed 170 degrees F.

The oven temperatures should not be above 350 degrees F., because with higher heat the outer layers are overcooked before the inner layers are cooked. Occasionally, a high temperature is desired initially to set leavened breads, egg whites, or pastries, but the temperature should be promptly reduced.

The hardening of protein which sets the structure of these foods can be accomplished this way with little sacrifice of nutritive value.

Broiling (including grilling and barbecuing) applies heat by exposing one surface of the food to a heat source close by instead of relying on circulating air. It involves the same factors as baking but is more likely to overcook the outside and less likely to overcook the inside than is baking.

Frying (pan-frying, stir-frying or wok cooking, and sauteing) applies heat to the food through a thin layer of hot fat. With red meat, the food's fat alone is used, while with other foods a little fat is added.

The temperature must be very closely watched so that the fat never smokes, burns, or turns brown. It is too hot for the food then, as well as harmful if eaten.

It is important that the food be moved and turned frequently to prevent any part from getting overheated. Sauces which give a golden effect, such as oils, molasses or honey, should be used for "browning," to avoid burning fats and proteins.

Fat cooks foods much more quickly than air (since it has a very high boiling temperature relative to the food). Care must be taken to prevent overcooking.

Vegetables are done when their color turns bright. They become dull again if cooking continues.

Deep-frying applies heat directly to all surfaces from hot oil in which the food is immersed. Temperature and timing are

obviously crucial here. Any variation from the ideal results in prompt destruction of vitamins, loss of moisture, and absorption of fat by the food.

Fat should never be reused unless it was not allowed to smoke and has been refrigerated since last use, to avoid rancidity.

Rancid fat requires special treatment in the body, draining the body's resources.

Steaming ("braising" for meats) applies heat by steam-filled air circulating around the food. Wet heat penetrates foods about twice as fast as dry heat, so that cooking time must be watched. The food is usually above a small amount of water, though with meat-braising, the meat usually sits in the water.

The water should never go above a simmer, 185-190 degrees F., to avoid loss of vitamins, minerals and sugars which dissolve in the steam if it is so hot and heavy. In braising, some leaching of nutrients into the water is inevitable, so the flavorful liquid should be served with the food.

Boiling applies heat by water circulating around the foods at over 200 degrees F. This method seems to create all the negative effects of heat, since nutrients dissolve readily in the water and the temperature is so high and penetrating that nutrients will be destroyed. If foods must be covered with water for some reason, the water should never exceed a simmer and should be eaten with the food.

Stewing (including soups, beans, and grains as well as stews) resembles the suggestion just made. The cooking water should never boil and it is eaten with the food. Though very slow, cooking at less than a simmer is quite adequate for beans and grains.

No more water than will be absorbed should be used for these.

Though variety in cooking methods is important for taste and nutrition, each method must be used with care and attention to what is happening to the food. Perhaps we can all relearn what full-value foods taste like.

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STEVE HARTMAN, a CETA employee, spent some time repainting the fence at the Garfield Cemetery recently. (Pete Baker Photo)

## The Madrid town crier

BY LULA CLARK

Sixty-nine relatives and friends attended a dinner at the home of Mrs. Earl Dawley on Sunday in honor of her father, Daniel, Winters who was observing his eighty-second birthday. Winters is a resident at Moongate Nursing Home, Canton.

CALLERS

Mr. and Mrs. Robert Smith and Julie Pharoah called on his brother, Frank Smith, a patient in Saranac Lake Hospital. Julie Pharoah of Canton was a recent visitor at the home of her aunt, Mrs. Smith.

SQUARE DANCE

The Skirts 'N Flirts Dance Club will hold a dance in the Canton Elementary School on Thursday night, August 25, at 8 p.m. Keith Hubbard will be calling.

VISIT FRIENDS

Iris Porteous and Winnie Jenner called on friends at the Grasse River Apartments on Wednesday afternoon.

AT HOME

Mrs. Ellen Hamilton is at her home after being confined to A. Barton Hepburn Hospital, Ogdensburg, several days.

BACK HOME SUNDAY

Back Home Sunday will be held in the Chipman Church on Sunday, August 28 at 11:00 a.m. Inez Rutherford Beggs will be guest speaker. She grew up in Chipman, a daughter of the late Mr. and Mrs. Earnest Rutherford.

ATTEND WEDDING

Mr. and Mrs. Gary Tyndall of Syracuse and Mrs. John Robinson of Washington D.C. and Mr. and Mrs. Richard Nabinger and two children of Delhi visited their parents and attended the Tyndall Gray wedding on Saturday. John Robinson is attending a recruiters Training School in California.

BARBECUE

Members of the Scotch Presbyterian Church, Chipman, are busy making plans for the annual chicken barbecue and food, garden and gift booths on September 10. Serving begins at 5 p.m. There will be take out dinners.

PICNIC

The ladies of the Madrid United Church are invited to attend a picnic at the Golden camp site on Thursday, September 8 at noon. Those attending should meet at Emma Goolden's home, and bring table service and a covered dish.

VISITS SISTER

Betty Bishop of Florida is visiting her sister, Doris Cauraugh, who is on vacation from her work at the Madrid Elementary School. She will also spend some time at the home of her sister, Mrs. Kenneth Burwell and family at DeKalb.

## Services for Bennett Hart

Funeral services for Bennett (Bill) Hart 53, were held on August 19 at 9:30 a.m. at St. Patrick's Church in Brasher Falls, with the Reverend Louis C. Gardner, pastor, officiating. Burial was in St. Patrick's Cemetery.

Mr. Hart died at 9:15 p.m. August 17, at the Veterans' Hospital in Boston, Massachusetts, where he had been a patient for a week. He had been in poor health for several years.

Surviving are a brother, James D. Murtha of South Sioux City, Nebraska;

two sisters, Helen Tattan and Marietta Regan, both of Cambridge Massachusetts; a nephew and four nieces.

He was born in Ogdensburg July 5, 1924, the son of Lloyd and Mary Hurley Hart. He graduated from St. Joseph's Academy in Brasher Falls. An Army veteran of World War II he participated in the Pacific and Asiatic campaigns.

He was employed by Alcoa for a time. For the past year, he had lived with his sisters.

## People

VAN ALSTINES' CAMP

Mr. and Mrs. William Van Alstine, with Mr. and Mrs. William Jones and daughter, Tracie, and a friend, Karen Parker, all of Sanfordville, have returned home after a camping trip. They left on July 24 and went to Plymouth, Massachusetts, where they camped, and then went to Cape Cod, and from there, they went to Province-

town, Massachusetts.

On their way home, they spent the week end of July 30 and 31, at the home of Mr. and Mrs. Paul Hamecher and family, formerly of Sanfordville, now of Valatie, and with Mr. and Mrs. Earl Hartling, also of Valatie. They spent the two nights of August 1 and 2 camping at Lake George and returned home August 3.

## Elementary school open September 6

The Lawrence Avenue Elementary School will open on Tuesday, September 6, at 9 a.m.

On Tuesday there will be a full-day session with students in grades 1-5 being dismissed at 3:15 p.m.

There will be afternoon kindergarten classes on Tuesday. Regular cafeteria service will begin on Tuesday, September 6, with prices the same as last year. St. Mary's School will also follow the same schedule.

Pupils who will be in grades 1-5 will report at 9 a.m. to the classrooms assigned to them. Students will receive a post card notifying them of classroom assignments.

New students not yet registered in grades K-5 will report to the Primary Cafeteria for registration and assign-

ment to classes.

Kindergarten pupils—morning kindergarten pupils already registered will report to the rooms assigned them at 9 a.m. on Tuesday. Morning kindergarten pupils will be dismissed at 11:30 a.m.

Afternoon kindergarten pupils will report to the kindergarten rooms assigned them at 12:45 p.m. Tuesday afternoon.

They will be dismissed from school at 3:15 p.m.

Parents of kindergarten pupils are asked to pin a slip of paper on their child's outer garment, listing the child's name, parent's name, address, including road name, and telephone number, as well as the teacher's name and room number for each day during the first week of school.

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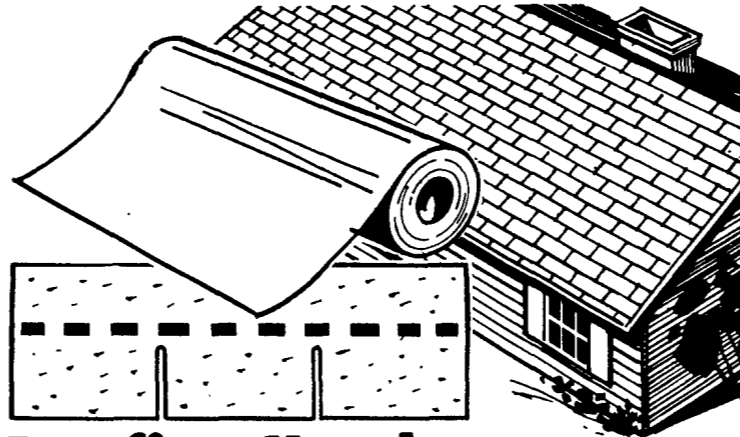
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