The Secrets of Long Life

What makes a man – or woman – live a hundred years? His heredity? The climate he lives in? The kind of food he eats? To seek an answer to this classic riddle *The Post* retained the Gallup Poll organization. Here are the fascinating results of their survey.

> By Dr. GEORGE GALLUP and EVAN HILL

PART ONE

There was no reason for big, bearded Francis Marion Rhetts to be poking about his livery stable in Salem, Indiana, that hot Sunday afternoon of July 19, 1863. In the first place, his dozen horses were gone, driven off ten days before by Confederate guerrillas under Brig. Gen. John Morgan.

In the second place, Frank Rhetts was expecting a fourth addition to his family. Two blocks away, in his hip-roofed house facing the New Albany and Salem railroad tracks, his wife Mary Ann had already unpinned her long brown hair, and was sitting on the edge of their straw-tick bed, counting labor pains.

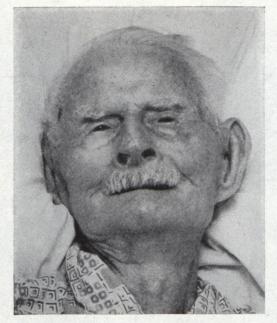
It was eight-year-old Albert who ran to the stable for his father; and before five o'clock that afternoon, a puny baby boy was born into a world of civil war in the knee-high hills of Southern Indiana.

The infant, so small and fragile that he was carried about the house on a pillow, was named John Edward Rhetts. That night, tallow candles molded by Mary Ann Rhetts burned in the big kitchen, and neighbor women walked down the unlighted, unpaved village streets bringing her pots of soup and plates of corn bread. They came to help Mary Ann Rhetts, and to see John Edward.

At this time, slightly more than 100 miles away, in a destitute log hamlet in Montgomery County, Kentucky, a five-month-old infant, Edward Clay O'Rear, was squalling in his crib. Edward was fourteenth of the family's fifteen children. And in nearby (Continued on Page 19)

Dr. John Edward Rhetts, 96-year-old retired dentist of Salem, Indiana, is one of the 402 persons 95 and older who took part in this study. Rhetts carries a cane only "because it makes me look distinguished."

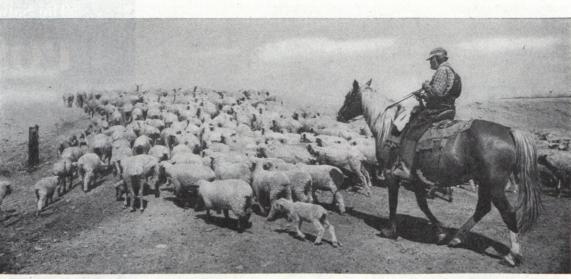




At the age of 116, Confederate veteran Walter Williams, of Houston, Texas, is the last survivor of the Civil War. He had a grandfather who lived to be 119.

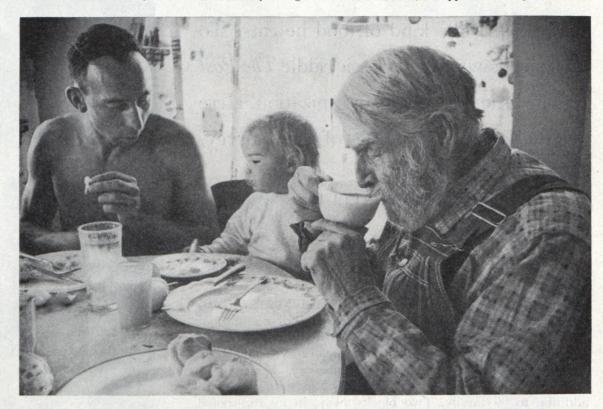


Mrs. Comfort Staten, 100, of Farmington, Missouri, was born a slave. Asked about her politics, she replied, "I'm a Republican. Heavens, yes, he [Lincoln] set us free!"

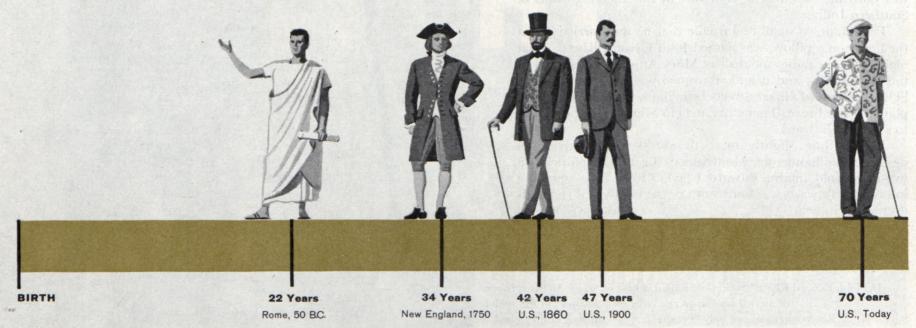


At 106, Hank Gooch (above), of Platteville, Colo., tends sheep every day on horseback. Gooch, who is an atheist, took his last drink 56 years ago. At mealtime (below) his appetite is still good.

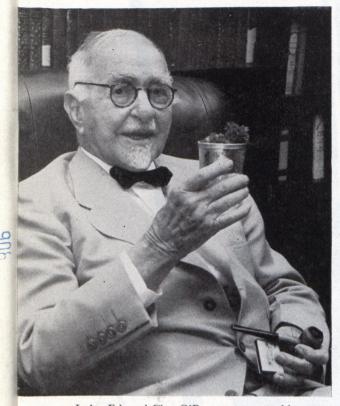
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Increases in the Average Length of Life Since Ancient Times



Although the subjects of the Gallup report were born in the Civil War era, they have lived a quarter of a century longer than the expected life span of a child born today.



Judge Edward Clay O'Rear, a 96-year-old, at his home in Versailles, Ky. He has smoked a pipe for 75 years and for the last decade, after lifelong abstinence, has taken a nightly drink.

(Continued from Page 17) Millersburg, Kentucky, a nineteen-year-old Negro named Charles Washington, until recently the slave of a planter named Abe Summit, kept at his work as a wood tote and pondered the meaning of his new freedom under President Lincoln's sixmonth-old Emancipation Proclamation.

In Cincinnati the five-year-old daughter of a merchant tailor tossed her pigtails and played in her grassy yard. In Republic County, Kansas, ten-year-old Hank Gooch—unmindful of the Civil War—helped his grandparents farm the rich prairie. In West Orange, New Jersey, an eleven-month-old baby named Amos Alonzo Stagg was one more hungry mouth to feed in a devout, impoverished household of five other youngsters.

Today the puny Rhetts baby is ninety-six years old, a retired dentist who for almost half a century pulled teeth at twenty-five cents an extraction. He lives only two blocks from the wooden house-still standing-where he was born. Edward Clay O'Rear is now ninety-six too. A former chief justice of the Kentucky Court of Appeals and a retired attorney, he lives near Lexington, still taking an occasional case. "Uncle Charley" Washington, the onetime Kentucky slave, now lives in Cincinnati after quitting work four years ago when he was ill. The merchant tailor's daughter lives in Los Angeles, and is now 100 years old. Hank Gooch is 106 and works every day, often on horseback, as a sheepherder near Platteville, Colorado. Alonzo Stagg, ninety-seven, is still serving as advisory football coach at Stockton College in California.

At the time of birth the chances that these people would live past ninety were so small as to be almost incredible. When John Edward Rhetts was spanked into his first breath ninetysix years ago in Salem, Indiana, one child in six died before reaching his first birthday. Today only one in 143 dies in his first year.



Amos Alonzo Stagg, 97, the celebrated football coach, of Stockton, Calif., dictates a letter to his wife, who is 83. All seven of his brothers and sisters lived more than 73 years.

Little Johnny Rhetts had to avoid—or survive—the great killers of the mid-nineteenth century: diarrhea, tuberculosis, pneumonia, influenza, diphtheria, typhoid, scarlet fever, smallpox. And he did get by, he and Eddie O'Rear and Alonzo Stagg and Charley the wood-tote boy. They survived infancy, despite its terrifying death rate. They survived the accident-prone years of adolescence, in a time when Joseph Lister was still preaching the antiseptic method of treating wounds. And they escaped harm in the epidemics that swept the world while Louis Pasteur was establishing the principle of bacterial vaccination.

They have lived not only beyond their own life expectancy—about forty-two years for a child born in 1860—but they have lived a quarter of a century longer than the expected life span—seventy years—of a child born today.

Why? Why have so many died and these survived? What did these people have, or inherit, or do, or eat, to allow them to live so long? If there is a secret to living long, these people have it.

Some months ago the editors of *The Saturday Evening Post* commissioned us to find this secret—or to establish that it does not exist. We were to use scientific sampling methods—the same techniques that tell us how Americans will vote, or what they think of our foreign policy—and the fact-finding facilities of the Gallup Poll.

The United States Census Bureau tells us that 29,000 living Americans are ninetyfive years old or older. Our task was to find a truly representative cross section of this group and study in detail their inordinately long lives. Then we were to assemble the facts about them, charting and graphing the details to see whether patterns of diet, or health, or birthplace, or climate, or heredity would emerge in some meaningful fashion. We designed and tested a twenty-four-page printed questionnaire containing 221 questions. Ordinarily it required approximately three hours to answer. In some cases, when respondents were semi-invalid and infirm, it took as long as five hours for our interviewers to get all their answers; one of our Utah interviewers had to return to his man on five consecutive days, because rest-home doctors limited each interview to forty-five minutes.

With the help of newspaper files, clergymen and old-age homes, we selected a representative cross section of the aged in this country— 402 persons ninety-five years old or older. Of these, 152 were men and 250 were women. The United States Census shows this to be the malefemale ratio of this age group in the nation. There were 364 whites, thirty-four Negroes, one Japanese, and three American Indians. And we found them in every state in the continental United States, in hot climates and in cold, at high altitudes and at sea level, in cities and on farms.

More than 300 trained interviewers visited these widely scattered people and forwarded the completed questionnaires to Gallup headquarters in Princeton, New Jersey. There the answers were punched into thousands of computer cards, tabulated and charted. Five months after we started we had a 226-page study with 343 charts, telling us what the nation's oldest living citizens had to say about themselves and their long lives.

Of course, there are limitations to any study of this kind. We had to depend on the honest answers and memories of men and women who have lived for almost a century. The median age of our group is ninety-nine years; 59 per cent are between ninety-five and ninety-nine, and 39 per cent are between 100 and 109; 2 per cent are 110 and older. We expected some to be mentally hazy. Actually only 7 per cent were hazy; 26 per cent were reported as "sometimes hazy," while 66 per cent were either "alert" or "unusually alert." But there was often the problem of impaired hearing.

However, we had designed the questionnaire to cross-check against contradictory answers, and we found memories for most remarkably good. Haziness was solved by getting help from relatives and companions who had known the respondent well for years; and talking to the deaf, our interviewers soon learned, is often a matter of pitch rather than volume.

All in all the results are gratifying; we have completed the first comprehensive study of this age group by modern scientific sampling methods. Although we expect that many of our facts may be subject to different interpretation, we feel that we have accomplished what we set out to do: to learn more about why some humans live so long, and to test scientific sampling as a medical-research tool.

Every American has read dozens of newspaper feature stories quoting nonagenarians on their secret of long life. The "secrets" include drinking a quart of whisky daily, or never touching alcohol; smoking ten cigars a day, or completely avoiding tobacco; frequent sexual activity, or complete celibacy; regular use of apple-cider vinegar, or honey, or yogurt, or you name it—it's been recorded somewhere in the folklore of the aged.

But these amusing answers are just that amusing. They are the careless dreams of desperate (Continued on Page 42) 42

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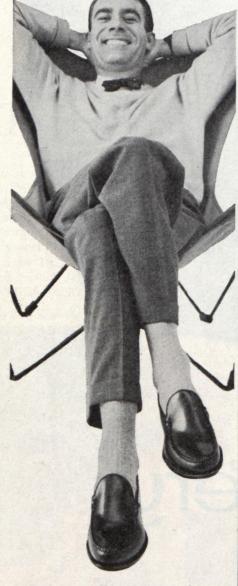
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The Secrets of Long Life (Continued from Page 19)

reporters, or the jokes of locker-room extroverts, or the testy replies snapped by elderly men exasperated by what they consider an absurd question.

In fact, our old people have been too busy living to think much about it. One of our questions was, "How do you explain your living to such an advanced age?" Generally the first reaction was a thoughtful shrug. Pressed for an answer, 28 per cent admitted that they did not know; 22 per cent said their long lives were simply God's will, a reply which is actually a restatement of the question, for it is logical now to ask why God had chosen them to live so long. Seventeen per cent said they took life as it came, were always happy, never worried and kept a sense of humor; 16 per cent credited hard work, 11 per cent said they inherited longevity, and 9 per cent mentioned regularity in eating, sleeping and exercise.

The answers are spread too thinly to form any significant pattern. They are about as general as those of William Kitchiner, an English doctor who in 1822 wrote a volume titled, *The Art of Invigorating and Prolonging Life*. Doctor Kitchiner advised, "Go to bed early; rise early; take as much exercise as you can in the open air, without fatigue; eat and drink moderately of plain nourishing food; and especially, to keep the mind diverted, and in as easy and cheerful a state as possible."

What Doctor Kitchiner was preaching, and what our oldsters have practiced—as a group—is simple moderation. Moderation in almost everything. But the moderate oldster who has lived a moderate life in moderate circumstances is the average oldster; he is the typical man or woman who has lived an average ninety-nine years. There are enough single and rare exceptions to indicate that almost any kind of human behavior may result in long life.

Almost half of our respondents have never touched alcohol in their lives, and the remainder were infrequent and extremely moderate drinkers. But 115-yearold Uncle Charley Washington drinks as much whisky as he can afford, and always has; 101-year-old Mrs. Marie Renier of Niles, Michigan, has been drinking a quart of whisky a week for almost eighty years, and for many decades she drank as much as a gallon of beer a day.

Ninety-seven per cent have religious affiliations, with 73 per cent describing themselves as deeply religious all their lives; yet there are six atheists in the group. Sixty-eight per cent have never smoked, and only 14 per cent are smoking now; but Judge O'Rear starts tamping tobacco into one of his pipes a few minutes after he wakes, and has a pipe in his mouth until bedtime. The average male weighed 152 pounds when he was thirty years old, but some pushed well beyond 200 pounds. Three men and one woman weigh at least that much now.

But these people are the exceptions. The only apparent value of their testimony is to give some sort of comfort to those of us who do not conform to the pattern, and who covet long life. It is the *pattern* that is significant.

In many respects Dr. John Edward Rhetts of Salem, Indiana, is typical of his contemporaries. In some ways he is not typical, but these differences do not seem to be critical. He is only ninety-six, while the "median" age is ninety-nine. He is a dentist, one of the ten men who entered the professions; 70 per cent of the males were farmers or manual workers. He was divorced from his second wife—only eighteen of the 402 respondents, thirteen men and five women, have been divorced—and he is one of the fourteen college graduates in the entire group.

In two other respects Doctor Rhetts is not typical: He is not a woman, and there are five women to every three men in this age group: and he was once a heavy smoker.

Otherwise he is a part of the pattern. He is a gentle, kind and friendly man, alert and intelligent. He is five feet nine inches tall, two inches taller than the male median height of his group; and he weighs five pounds more than the 137pound average for these old men. He is flat-bellied and erect. Thoroughly healthy, he has had only two medical checkups in the last fifty years, and each time the doctors "had a hard time finding anything wrong with me."

He dresses neatly and uses a cane "because it makes me look distinguished." He wears brown, horn-rimmed spectacles and is only slightly deaf. He is intensely proud of his two children and of the county where he and his parents were born.

Last April when we had lunch with Doctor Rhetts and his third wife, we walked from his comfortable brown brick house across from the First Baptist Church to the cafeteria on the sunny town square. In less than a block we were stopped four times by Doctor Rhetts' friends to exchange pleasantries and Indiana witticisms. Doctor Rhetts likes people and they like him, for he is a social creature as are most of the men and women in this study. Once he was the state's champion triple-tongue baritone-horn player; he sang and acted as interlocutor in the town's minstrel shows; he has been choir director of the Methodist Church.

"I like a small town," he told us. "I wouldn't live anyplace else." Except for a few experimental forays into Minneapolis, St. Louis and New Orleans as a young man, he has stayed in Salem. And this is significant. While the great westward migrations of the nineteenth century were sweeping hundreds of thousands of Americans across the Alleghenies, through the plains and over the Rockies, most of our old people—young then were content to stand still and watch the emigrants go by. They were not malcontents, or misfits, or insecure, and they were untouched by the excitement of adventure. They were happy where they were, happy with their jobs and neighbors, and they stayed. Many of them are still living only a few miles from where they were born. They like it there.

At lunch Doctor Rhetts ate mashed potato with baked sausage in gravy, a dish of cabbage boiled with pork fat, and corn bread. He sampled the slice of apple pie Mrs. Rhetts had bought and drank his coffee with cream and sugar. He discussed his favorite foods. "I'm not a salad eater or a fruit eater, and if it were true that an apple a day keeps the doctor away, I'd be dead long ago; I don't eat an apple a year."

The fact is that Doctor Rhetts is just not fussy. To him—and to the great majority in this study—food is not something to love, or to talk about, or to dress with condiments; it's something to eat, that's all. "I don't stick up my nose at anything," Doctor Rhetts said. "If it's onions, I'll eat 'em. If it's parsnips, I'll eat 'em, and I don't give a rap about parsnips. But I've never made a slop bucket out of my stomach."

Mrs. Rhetts nodded. "He's easy to cook for as long as it's plain food," she said. And "plain food" to Doctor Rhetts means boiled turnips or cabbage or carrots with a little butter and salt; never any pepper. He loves pot roast and medium steak and roast beef, but nothing ever fancy. Mrs. Rhetts said, "He considers mayonnaise on lettuce as fancy." The study shows that Doctor Rhetts is

not alone in his diet preferences. Almost



August 15, 1959

90 per cent of those we questioned preferred "just plain cooking" to any other kind. Although "plain cooking" in Indiana is not always identical with "plain cooking" in New England or Colorado, the ingredients are just about the same. What seems to be most important about these old folks' diet is not what they ate, but how much. Doctor Rhetts eats "only enough to keep my boiler running. I never eat so much that I feel full." And in this he is typical, for almost four out of every five of these near-centenarians say they have always been careful not to overeat.

Doctor Rhetts—as were about 75 per cent of the respondents—was extremely happy with his work, and he took pride in it. He closed his office thirteen years ago after a bout with pneumonia, but he still makes dental plates for old patients who insist. "There are some people who

Sight Unseen

- By Ralph W. Seager
- Whose eyes were watching me I do not know,
- I'd come for berries with my wooden pail;
- The land was wilder, it was years ago
- Since I had wandered this far off the trail.
- No blue jay called, and they're the first to tell
- When anything has come within a mile;
- No silent deer stepped out, yet I knew well
- That there were eyes upon me all the while.
- Although the pail showed less than half a peck,
- I thrashed my way out through that brambled screen.
- There's something in the spine and nape of neck
- That does not like the feel of sight unseen.

think there is nothing so good as a wooden-works clock," he said, "and some people feel the same way about me and my plates. They brag on me, you know, and I'm softhearted. Anyway, if someone brags on you, you do something for them." So he makes a jaw impression in his kitchen and molds the plates in his cellar workshop.

Before his retirement at eighty-three, he worked eighty to ninety hours a week, standing at his chair from eight A.M. to five P.M.—twenty-five cents an extraction; fifty cents with anesthetic—and working late to make his plates. In his early days of practice he made many of his own dental instruments, and manufactured gold dental plates by rolling out twenty-dollar gold pieces.

During one summer Saturday in 1893 he pulled enough teeth to finance a round trip to the World's Columbian Exposition at Chicago. A circus had come to Salem, drawing the farmers in huge crowds. "Saturday was always toothpulling day," he said. "If you had a toothache, you waited until Saturday, when you were coming into town anyway. That day I pulled teeth all day, and they were just flying, one hitting the ceiling and one hitting the floor. I was bloody up to my elbows."

In effect, Doctor Rhetts' work week was twice as long as today's forty-hour standard. He worked hard and long, and he loved it. When he retired he had been a practicing dentist for sixty-four years, almost a quarter of a century longer than a man could have expected to live when he was born. But he enjoyed more than his work. He was broad-jump champion of Washington County, sneaking an hour away from his office each summer Saturday to jump against "the country boys" for five-dollar gold pieces. And he never discussed his work at home. "I went home to enjoy my family," he said. His is the typical pattern; but the In-

His is the typical pattern; but the Indiana dentist was immoderate in one respect that sets him apart from 68 per cent of the other oldsters. For sixty years he smoked incessantly; if it wasn't a pipe, it was ten to fifteen cigars a day, or two packages of cigarettes. "When I was making plates," he said, "I had a cigarette in my mouth all the time."

He stopped smoking fifteen years ago, and is thus representative of the 17 per cent who once smoked and stopped. He had no difficulty breaking the habit; he simply stopped smoking, and that was that. Why did he stop? He shrugged. "It was a sort of silly habit." And here, too, he is fairly typical of those who formerly smoked. Less than a fourth thought it was harmful; others lost their taste for tobacco, or felt it was wasteful, or suspected it was irritating their throats or lungs or nerves.

If Doctor Rhetts' life—and the lives of those in this study—were distilled to get the essence of (Continued on Page 50)



"Free to leave at five!"

"I'm not the office orphan any more—stuck with that dreary, messy, licking and sticking stamps and envelope flaps at the end of the day. And baby sitter for a stamp box, too. This little postage meter makes mailing a cinch. I'm finished at five, when everybody else is."

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(Continued from Page 43) longevity. the result would be a blandly sophomoric secret: Don't worry or be tense, don't eat too much; do be happy, do exercise, do be moderate.

But here the elixir is too much concentrated; it is dehydrated and has lost its value. The study indicates that food is the killer and worry the pallbearer of most Americans, and they must be examined at some length; but there are other factors that deserve attention.

Take heredity, for example. About a century ago Dr. Oliver Wendell Holmes suggested that people might increase their life spans if they could "advertise for a couple of parents, both belonging to long-lived families, some years before birth." Most longevity experts agree with Doctor Holmes' prescription, concluding that heredity is a critical factor in reaching a ripe old age. Our study confirms the importance of heredity, but indicates that it might be less important than we have thought. It is not a factor that we must have in order to live long, for fully half of our respondents had parents who lived less than eighty years, and one fourth had neither parent, or brother or sister live to eighty.

But the value of heredity is evident when we see that 73 per cent did have a parent or a brother or sister who reached eighty, and that 39 per cent had one of these relatives reach ninety or more. Doctor Rhetts' grandmothers, for example, lived to eighty-three and ninety, although neither of his parents lived longer than sixty-three; his brothers died at ninety-two and ninety-six, and his sister at eighty. He had three uncles who lived longer than eighty-nine.

All seven of Alonzo Stagg's brothers and sisters lived more than seventy-three years, with the oldest dying at 103, and four living well into their eighties. Walter Williams of Houston, Texas, the 116-yearold last surviving Civil War veteran, had a paternal grandfather who lived to 119.

On the other hand, a ninety-nine-yearold Philadelphia woman was orphaned at three, her father dying in his twenties of tuberculosis and her mother dying soon thereafter. She has no long-lived relatives in her family. And there is John Richardson, 100, of Easton, Pennsylvania, whose parents died in their fifties-his mother of a stroke, his father of pneumonia-and whose brother and sister died as infants. There seems to be no doubt that heredity is exceedingly important in longevity, but there is no reason for the average American to despair if he seeks long life and has short-lived ancestors. The odds are against him, but he does have a chance.

Despite smug Vermonters, who like to say they live so long they have to kill a man to start a graveyard, the place where a man is born or where he has lived most of his life seems to have little influence on how long he will live. The Eastern, Midwestern and Southern sections of the nation each claim approximately one fourth of the birthplaces of the Americanborn respondents. Only 3 per cent were born in the West, and this is understandable in the light of the smaller population there a century ago. Most of the remainder are natives of Europe, except for twenty-one persons born in Canada, Mexico, what is now Israel, and Japan.

These figures, paralleling population concentrations and immigration statistics of 100 years ago, strike down a tempting hypothesis: the possibility that an unborn child is affected not only by his mother's diet but also by the climate, altitude or weather of the place where she spends her pregnancy. If so, then statistics should show more centenarians born in the warm climate of the Southern

states, say, or in frigid New England or at sea level.

Only recently, in Boston, the American Association of Plastic Surgeons was told of a hospital in a mountain state where a startlingly high number of children were born with harelips within a few days. Research showed that when the mothers were ten weeks pregnant terrific thunderstorms shook the area. One surgeon said, 'That's the kind of thing that leads the adrenal glands to put out cortisone, and it is known that cortisone can produce facial clefts in animals."

If it is possible that thunderstorms can cause pregnant women to bear hare-lipped children, is it not also possible that other climatic factors can produce long-lived children? The old-age study says no. Place of birth has no effect; you can be born anywhere in the nation and have the same chance of living to be 100. This is equally true of the place where you have spent most of your life. Except for the West, the oldsters are scattered throughout the nation in about the same proportion as the rest of the population.

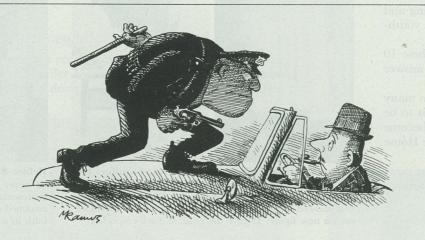
And this broad geographical distribution of the aged forbids any conclusions about the life-prolonging effects of climate or altitude. You can live equally long in the heat of Texas, the drizzle of western Washington, the mountains of Colorado or the tidelands of Virginia.

No state has any significant concentration of the aged. After eliminating the colored races because of the questionable reliability of these statistics, the raw figures of the latest United States Census show that New England and the West Central States have the highest ratio of persons ninety-five and older to the total population, and therefore it has often been assumed that these are the most healthful sections of the nation. However, it is in these two areas that population has grown the least in the last fifty years. While the nation's population doubled, New England's increased by only two thirds, and the West Central States by about 40 per cent.

Maine and Kansas now lead the nation with the highest ratio of persons older than ninety-five-twenty-five persons per 100,000-followed by Iowa, Nebraska and Rhode Island with twenty-three. But Iowa and Nebraska populations have increased by less than 25 per cent in the last fifty years, Maine and Kansas by less than 50 per cent. Analysis of tiny Rhode Island's high ratio of twenty-three persons over ninety-five per 100,000 population seems to be a barren project; why should it be a greater haven of age than its neighbors who squeeze it in from east and west-Massachusetts with a ratio of twenty, and Connecticut with seventeen?

Vermont, the state with the graveyard trouble, joins Massachusetts and Arizona for fifth place on the state longevity scale with a ratio of twenty, but Vermont also has grown less than 25 per cent while the nation's population doubled.

Florida and California are comparatively low on the list, with ratios of fourteen and eighteen despite the large numbers of retired Americans settling there. But Florida and California have also attracted hundreds of thousands of young people, whose presence lowers the old-age ratio. The raw census figures are interesting, but not conclusive. They must be



You be the Judge

By JAMES A. EICHNER

Tom, a tough cop, went berserk one night. He halted a motorist's car at gun point, handcuffed the unlucky motorist, then beat and robbed him. His victim prosecuted Tom and also sued the police chief for damages.

"The chief negligently hired this dangerous character without properly investigating his background and moral character," counsel for the motorist argued. "He should have found out that Tom was unfit to be a policeman and fired him."

"A public official shouldn't be required to pay damages for the unauthorized acts of his subordinates," the chief replied. "I had no way of knowing that Tom would misbehave as he did. Certainly it wasn't my fault that he committed a crime." If you were the judge, would you make the chief pay damages?

...

The court said that the appointment and removal of policemen is a "discretionary" duty, and that a public Based upon a 1956 Connecticut decision.

The chief did not have to pay. official who exercises his discretion "erroneously but in good faith' should not be made to pay damages if the result turns out badly.

You be the Judge is not intended as legal guidance. Laws vary from state to state. Anyone having a legal problem should consult an attorney.

compared to population migration and increase. Vermont, for example, exports not only milk but youth as well; its elderly citizens stay in the Green Mountains, and the ratio is thus affected.

While your state or region does not seem to have any effect on your expectation of life, there may be some significance in the size of your town. Seventyfive per cent of the old people lived most of their lives on farms, in villages or small cities. Only 25 per cent were lifelong residents of the larger urban areas. But like the early orphaned, the city dweller does have a chance-one fourth of the respondents have been streetcar straphangers for at least seventy-five years.

he racial background of these people shows a heavy preponderance of Britons, Germans and Scandinavians. More than half had ancestors from the British Isles. About 16 per cent came from Germany, and 5 per cent from the Scandinavian countries. The evidence indicates that North European stock in the United States has a longer life expectancy than Americans of Middle and Southern European ancestry.

And there is no evidence that the educated man has any advantage over the unschooled. The study shows that 20 per cent of the men and 9 per cent of the women never attended school; a small number are illiterate. The average grade completed was the seventh for men and eighth for women. The average oldster in the study left school at the age of fifteen. Ten per cent of the men and 6 per cent of the women attended college, and 3 per cent are college graduates.

Although it is ridiculous to connect political beliefs with longevity, the results of the survey may give small comfort to the Republican Party. Of the 402 in the study, 195 are Republican, 134 Demo-crats. The remainder are independent. Their party affiliations could be ascribed to contagion or inheritance, rather than intellectual decisions. Spot questioning resulted in such answers as, "Well, my father was a Democrat," or "That's how the neighbors voted." However, with Mrs. Comfort Staten, a 100-year-old Negro in Farmington, Missouri, the reason leaps from the pages of history. With a toss of her head and a quick gesture of her wrinkled hands, she said, "Of course I'm a Republican. Heavens, yes, because he set us free!"

If there are rules for living long-and it seems that there are-they would include these:

Don't be fussy about your food, and never, never overeat. Don't worry. Work at a job you love, and if it gives you physical exercise, so much the better; if not, be sure to get your exercise-and lots

of it—some other way. To the ambitious American driving himself to gain what he calls success, this pattern will seem intolerably dull and boring. And the cynic might be correct in saying that living to be old is probably the most exciting thing that ever happened to these people. In truth, for many of the aged their only outstanding accomplishment is that they have lived longer than most other humans; they have simply delayed the inevitable.

On the other hand, these are admirable people. They have been honest, hardworking, law-abiding, religious citizens who have reared their children into useful adulthood. They have paid their taxes and have never upset the social order.

If this still sounds dull, the chances are that you'll never make ninety. These people loved their lives-almost every minute of them-and most of them still do.

Next week's article describes the effects on longevity of food, alcohol and tobacco. -THE EDITORS.

The Secrets of Long Life

How much do tobacco and alcohol affect the length of your life? And food and exercise? Here are the answers as given by the oldest living Americans.

By DR. GEORGE GALLUP and Evan Hill

Part Two

Both Mrs. Lulu H. Williams of Quitman, Georgia, and Mrs. G. B. Mounger of McKinney, Texas, are 103 years old. They were born in 1856, the year the first railroad train crossed the Mississippi River.

Both lived through the Civil War as little girls, Aunt Lu Williams as a slave, and Granny Mounger as the daughter of a slaveowner. Both have outlived their contemporaries by more than half a century, subsisting for more than 100 years on a diet that would confound most dietitians and perplex medical researchers seeking the cause of heart disease.

They have lived mainly on proteins and carbohydrates—terms not in their vocabularies feeding themselves almost exclusively on potatoes, corn bread and fried pork. They have boiled their vegetables for hours with a piece of fat pork that coated each mouthful with a thin film of animal grease.

They have never heard of cholesterol, produced by fatty diets—a probable cause of heart disease, the nation's No. 1 killer; and Gayelord Hauser is a name as strange to them as that of Sylvester Graham, an earlier food faddist who died at fifty-seven in 1851, leaving his name to the graham cracker.

Today in the rest home where she has lived for the last five years, white-haired Granny Mounger is not exactly happy with the food she is being served. "I tell you, hon," she says, her eyes twinkling and her hands smoothing the apron she always wears, "they don't put enough salt in it. And it would taste much better if they'd plop in a nice fat piece of pork." The rest-home physician, following the tenets of modern medical practice, has prescribed a light-salt, light-fat diet for her, but 103-yearold Granny is not much impressed.

Aunt Lu Williams lives with her daughter in a scrubbed yellow house on a dirt street shaded by oaks with straggly beards of Spanish moss. Quitman is a small Georgia town tied strongly to agriculture, and Aunt Lu, widowed for forty years, is tied strongly to the land and to its products. At the death of her farmerpreacher husband, "Parson T," she took his place to produce the corn and cotton he had raised. Her way of living and her diet have not changed since she was a Florida plantation slave 100 years ago.

She still eats her collard or turnip greens boiled with a piece of side meat. She loves corn bread and corndodgers, sometimes dipped into the pot liquor of the boiled greens, and she eats fried pork when she can afford it. She drinks two or three glasses of buttermilk a day, as she has done much of her life, and she has been drinking coffee since she was old enough to hold a cup. She is not fond of sweet foods, but for eighty-five years has taken an occasional glass of "sweetening water"—cane syrup and water—as an energizing pickup when she is "too tired to eat."

Aunt Lu and Granny Mounger are fairly typical of the 402 persons ninety-five years old or older who have been interviewed for this report on longevity. The work, massive in scope, was commissioned by the editors of *The Saturday Evening Post*. Its object: to discover the secrets of long life—if such secrets exist using scientific sampling methods and the field organization of the Gallup Poll.

One of our first discoveries was that 50 per cent of our oldsters have eaten fried food regularly all their lives. But there are exceptions. Ninety-five-year-old Walter J. Fenn of Chula Vista, California, calls the frying pan "a devilish instrument" and prefers his food boiled, "not greasy with fats or butter." A lifelong bachelor, he has always done his own cooking, deliberately avoiding greasy foods.

On the other hand, Redwing Beck, a fiery ninety-five-year-old in Bonne Terre, Missouri, says, "Fat meat and corn bread and beans is what I've lived on. The fatter the meat, the better I like it. When it runs down my chin, that's the way it should be." And Uncle Charley Washington, living happily in Cincinnati at 115, was raised on "corn bread, fat meat and milk." He says, "Fat meat is the best part of the hog; I sop up the fat with my corn bread." He still follows the daily diet he started more than a century ago: boiled fat meat and corn bread for breakfast, cabbage and beans for lunch, fried fat meat and corn bread for supper.

There is a large and convincing body of medical evidence indicating that a diet heavy with animal fats causes fatty deposits, such as cholesterol, in the arterial walls. The result is hardening of the arteries and increased danger of heart attack.

According to Dr. John W. Gofman, professor of medical physics at the University of California at Berkeley, carbohydrates—contained in sugar, potatoes, bread, corn and beans—also increase the possibility of arterial hardening.

But the centenarians in this study seem unaffected by cholesterol and carbohydrates. Only 13 per cent have ever had any heart trouble, and of this small percentage the vast majority had no attacks until after they were eighty. Yet 45 per cent of them name pork, ham and bacon as their favorite meats—40 per cent preferred beef. Almost 60 per cent admit they have a sweet tooth, and a typical favorite meal would include pork or beef, potatoes, cab-



"I don't want to dig my grave with my teeth," says Henrietta Dull, 95-year-old Atlanta author of *Southern Cooking*. Like many of those surveyed, she eats lightly.

bage and beans or peas and a dessert, most likely apple pie. Of course, a favorite meal is not necessarily a typical meal, but answers to other questions in the survey confirm the almost daily consumption of foods heavy in carbohydrates and fatty proteins.

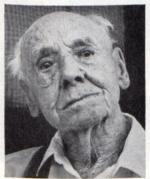
Sixty-five per cent of these people have normal blood pressure. Of the rest, those reporting a tendency toward high blood pressure, or low pressure, are about equally divided. How can we explain the low incidence of heart trouble and the comparatively normal blood pressure, in view of their diet? We cannot; the study gives us no indication.

They are meat-and-potato people, plainfood eaters who would blight the soul of a Parisian chef; and they are indifferent to the rules of dietitians. At his 100th birthday dinner two years ago the Rev. Dr. Arthur Judson Brown of New York City said, "I have always liked New England boiled dinners. Dietitians told me such heavy meals were not wise. But I am here, and the dietitians are dead."

Food faddists are about as useful to this group as a Christmas tree on New Year's Eve. They have never (Continued on Page 73)



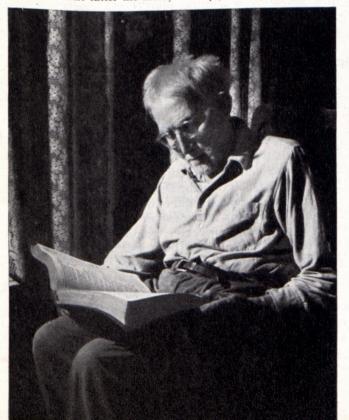
At 106, William Perry (above) of San Francisco still has a huge appetite. Here he breakfasts on ham and eggs, beans, fried fish and coffee. He says he's never had indigestion.





"I drank whisky," says exlumberjack Thomas Murphy, 109, of Spokane, Wash. Lulu Williams, 103, of Quitman, Ga., thrives on fried pork and boiled greens.

Redwing Beck of Bonne Terre, Mo., is part Cherokee, loves to argue and has lived 95 years on a high-fat diet. "The fatter the meat," he says, "the better I like it."





Granny Mounger, a 103-year-old, dips snuff on the porch of a nursing home in Mc-Kinney, Texas. She started using snuff at the age of six and still takes it after every meal.

The Secrets of Long Life

(Continued from Page 22)

heard of Gayelord Hauser's promotion of yogurt, wheat germ, blackstrap molasses and skimmed milk as health preservers and restorers. Hauser calls overcooking "murder in the kitchen," and modern dietitians agree that it destroys vitamins; but these people have been boiling their vegetables for more than a century, and have been introduced to vitamin capsules only late in their lives. Fifty-four per cent have never taken vitamins at all. Of those who have, more than seven out of tenstarted taking them after they were eighty, sometimes with little reason. Alfred Clumpner of Spokane, Washington, a tall-6'1"-slim man of 101, started taking vitamins at ninety-seven simply because he saw others taking them.

It was Sylvester Graham, of the cracker fame, who in the early nineteenth century advocated a health regimen including pure drinking water, meals of vegetables, rough cereals and fresh fruits, and cheerfulness at table. No one knows what efforts our centenarians have made to get pure water, but their health records show little disease caused by polluted water. They have probably been cheerful at meals—despite the unexciting blandness of their food—for they laugh a lot (70 per cent) and they often whistle and sing to themselves (60 per cent).

But they have neglected the rough cereals on the menu; and apples, peaches and apricots, their favorite fruits, have been a small part of their diet. As for Graham's no-meat, strictly vegetarian rule, they have virtually scorned it. Only 3 per cent have ever been vegetarians. An equally small percentage, although not the same persons, have experimented with special health-food diets.

Graham also prescribed hard mattresses (only 19 per cent of our oldsters prefer them), open bedroom windows (72 per cent agree), daily exercise (67 per cent said they got enough exercise at their work), and long walks (only 15 per cent took walks before they were fifty; 30 per cent did after age fifty).

Like 95 per cent of the old folks, 106year-old William Perry of San Francisco, a retired railroader, cowboy and professional gambler, has a sharp appetite. Unlike the others, he is a huge eater. The morning we visited him last April he had started the day with a shot of straight whisky—"gives you a good appetite" and had finished a breakfast of eight ounces of grape juice, bran cereal, fried noodles, bread, two fried eggs, a dish of peaches and two cups of coffee.

He likes honey, and his stepdaughter buys it in five-pound lots. Why does he eat honey? "Dammit, if you'd read the Bible, you'd eat honey. John the Baptist ate milk and honey, and was the strongest man in the place." Does he avoid fats? "Hell, no! I eat anything and always have."

Tough, short—five feet six inches, 164 pounds—old Bill Perry is scarred with arrow and bullet wounds from a dozen Indian fights, and limps slightly on the artificial left leg he bought four years ago after an above-the-knee amputation. In these respects, and in the unusual violence of his first twenty-eight years, he is unusual; but apart from his huge meals, his dietary habits are quite similar to the 401 other old persons in the study.

Like most of the others he feels a man "shouldn't overeat, but should eat enough," although his "enough" is much more than normal for these people. He has never dieted (only 14 per cent have). Since reaching fifty, he has neither diminished the amount of some foods (31 per cent have) nor eliminated any entirely (26 per cent have). He eats bread at every meal, as do 86 per cent in the survey. He is a regular butter user (74 per cent are) and dislikes margarine (21 per cent use it). He has eaten eggs almost every day of his life (like 56 per cent) and prefers them fried; most of the oldsters prefer them boiled.

He has eaten fish at least once a week, as have 56 per cent, and prefers his food slightly salted, as do 54 per cent, although 40 per cent like their food "well" salted.

With two thirds of the others he has never had indigestion. Of the third who have had an occasional stomach upset, a large proportion blamed overeating or rich foods. They have treated themselves with the usual druggist's remedies or with baking soda, although some believed they got relief from vinegar, spirits of ammonia, or table salt with coal tar. One indigestion recipe given us requires a half teaspoon each of black pepper, salt and baking soda. "Mix it up, take half now and the rest during the week."

Many of these old folks, however, have simply fasted when they felt ill. Uncle Charley Washington, for example, says, "When I don't feel up to snuff, I just starve myself for a few days and that fixes me up." He also has eaten a weed called mule's tail or chewed nutmeg when his stomach was upset, an infrequent occurrence.

The oldsters' consumption of nonalcoholic beverages-milk, tea, coffee and water-throws little light on the search for the secret of longevity. They are not coffee or tea addicts; they treat milk with the same indifference as they do the rest of their foods; and they are not waterdrinking faddists. They prefer coffee to tea, and they drink it hot with cream and sugar, as does most of the adult population of the nation. They drink an average of two cups a day, and have been doing so for at least seventy-five years. The tea drinkers-two thirds occasionally drink tea, with some drinking it in addition to coffee-consume about a cup a day.

Three out of four drink milk, consuming about two glasses a day; two thirds say they drank a lot of milk when they were youngsters, and most of them say they have drunk milk regularly since they have been grown up. Almost all drink about two glasses of water a day, but there is no significant pattern in when they drink it; they drink it any time they are thirsty.

If there is anything meaningful in the dietary customs of these old people, it does not seem to include what they ate,

s unless it is their insistence on "plain food." Certainly what we eat makes us what we are, but the specific intake of these oldsters gives us no recipe for longevity. However, there is another aspect to their diet that emerges with strong implications.

This is the *amount* they eat. For centuries doctors have warned that gluttony kills more people than the sword. Lifeinsurance companies have produced statistics condemning fatness. Obese Americans nod agreement, go on stuffing themselves, and all too often die early.

Mrs. Henrietta Dull of Atlanta, Georgia, is ninety-five. One of the nation's first newspaper food editors, she wrotefor the Atlanta Journal for twenty-five years, retiring in 1945 when she was eighty-one. Her cookbook, *Southern Cooking*, has sold more than 100,000 copies and is still selling. She speaks incisively in a Georgia accent, and she is gently positive as she warns of overeating. "I don't want to dig my grave with my teeth."

As an expert in dietetics, Mrs. Dull has long known and taught the advantages of light eating, and she has practiced her own preaching. So have most of the oldsters in this survey. Since they have lived an average of ninety-nine years, we must take seriously one of their few positive conclusions about longevity: Overeating is dangerous. Throughout their lives, 78 per cent have always been careful to avoid overeating; only 14 per cent admit that they have often stuffed themselves. The daughter of 101-year-old Mrs. Melinda Williams of Houston, Texas, says, "Mamma often eats like a pig."

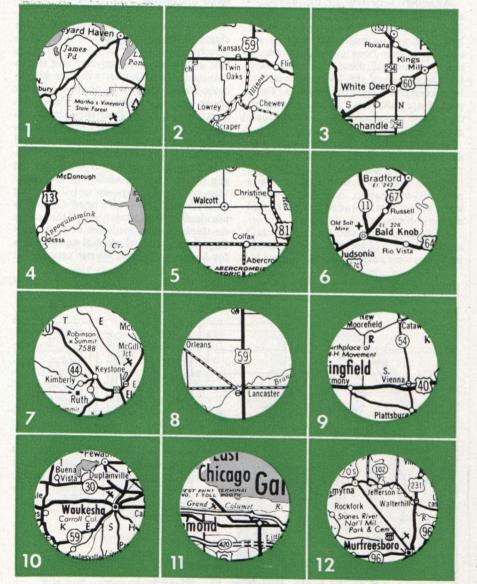
Seven out of ten never eat bedtime snacks, and only 22 per cent eat between meals. Most of them have only one helping at meals, and that seems to satisfy them, for 65 per cent leave the table satisfied. A rather significant number—76 per cent—say they eat all foods. William Perry says, "Too many people say they can't eat this or can't eat that." And 90 per cent insist on what they call plain cooking—lightly seasoned food with few sauces. They are neither gourmets nor gluttons, and they rarely have been fat.

Weight and height must be correlated, of course, to get body build, and the study shows that the average man in this group is five feet seven inches tall about the same as his contemporaries. He reports that he weighed 152 pounds at age thirty, fifteen pounds lighter than today's average thirty-year-old male, who is two inches taller. At age fifty the typical oldster had gained two pounds in twenty years, compared with today's average fifty-year-older, who has gained three pounds since he was thirty.

The average female centenarian is five feet three inches tall, one inch shorter than today's average American woman. She averaged 128 pounds at age thirty one pound lighter than today's thirtyyear-old woman—and 136 pounds at age fifty, five pounds lighter than today's average fifty-year-old American female.

When their weights and heights are correlated, they hardly appear to be as lean and slight as their diets would indicate. They seem to have been rather like the average American of today. Their stature seems to have no connection with their endurance in the longevity race.

But their vitality, their seemingly inexhaustible energy, and their almost boundless zest for life would seem to give them a great advantage over the listless. The value of this discovery, of course, is a little dubious. It is useless to tell an exhausted man that he'll live longer if he has more energy. The vital questions are why these people had so much energy, and where they got it. But the oldsters do



Where Do You Think You Are?

East or West, North or South, each of the distinctive areas above appears on the road map of a single state. There is, as the saying goes, "no place like it." Can you identify the states? Harley P. Cook

(Answers on Page 75)



not know, and the study does not show, although the secrets may be hidden somewhere in their diets, their sleep habits, their exercise, or their heredity.

However, they had it. Granny Mounger speaks of "the time I had dancin'! My husband was a fiddler, and they'd come thirteen miles to get him. He'd jump up on the mare with his fiddle, and I'd jump up behind him and away we'd go." Of course, the dancing stopped when the children came—nine of them.

Five years ago, when he was ninety, Redwing Beck hitched up a mule and drew 160 logs out of the woods. Uncle Charley Washington says the happiest life is "to get two mules on the end of a plow and go right up the row," and Aunt Lu Williams spent her childhood "tending to white children, helpin' with hog killings, picking cotton, chopping cotton and breaking corn." Then for almost half a century she plowed the family farm, clearing land and rooting out stumps. And she reared five children.

They were a highly energized group, men and women who would jump out of bed in the morning feeling not only that the world was their apple but also that they could pare and core it.

If exercise or physical activity causes this zest, then the secret is out, for, in the words of William Perry, they've been "as busy as a one-eyed cat watching two rat holes" most of their lives. The riddle is, which came first, the zest or the exercise? Only 6 per cent say that they have ever tired easily; the others say they have had much stamina, and the record proves it.

Only a third of them ever made an effort to exercise in addition to their work, and obviously the others were exercised enough in their occupations. Seventy per cent of the men were farmers or laborers, and 25 per cent of the women worked as servants or at other manual work. The remaining females stayed at home in a time when a woman was a housewife, not a "homemaker" commanding a platoon of electrical outlets.

Besides, their families were larger than today's average. The average number of children for these old people was four per family. Ten per cent of the married women were childless and 12 per cent of the women never married; but 28 per cent of the women gave birth to six or more children, with 8 per cent bearing ten children or more.

Somewhere, meandering about our American folklore, is a sentimental Victorian formula for longevity: Every child a woman bears, the legend goes, adds five years to her life. The number of bonus years varies with the storyteller, but the principle remains. Our study of 250 women ninety-five years old or older does not connect maternity with long life, but it does reveal a fascinating fact about vitality, measured by childbearing years.

Today nine tenths of our children are born to mothers under thirty-five; approximately 10 per cent of our mothers are bearing children after they are thirtyfive. But 47 per cent of the mothers in this old-age group report they have borne children after thirty-five; 8 per cent gave birth after forty-five, and 2 per cent after fifty. Then, after bearing children at these comparatively old ages, they went on to live for at least half a century more.

The chart on fatherhood age is of less significance. Twenty-three per cent fathered their last child between the ages of thirty and thirty-nine; 20 per cent in their forties: 14 per cent in their fifties; and 6 per cent after they were sixty. Onehundred-and-sixteen-year-old Walter Williams, who retired at sixty because he was too old to work, sired his last child when he was seventy-four; and one old man in the survey says he was eighty when his wife gave birth to their last infant. From the simple fact that they have

lived so long, it would seem that the centenarians have been extremely healthy, and in fact the survey shows that 58 per cent of them have never had a major illness. But a third of them have been attacked with some disease or other, and 11 per cent have had two or more bouts with major sicknesses. One in six has had pneumonia, and 10 per cent have survived typhoid fever. Nervous breakdowns, asthma and allergies were rarely reported, and there were only three cases of stomach ulcer. Four persons had suffered cancer, four had had malaria, and four had survived smallpox. Seventy per cent of them generally have been free of colds throughout their lives.

Their illnesses occurred most frequently after they were eighty, but surgical operations followed this pattern only with the men. The women (31 per cent had had operations) scattered their surgery throughout their lives, while the men (41 per cent), distressed mostly with prostate trouble and hernias, were operated on more frequently after eighty. Hysterectomies accounted for ten operations on the women, removal of cataracts or appendixes for nine each. Rheumatism or arthritis, disorders common in old age, afflicts 31 per cent of the respondents today.

Although very few of the women eighteen out of 250—ever have smoked, 71 per cent of the men have smoked for half a century or longer. But only 15 per cent have ever been cigarette smokers, and two thirds of these have given them up. Only three of the 108 male smokers have been chain cigarette smokers. These people are, and have been, devoted to cigars and pipes, and they do not inhale the smoke.

Judge O'Rear has been puffing a pipe for seventy-five years. When he was on the bench he chewed tobacco. He says, "A pipe keeps my hands busy. It's a peaceful occupation, smoking. I never knew a man to whip his wife while he had a pipe in his mouth."

Half of the men who smoked are still at it, and many of them have been smoking for as long as eighty years. Eugene M. Gillette, now 102, of Wenatchee, Washington, smoked three or four cigars a day for fifty-nine years, then decided to quit. "I enjoyed smoking," he says. "But I just came to the conclusion it wasn't doing me any good." He had no trouble divorcing himself from his cigars.

Granny Mounger is a real tobacco addict, although she does not smoke. She's been using snuff for almost a century, starting when she was six by dipping into her mother's bottle. When she was sharply reprimanded, she made her own, pounding dried tobacco leaves into powder. But her homemade brand wasn't good enough; she's been buying the factory brand ever since, using it after every meal. "Hon," she says, "I done made the snuff makers rich."

Perhaps the general avoidance of cigarette smoking is one explanation for the normal blood pressure registered by the majority of these oldsters and the low incidence of heart attacks. In 1954 the American Cancer Society published the results of a 200,000-person survey which showed that regular cigarette smokers had from one and a half to two times as many heart attacks as noncigarette smokers. Recently Doctor Gofman, the University of California researcher, reported that "cigarette smoking is associated with elevation of certain of the blood lipoproteins that are related to coronary arterial hardening and hence to heartattack risk.'

Doctor Gofman also points out that a cigarette smoker raises his blood pressure by about 20 per cent while smoking two cigarettes consecutively, and that a two-pack-a-day smoker will raise his average blood pressure by about 6 per cent above that of a nonsmoker. These old-sters do not know this; they simply do not smoke cigarettes; they stick to pipes or cigars or they do not smoke at all, and they live to be 100.

If there ever was any truth to the old gag about keeping whisky in the house "for medicinal purposes only," it must be credited to these old people, for they use alcohol—moderately—and they really do think of it as medicine or tonic. But they do not regard alcohol as necessary for longevity. About 60 per cent of the

women and a fourth of the men have never had a drink in their lives.

Very few of them consider drinking an evil. For the most part the teetotalers don't drink simply because they don't like the taste, or because their parents never drank, or because they tried it once and became dizzy. Very few abstain for moral reasons, although Aunt Lu Williams does say, "I've never seen anyone who is fond of liquor live his days out." Aunt Lu can say this because she has not traveled very much.

Alonzo Stagg is less positive about the dangers of drink; he merely says that Christians and cocktails should not mix, and that he's been a Christian since he was sixteen. "As a boy I played around the saloons and watched the fights. They were to us then as the movies are to boys today. I didn't want to emulate those men." And he hasn't.

The reason that Hank Gooch hasn't had a drink for fifty-six years is that he drank too much one night when he was fifty and became ill. He hasn't touched a drop since. "No sense in swallowing stuff that makes you sick," he says.

Judge O'Rear is probably typical of the oldsters in their drinking patterns. He was thirty before he tasted alcohol. "I wasn't a teetotaler," he says. "I just didn't drink. No one in my family drank."

During his long and active practice in the courtroom and on the bench, the judge would sip an after-hours glass of wine with his colleagues; but this was not for pleasure, it was to keep his drinking friends from being put out of countenance. He does drink now, a nightly toddy, and has done so since he reached eighty-six, ten years ago; but this practice is truly medicinal.

Wine and whisky are the most popular drinks for those who have used alcohol during their lives. In Spokane, Washington, Thomas Murphy says, "I drank whisky. I wouldn't give beer belly room." But this 109-year-old lumberjack, who chopped logs in the Northwest until he was eighty-three, has actually given very little belly room to whisky. Throughout his long life he has had about a drink or two a month, and never more. Like 61 per cent of the men we interviewed and 80 per cent of the women, he drinks nothing now.

There are exceptions, of course. Uncle Charley Washington, for example, has been drinking "all the corn juice I can get" for more than 100 years. The 115year-old former slave was introduced to bourbon as a boy when "the old master would call us up when he was feeling good and would give us a drink out of a tin cup to see us act the fool." Today he drinks about three pints of whisky a month. But Uncle Charley's consumption falls into the moderate-drinking scale; his daily intake is about the quantity a physician might prescribe as a tonic.

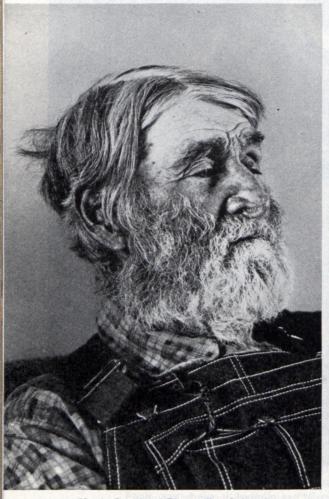
One problem with charting people is that it is too easy to see a chart as a composite person rather than as a symbol. On the charts Granny Mounger is listed as a drinker, as are forty-eight other old women and fifty-nine men. This is because Granny would "tip up the bottle and take a swaller" when she felt bad, and because she now says, "I like my dram." But Granny's dram, further questioning reveals, was purely medicinal and very rare, because she rarely felt bad; or it was an eggnog at Christmas, or a hot toddy on cold days.

Actually the drinkers in this survey were very moderate—as they have been in everything during their long, long lives.

The third and concluding article next week tells how religious beliefs, marital happiness and occupations influence longevity. —THE EDITORS

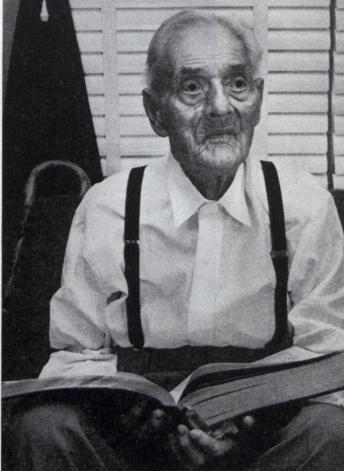


"Pioneering the thirty-hour week, Hutchins?" THE SATURDAY E



30

Hank Gooch of Platteville, Colorado, age 106. Unlike most of the old people polled, Gooch doesn't believe in any religion.



James Brett, 109, of Houston, Texas, with his Bible. A Godfearing man, he has spent his years in piety and peace, desiring only "to be comfortable and stay with my family."



William Perry, a 106-year-old San Franciscan, is stubbornly active. Despite his age and an artificial leg, he still goes on periodic gambling trips to Reno.

The Secrets of Long Life

How do your religious beliefs, marital happiness and occupation influence your chances of living to be a hundred? What about your money worries and sleep habits?

Conclusion

Last summer, wearing his usual loose, bib overalls and knee-length rubber boots, Hank Gooch rode his mare along a stretch of barbedwire fence in the grazing lands of Northern Colorado. He was doing what he has done for sixty years—tending sheep. He guided the young mare too close to the fence, and she caught a stirrup on a post.

"Shejerkedloose," Hank says, "and threw me. The doctor said I was O.K., but I was a little lame for a while." That was only a few months before Hank had his 106th birthday.

Easygoing, gentle Hank Gooch lives in Platteville, Colorado, thirty-seven miles north of Denver. He has a full head of iron-gray hair, his hearing is excellent, and his blue eyes are better than those of many an American college student, although they are beginning to water. He is five feet five inches tall, and he weighs 130 pounds. In winter he wears a closely trimmed white beard—"It keeps me warm when I'm working out"—but in summer he is close-shaven.

By Dr. GEORGE' W. GALLUP and EVAN HILL

For the first fifty years of his life he farmed in Republic County, Kansas, and as a boy he stood alongside the Mormon Trail, watching the Latter-day Saints migrating westward to Salt Lake City. "There were miles of them," he says. "Wagon trains with kids and sheep and cattle." But he felt no urge to go west himself; he had chores to do. He remembers the huge buffalo herds on the prairie, but he didn't shoot any. "No need to," he says.

For longer than most Americans have been alive, Hank has led a lonely life in the sheep camps. He's more careful now since the mare threw him, but he's still on the job, although he admits that "it's getting pretty hard for me to get on that horse unless I can find a piece of high ground." He is a placid, comfortable old man who would like to own his own sheep instead of herding them for someone else. Still, his economic status does not disturb him; he's happy in his old age. He likes companionship, but his occupation has kept it from him. "When I'm out there I miss people," he says, "but I don't let it bother me."

In fact, there is very little that bothers Hank Gooch. In this respect he is like the majority of the 402 persons ninety-five years old or older whom we have interviewed. This painstaking study of the aged was aimed at discovering the secrets of longevity. Commissioned by the editors of *The Saturday Evening Post* and using the field staff of the Gallup Poll, the survey led us to many oldsters like Hank Gooch. For Hank—in his personality, his happiness, his ambitions and his worries—is typical of his age group. (Continued on Page 63)

The Secrets of Long Life

(Continued from Page 30)

But there is one point on which he diverges sharply from this group of aged Americans: He doesn't let religion bother him either. He is an atheist.

Ninety-seven per cent of these people identify themselves with some church, and 73 per cent say they have been deeply religious all their lives. Hank Gooch belongs to the few who profess no religion. "It don't make sense," he told us. "I

just don't believe in religion." He is calm about his lack of belief.

"What if you're wrong, Mr. Gooch? What if there is a God? You're one hundred six years old."

Old Hank Gooch smiled, and his blue eyes twinkled. "Well, if I'm wrong about religion, and there is a God, then I guess I'll have to go down to the bad place."

And that is a significant remark. Although his disbelief clashes with the religious convictions of the majority of these old people, his general attitude jibes with theirs. He is unworried and serene. He is not a crusader, and neither are his strongly religious contemporaries; they are not inclined to seek converts.

inclined to seek converts. Perhaps one of the most sincerely devout persons in this study is 109-year-old James Henry Brett of Houston, Texas.

He is a moderate man of moderate height and weight and is almost completely deaf. Until two years ago he was completely bald; today his head is covered with baby-soft white hair. "This is his second suit of hair," his daughter says. And last year a new molar pushed through the gums of his lower jaw.

James Brett has been a Baptist for seventy years; he has said bedtime prayers all his life, and he has never eaten even snacks—without first saying grace. For years he and his wife read the Bible each night before bed. He has complete faith in God, saying his time for dying "is not left to me; it's left to the Old Marster," and he points to the sky.

Yet James Brett, with his strong faith, and Hank Gooch, with his lack of it, would find no cause to quarrel about religion. Both have lived long enough to know their minds and to have acquired a philosophy of live and let live. Gooch would shrug at a missionary sermon, and the James Bretts in this survey would never think of trying to win him over.

Redwing Beck at ninety-five is religious simply "because it's the way to live." Like the others, he is not much concerned with the fires of Hell. These old people worship an understanding God, who will not punish them if they do not attend church. To them religion is not based on fear.

In Spokane, Washington, Thomas Murphy, a man who never married "because I didn't want to quarrel with a woman," has been a Roman Catholic for 109 years. Although religious pictures are on the wall over his rest-home bed, he seldom takes the trouble to attend Mass. He is comfortable in his theology, and calm. "Too many people go crazy over religion," he told us.

There are a few, of course, who have been caught up in the excitement of revival meetings. Mrs. Melinda Williams, 101, attended church every night during one five-year period of her life. Granny Mounger, a Methodist for eighty years, remembers one sermon when she left her pew and walked up the aisle. "Hon," she laughs, "I found myself up there huggin' the preacher." But these exhibitions of religious fervor are as rare in the group as the occasional profession of atheism.

It is reasonable to assume that persons ninety-five and older take more interest in the hereafter than teen-agers do. When 73 per cent of these people say they have been deeply religious most of their lives, their present nearness to death may be affecting their memory of years long past. Statistics indicate that the nation was less churchgoing when they were born than its citizens profess to be now. In 1860, the birth year of the typical person in this study, only 23 per cent of the population were church members; in 1956 American church membership was 62 per cent of the population. Our old people would seem to be not only more religious than today's average American but also far more so than the average American 100 years ago.

A significant difference was found between Protestants and Roman Catholics in relation to their present-day numbers. Today's Catholics represent 21 per cent of the nation's total population. But only 11 per cent of the oldsters interviewed claimed this faith. (In 1860 they represented 12 per cent of the population.)

With the heavy migrations of the Irish, Italians and Middle Europeans after 1860, we could expect the ratio of our aged Catholics to increase somewhat parallel to that of the general population. However, it shrank slightly. There is a possibility that this can be explained by the near-ghetto status of the early Catholic migrants, or by a tendency of certain peoples—English, Scotch, Welsh and North Europeans—to survive longer than Southern and Middle Europeans.

Whatever their religious practices or beliefs may be, these old people remember their marriages as extremely happy ones. Time, of course, is a great tranquilizer. After a man has been buried half a century, his smile is remembered, his petulance forgotten. Perhaps one of these old women had a husband so stingy he'd chase a mouse to Hell for a pumpkin seed, but there's no remembrance of this. Perhaps there was a wife with a temper like a meat ax, but this, too, is forgotten.

The survey shows that their marriage partners and their children have been their comfort and their pride. About four in ten say their families have been their greatest satisfaction, and the same number say the happiest times of their lives were spent with their families. Thirty-five per cent were unable to pinpoint their happiest years—"my whole life has been happy"—but 94 per cent say their home lives have always been quiet and peaceful.

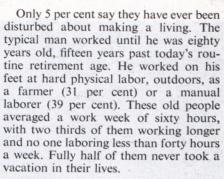
In a time when the household included parents and grandparents as well as maiden aunts and aged cousins, these people had few clashes with relatives. For them the mother-in-law problem was minor, if it existed at all, for 94 per cent say they have always got along well with relatives. More than half of them labeled their marriages as "extremely happy"; 31 per cent said marriage was" fairly hapt *j*." Only 5 per cent had unhappy marriages.

Six per cent of the males and 12 per cent of the females never married. Only 5 per cent—nine per cent males and 2 per cent females—were ever divorced. The typical male married at twenty-seven; the female at twenty-one. Nearly a third of the men have married more than once, and about one in ten has been married three times or more. Only 15 per cent of the women have married more than once, including 3 per cent who were married three times. One man and one woman have been married five times.

On the average, the men have outlived their wives by seventeen years; the women have outlived their husbands by an average of thirty years. None of the women have living husbands, but 7 per cent of the men now have wives, most of them December brides.

They have been happy people, bright as chipmunks most of their lives. They have been happy with their wives and husbands, with their children, with their education, with their incomes, with their social status. Redwing Beck, for example, now has electricity and a telephone in his home for the first time in his life. They were installed only in the last few months, through the efforts of the Gallup interviewer who first called on him. Red Beck was never concerned about the lack of these conveniences. "It never fussed me," he says. "I never had the money for it. But now I can call the grocery store when I want grub."

Above all, these people have been happy with themselves. They have not been tortured with guilty consciences; they have known the difference between right and wrong in an uncomplicated, strongly fundamental way, and they have practiced the rules of this knowledge. They have never tried to be someone else. In fact, they have never tried even to be themselves; they have been too busy, too happy to be self-conscious. And they have almost never worried.



Most of them say, "I was my own boss," and this coincides with their occupations, except perhaps in the case of some in the salesmen-and-clerks category (9 per cent). The farmers were certainly their own managers; and the businessmen (15 per cent) and professional people (6 per cent) also made their own decisions. And it is quite possible that the laborers cutting logs or chopping cotton or herding sheep—were told what to do and then were left alone, without the tensions that come from minding machines under critical foremen or ambitious overseers.

For more than sixty-five years Alonzo Stagg has been a football coach, an occupation about as relaxing as a kick in the shins. He says, "I've known lots of coaches who couldn't eat before a game, but I've never missed a pregame meal in my life." Even when his teams were defeated, he remained undisturbed. "My main concern was for the boys. I wanted them to produce as best they could with fair methods and sportsmanship. If we lost, I didn't take it to heart. I wasn't afraid of losing my job. I did my coaching on the field, and gave lots of vitality to it. But when the day was over, I didn't bring it home with me. I didn't worry over it.

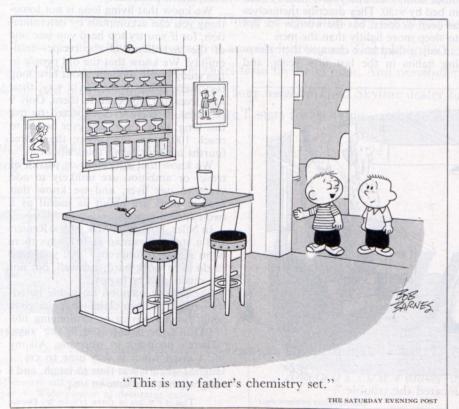
Although about a fourth of these old people worried about money at some time in their lives, almost half of them said that more income would not have made them any happier. Seventy-one per cent have owned their own homes for most of their lives—compared with 60 per cent in the United States in 1956. And they have been so content with their iobs and home towns—or so unexcited by adventurous prospects—that they have rarely made any great changes in occupation or residence.

White-haired James Brett wanted simply "to be comfortable and stay with my family." Tom Murphy was tempted by the Klondike gold rush in 1899—he was forty-nine that year—and he went to an older man for counsel. He had saved \$600 for a stake, he had several friends ready to go with him, and he was single. But his friend warned him against going, and he followed the advice. He has never regretted it. "Why, more gold went into Alaska than ever came out of it," he says.

These people can hardly be described as having great driving ambitions. Three fourths of them would do the same work again if they had their lives to live over, and only 29 per cent feel that more education would have made them happier. And only nine of the 402 in the study ever have had a mental breakdown.

According to their own estimate of their nature, they are cheerful (68 per cent), easygoing (58 per cent) people who were hard to provoke (61 per cent), who took things as they came (65 per cent), who were always in the same mood (70 per cent), who had feelings that were hard to hurt (57 per cent) and who usually were satisfied with life (84 per cent).

They are not upset by little things. They are—and have been—complacent, serene, unruffled and self-possessed. There are no psychosomatic ailments here. Along with their heredity, light eating habits and physical activity, their tranquillity



is one of the secrets of their longevity. Little wonder that Ponce de Leon never found the Fountain of Youth; he could not find it because he was seeking it.

And of what value is this discovery that long life depends in some degree on serenity? Can a perfectionist change his personality, replacing his ambitious drive with disinterest? Can he be indifferent about another man's religion, or his politics, when he knows in his heart that *he* is right and the other man is wrong?

Probably not; personality may be modified, but not radically changed. If you are aggressive, and somewhat critical, and more quick-tempered than you'd wish, the door to longevity might seem closed to you. But not completely; there are exceptions.

Redwing Beck of Bonne Terre, Missouri, is far from serene. He is part Cherokee and was reared by an Indian woman until he was seven. He attended school for only three months. He was wounded at San Juan Hill with Teddy Roosevelt.

Now, strong and vigorous at ninetyfive, resembling a Frank Lloyd Wright in bib overalls, he lives with his second wife—who is ninety-six—in a small, unpainted, rented house. He is an unswerving Republican in Democratic territory, and he loves to argue. Often at the neighborhood grocery store he'll provoke an argument with another Republican by pretending he's a Democrat.

When we called on him in Bonne Terre a few months ago, he demanded, "Are you religious?" and left the room without waiting for a reply. He returned with three heavy, well-thumbed Bibles and tossed them into our laps. "I can tell you ain't religious," he accused.

"How can you tell?"

"Hah! How can a hog tell when it's eatin' corn? Listen. I got religion when I was twenty-two. Before that I was the wild man from Borneo. Didn't have no sense when I got mad and still don't. Why I'd cut your heart out just to look at you. Want me to show you?" We said a demonstration was not

We said a demonstration was not necessary, thank you; but we would like to know if his temper ever got him into fights.

"Of course it did," he said. "I got into lots of fights. I killed a man once. It was in Protection, Kansas, in the summer of 1906. This fellow he come at me when I was delivering mail with a team and a spring wagon. He said he was taking the mail from me, and I said he wasn't. He seemed right mean, so I just reached down and got that revolver and shot him right square in the head. I told the postmaster about it, and he said I had done right."

"But that seems like more duty than temper. How do you get along with your wife?"

His voice softened, and he turned to look at her. "Well, we lived together for twenty-eight years and we ain't never fit yet." Then he looked back at us. "But that don't mean I ain't got a temper. Ask anyone around here. They know. Let someone start trouble with me, and they'd soon know what hog's eatin' the cabbage!"

It is unlikely that Red Beck's cabbageeating ability or the accuracy of his memory has been tested for some decades now, but he is hardly the unruffled, serene oldster typical of this survey.

The same is true of William Perry of San Francisco. Although he is 106 and somewhat slowed down by an artificial left leg, he still takes periodic gambling trips to Reno. His absence disturbs his stepdaughter. "I worry when he's away," she says. "I'm afraid something might happen to him—you know, with his leg and all."

"The old fool," Bill Perry snorts. "What can happen to me? I was taking care of myself for twenty years before she was in diapers. Same thing they said when they took off this leg. I was a hundred and two then, and those doctors said I was too old to use a wooden leg. They told me to get a wheelchair, and I told them to go to hell. I learned to walk the first time a hundred years ago, and I could learn again."

He got his artificial leg after badgering three prosthetic suppliers who refused to fit him because they "said I'd be wasting my money." He learned to walk rapidly; in his haste he fell and broke his nose. "But what's a broken nose?" he asks. "I can walk, can't I?" And he takes a few vigorous steps of demonstration, impatiently kicking a footstool out of his way with his good leg.

But neither Perry nor Beck has ever let his irascibility interfere with his sleep. Like Alonzo Stagg, they never took their troubles to bed, and here they are typical. Most of these people—85 per cent—woke bright and fresh in the morning after at least eight hours of sleep. Sixteen per cent of them have slept nine or ten hours a night for most of their lives.

Almost 90 per cent have been early risers—farmers and laborers cannot keep office hours—and they have usually been in bed by 9:30. They describe themselves as deep sleepers, but the women are apt to sleep more lightly than the men.

Only a third have changed their sleeping habits in the last fifty years, and



THE SATURDAY EVENING POST

these say they need more sleep now.

About seven out of ten have never been habitual nap takers—"When in the world would I get time?"—but almost half of

them have been able to drop off to sleep

speculation on the advantages of sleeping

on hard mattresses or in cool rooms or

without pillows, the survey reveals no conclusive guides. The use of pillows is

simply a matter of choice: Red Beck uses

one, William Perry does not. More than

70 per cent want fresh air at night, but

the remainder prefer the windows closed;

and 39 per cent like a soft mattress, 40

per cent want them average, and 19 per

But there is one point about their sleeping habits that might have some

significance. And that is that more than 70 per cent of these people did not go

out much at night when they were

younger. They stayed home and went to

bed-probably exhausted from a hard

day's work—and therefore avoided some of the causes of death. A man dreaming

on a corn-shuck mattress can hardly be

killed or injured in a barroom brawl or

be infected with a contagious disease at

a public gathering. And he is also less

likely to be infected by those two great

getting to sleep at any time in their lives, and this was usually for a very short

period. Possibly this is because less than

a fourth of them were ever required to

make major decisions that were impor-

tant to others, and only 23 per cent of

them say that they have ever done any

of their lives. They have avoided it in

many ways-by their occupations and

their overwhelmingly rural living, by

their faith in God and their lack of

missionary zeal, by their contentment

and by their economic security. Perhaps

they avoided it by being born 100 years

study of 402 aged Americans-the first

such study using mass sampling tech-

niques-has not uncovered any startling

secrets of the centenarians, it has con-

firmed the effects of heredity, physical

activity, moderation in eating, and a

complacent personality. We know that living long is not something you can accomplish by determina-

tion, for if you try too hard you lose one

of the ingredients of the recipe-tran-

quillity. We know that the old people in this study rarely thought about how long they were going to live. In a way, their long lives just happened to them. Only 9 per cent of them ever expected to live this long; only 2 per cent ever hoped to reach 100 years; and more than three fourths of them didn't think about it. We know that education or wealth or travel or ambition are unlikely to add years to our lives, and we know that faddish diets are about as useful as a

two-handled broom.

too much, and be happy."

But these things alone do not guarantee serenity, any more than serenity alone can guarantee longevity. Although this

Certainly tension has not been a part

hard mental work.

ago.

Only a third ever had any difficulty

sleep thieves-politics and ambition.

cent like hard mattresses.

Although there have been centuries of

any time there was opportunity.



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life I cried when it was time to cry, I laughed when it was time to laugh, and I sang when it was time to sing." This is t e last of three articles by Doctor Gallup and Mr. Hill. — THE EDITORS

In Niles, Michigan, Mrs. Marie Renier, still a striking woman at 101, says there is no secret to longevity. "All you need to do is to work hard, eat well, but not

She doesn't mention favorable hered-

"Don't be frustrated," she says.

"There's no point in worrying. All my

ity-which she can claim-but she gives some further advice on prolonging life.