

WHAT CAN WE LEARN ABOUT HEALTH FROM THE MORMONS?

Why do these 2,300,000 Americans have a significantly lower cancer rate, fewer heart attacks, less diabetes and other devastating diseases than the rest of us? Scientific studies are finding some of the answers—and may have a message for us all. By BILL DAVIDSON

Jerry Cahill is a Salt Lake City executive who has a lot going for him. He has a lovely wife, Lela, and five charming children with no modern-day adolescent aberrations—plus a statistical advantage that few of the rest of us can enjoy:

The Cahills are at least 25 percent less susceptible than other Americans to cancer, heart attacks and many equally dire diseases.

The reason? According to a current flurry of highly regarded medical reports, the Cahills have their edge simply because they practice the Mormon religion.

No one knows *why* Mormons are comparatively resistant to catastrophic illness. Medical researchers, who look beyond theological and metaphysical explanations, are convinced that the answers lie somewhere in the life-style of those 2,300,000 Americans who call themselves "LDS" (from the official name of the Mormon religion—Church of Jesus Christ of Latter-Day Saints).

Low Cancer-Death Rate

As early as 1938, an LDS church elder, John A. Widtsoe, wrote an interpretation of *The Word of Wisdom*, one of the Mormons' books of holy writ, and noted that Mormons had dramatically lower death rates for many diseases—notably an astounding 50 percent below average rate for diabetes and ailments of the urinogenital tract. Although Widtsoe was a Ph.D., a chemist

BILL DAVIDSON is an award-winning journalist (including the Lasker Award for medical journalism), author of seven books and numerous articles.

of some note and a former president of the University of Utah, not much attention was paid in the medical community to his findings.

Then in 1973 a young California physicist, Dr. James E. Enstrom, became fascinated with a California Health Department study of residents of Alameda County in the East San Francisco Bay area. The study, supervised by Dr. Lester Breslow, included a startling disclosure:

The 111 Mormons in the sample of 6,928 adults had a death rate from major diseases that was 45 percent lower than that of the general population. All 111 were regular churchgoers and—following one of the tenets of their religion—they neither smoked nor drank.

This reminded young Enstrom of another series of studies of a smaller sect, the Seventh-Day Adventists, which also prohibits the use of tobacco and alcohol. As far back as 1959, a group of scientific investigators headed by Dr. Ernest Wynder at New York's Memorial Hospital had discovered remarkably low rates of lung cancer among Seventh-Day Adventists. Similar studies had continued into the 1970's, but Enstrom believed the number was too small—about 400,000—and their social and economic status too high to draw totally valid inferences.

It was then that Enstrom felt impelled to make a major study of the much more numerous Mormons, who range from the very poor to the very rich. Dr. Breslow, now Dean of the School of Public Health at UCLA, obtained both a fellowship and sizable money grant for Enstrom at the Los Angeles campus. Overnight, Enstrom

changed fields—from physics to epidemiology (the study of occurrence and distribution of disease).

It was a lucky switch.

Enstrom produced a massive report that attracted worldwide attention when it was published in the September, 1975, issue of the authoritative medical journal *Cancer*. He had studied cancer deaths in Utah County, Utah (where the population is 90 percent Mormon), in the State of Utah (73 percent Mormon) and in the State of California (less than 2 percent Mormon). The results were astonishingly similar:

- In heavily Mormon Utah County, the cancer death rate for men is 35 percent below the national average; for women it's 28 percent less than in the United States as a whole.
- The State of Utah, nearly three-fourths Mormon, has the lowest cancer death rate by far of any state in the United States—27 percent lower for men and 26 percent lower for women.
- In California, where there are no complicating environmental differences—such as clean Rocky Mountain air—and where Enstrom directly compared the deaths of Mormons and non-Mormons from cancer over a three-year period, the deaths of Mormons are 21 percent less for women and nearly one-third less for men.
- Particularly low for Mormons in all three regions are deaths from cancer of the mouth, throat, stomach, lung, colon, rectum and bladder. For some unexplained reason, only in the matter of cancer of the prostate do Mormon men—in Utah but not in California—equal or even exceed the national average.

Excited by his finding, Enstrom launched a similar study into Mormon incidence of heart-attack deaths. The startling revelations continued. He reported to an American Heart Association conference in Tampa, Florida, last March that both in Utah and in Los Angeles County the Mormon death rate from heart attacks and other cardiovascular disease was from one-third to one-half less than average.

Then came a totally independent study by a well-established epidemiologist, Dr. Joseph F. Lyon of the University of Utah. Lyon made a case-by-case analysis of living cancer victims as they were admitted to hospitals and their disease was diagnosed. The results? Almost the same as Enstrom's: Mormons in Utah were contracting cancer 25 percent less frequently than non-Mormons.

Other Health Surprises

But there were some additional surprises in the Lyon work. For example, he found that Mormon women are an incredible 90 percent below the national rate in contracting cancer of the esophagus, the tube that carries food from the throat to the stomach.

Soon Enstrom, Lyon and others were looking into Dr. Widtsoe's 1938 statistics. They confirmed that Widtsoe indeed was correct about Mormon resistance to diabetes (50 percent less), bladder and kidney disease (51 percent less), and the race was on to find out *why* the Mormons fare so much better than the rest of us in warding off dire illness.

Based on what science already knows, there are some logical explanations for at least part of



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the Mormon medical phenomenon. For one thing, the Jerry Cahill family, along with all other devout Mormons, rigidly follows the church's "Health Code." This is incorporated in *The Word of Wisdom*, considered a revelation from God handed down in 1833 to prophet Joseph Smith, the founder of the Latter-Day Saints religion. The Health Code decrees total abstinence from alcohol, tobacco and "hot drinks"—interpreted to mean tea, coffee and every derivative thereof, including even sodas that contain caffeine.

With devout Mormons smoking not at all, and with even nonpracticing Mormons smoking far below the national average because of social pressures, it's not surprising that Mormon rates for cancer of the mouth, throat and lung are amazingly low—as are those for heart and circulatory-system disease.

The same is true with respect to drinking. Alcohol has clearly been identified as a cause of acute liver disease and is implicated in cancer of the esophagus as is heavy beer drinking—20 or more cans a day—in cancer of the rectum. Among teetotaling Mormons such diseases are so rare as to be a statistical

puzzlement. Even those Mormons who "cheat" a little do not seem to raise appreciably those extremely low death rates for, say, cancer of the esophagus. So much for the fairly possible reasons for the Mormons' extraordinary health statistics. But how about their low incidence of diseases like diabetes, and cancers of the stomach, colon, breast, kidney and the lymph glands, none of which have ever been associated with smoking or drinking?

A perplexed Dr. Enstrom told me, "Maybe it's because their church advises them to avoid all drugs that are not prescribed by a physician? Maybe there's a clue in certain of their dietary habits?"

Many scientists believe there is a valid clue in the eating patterns of the Mormons. While they're not complete vegetarians like the Seventh-Day Adventists, *The Word of Wisdom* counsels moderation in the consumption of meat but commands that the faithful eat "every fruit in the season thereof" and states without equivocation that "all grain is ordained for the use of man... to be the staff of life."

Most Mormons take this grain edict literally and even go a step further. They

actually make it a point to obtain newly threshed wheat and such from nearby farmers and granaries. They have another reason for such purchases. The church orders all Mormons to keep a one-year supply of food in their homes as insurance against disaster and depression—and raw unprocessed wheat is the easiest and least perishable commodity to store.

In Salt Lake City, Jerry Cahill told me he keeps several steel drums full of wheat in his basement at all times and that "we're still using wheat we bought 12 years ago." The Cahills also keep large quantities of canned cherries, apricots, peaches, apples, tomatoes, peas and beans.

There is no actual proof that such dietary practices can stave off serious illness, but most nutritionists agree on the theoretical efficacy of a well-balanced diet based on wholesome grains, fruits and vegetables.

The scientists also agree that another Mormon religious-dietary practice might contribute to their overall health—they *fast a lot*. Every Mormon is required to abstain from food completely for at least one 24-hour period every month.

"Run and Not Be Weary"

Dr. Enstrom points out that there are very few fat Mormons. And this leads to what could be another important anti-disease factor: They practice what probably is the most athletic-oriented religion on earth, with physical fitness ordained in the holy writ. The human body is described as the Temple of God and must accordingly be kept in top shape at all times so "you shall receive health in your navel and marrow to your bones... and shall run and not be weary, and shall walk and not faint."

Thus each local "ward" (congregation) has a gym and basketball court that is formally called a "cultural hall." From the age of 12, nearly every Mormon girl and boy competes in organized league competition in basketball, volleyball, softball, tennis and golf. And all this doesn't stop with adulthood. On any given weekend the entire state of Utah resembles a vast Olympic Village. Almost the whole population seems to be out golfing, playing tennis, skiing, hiking, mountain-climbing, shooting river rapids—receiving "health in their navel and marrow to their bones." At the very least, cutting down on coronaries and high blood pressure, both known to be abetted by a sedentary existence. It's hard to find a sedentary Mormon.

There are other factors in Mormon health statistics that are harder to explain by diet, regular exercise and abstinence from possibly harmful drugs. Epidemiologist Dr. Joseph Lyon is particularly perplexed over the Mormons' low rates of cancer of the cervix, breast and stomach (only 40 percent of the national average).

"No one has ever demonstrated," he told me, "that these types of malignancies are associated with diet, tobacco, alcohol or any external or environmental cause." Dr. Lyon—himself a Mormon—adds: "I can't explain it. Maybe we'd better start looking into more intangible aspects, such as the

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To Dr. James O. Mason, the stress factor is not quite that intangible. A distinguished former Harvard epidemiologist and now director of the Mormon church's worldwide medical program, Dr. Mason says: "It's a supposition, not a scientific theory, but the stability in the life of the average LDS family could be one of the main secrets of this medical phenomenon of ours. It's known that possibly dangerous hormonal discharges are caused by deprivation, breakup of family, social problems, drug dependency. The church does a lot of programming of people's lives to avert these kinds of crises. To be candid, the programming itself can bring on stress in some cases, but it's *not* the kind of stress that causes hormonal discharge. A lot needs to be measured."

One scientist has already done some measuring—in one area at least. He's the University of Utah's Dr. Glenn M. Vernon, who has a national reputation as a sociologist. While he was at the University of Maine in 1968, Dr. Vernon began a fascinating recently published study about lifelong stress caused by fear of dying. He used a sample of 1,500 students and compared their reactions according to their religious background. In all categories, the Mormons emerged as the least fearful. For example, 92 percent believed implicitly in a life after death—compared with the runner-up Catholics (77.5 percent) and the 10th-

place Presbyterians (48.6 percent).

Dr. Vernon explained: "The Mormon is brought up with the assurance that life is eternal and that he can look forward to meeting all his loved ones in the hereafter, and even his more interesting ancestors. He knows all about the ancestors through the Mormons' penchant for studying the best-kept genealogy records in the world. My hypothesis is that this lack of fear of dying causes less stress in *life* over the years."

This led Dr. Vernon to speculate about other stress-reducing facets of the Mormon existence: "There's no professional clergy, so that from childhood on, everyone is so busy keeping the church going that there's no time to get into mischief. All boys enter the priesthood at 12, and girls work in an auxiliary called The Young Women. At age 19 to 21 thousands of Mormon youth become missionaries all over the world in a sort of Mormon Youth Corps. This missionary work is an important bridge over a rather difficult time of growing up. It prevents a lot of exposure to the temptations of the drug culture and such. But most important in reducing stress," Dr. Vernon added, "is the church-ordained strong family unit. For example, on Monday nights every Mormon church building is closed and dark. Every Mormon must spend Monday night in joint activities and discussions with all members of his immediate family."

I asked Jerry Cahill what his Monday

family nights were like. His reply: "It's flexible. My 12-year-old daughter Jennifer plays the piano well, so we might sing—religious songs or pop ballads. We could read a religious lesson and spend 15 minutes discussing it. Or we could go to a movie, the circus, the symphony or the ballet. Or we might just go up into Big Cottonwood Canyon and barbecue hamburgers near the waterfall. It doesn't matter, just so long as we do it *together*. The main purpose is to indoctrinate the family with the idea that when there's stress or trouble with any of them, we also work it out together."

Whether or not you agree with the Mormons' theology and restrictive racial policies—blacks are excluded from the priesthood—there's no question that such activities have produced a remarkable record even in non-health areas. In proportion to their total number, a greater percentage of Mormons than any other religious group get into *Who's Who in America*. Their higher-education quotient is the best in the country.

Does the same life-style, the strong family unit, the comparative placidity of their existence also contribute to their proven capability better to resist catastrophic disease? "It's a hypothesis that cries out for additional research," Dr. Enstrom told me.

Shaking his head in wonderment as he looked over his startling Mormon health statistics, Enstrom said: "They must be doing *something* right." ■