LIFE & HEALTH

national health journal • march 1979

FETAL ALCOHOL SYNDROME

HOW TO GET MORE MILEAGE OUT OF YOUR MEDICAL DEDUCTIONS

DON'T BE A VICTIM OF FOOD POISONING

New Sandwich Spread from Worthington lets you turn those quick lunches and hurried snacks into hearty, mouth watering treats. And when you serve your family savory new Sandwich Spread, you know they're getting the nutritious and wholesome goodness of vegetable protein in every bite (with no preservatives).

This tasty time-saver spreads right from the can for delicious sandwiches. Or you can add your own "special touch" with pickles, lettuce, mayonnaise, olives and relish. So try some today. You'll love the taste, nutrition and convenience of Sandwich Spread. And you'll know by the smiles that your family loves it, too.

SANDWICH SPREAD

the tasty time-saver.

NEW

WORTHINGTON
Putting good taste into good nutrition

FORTY YEARS 40 DEDICATED TO BETTER NUTRITION

Worthington Foods • Worthington, Ohio 43085

national health journal

LIFE&HEALTH

(ISSN 0024-3035)

95th Year of Publication
Volume 94, No. 3

March, 1979

COVER BY SKIP BAKER

20

23

29

39

OBJECTIVE: LIFE & HEALTH, a family magazine, features significant health information designed to motivate readers to adopt and practice sound principles of healthful living. LIFE & HEALTH is affiliated with the Health Department of the General Conference of Seventh-day Adventists.

MANUSCRIPTS: LIFE & HEALTH gives consideration to unsolicited manuscripts provided they meet certain requirements. Submissions can be up to six double-spaced typewritten pages; brevity is encouraged. Articles should be health oriented, properly researched, scientifically documented, and written in an interesting style for nonprofessionals. Emphasis is on prevention. Only those articles accompanied by a self-addressed and stamped reply envelope are returned.

CONSUMER SAFETY: Since LIFE & HEALTH is written for the lay person, we take great effort to screen those products and services that are felt to be harmful to our readers, although the companies who advertise take actual responsibility for their products or services.

ADVERTISING: LIFE & HEALTH accepts those advertisements that have been found to be compatible with the aims and objectives of the journal. Those wishing to advertise should submit advance data on copy and product to the Marketing and Advertising Department.

BRAILLE: Selections available in Braille. Write LIFE & HEALTH, P.O. Box 6097, Lincoln, Nebraska 68506.

CHANGE OF ADDRESS: Please use the change-of-address form in the Gazette section of this magazine.

SUBSCRIPTION PRICE: $9.00, one year. Single copy, $1.00. Price may vary where national currencies differ.

LIFE & HEALTH is published monthly and copyrighted © 1979 by the Review and Herald Publishing Association, 6856 Eastern Avenue NW., Washington, D.C. 20012. (202) 723-3700. Second-class postage paid at Washington, D.C. Vol. 94, No. 3. Title registered in U.S. Patent Office.


100
PROOF
025915658

Fetal alcohol syndrome—the avoidable tragedy

by Pat Horning

this month's
DRUG EDUCATION
FEATURE

If the odds were 10 to 1 against you, would you gamble your next month's paycheck on something as capricious as the drawing of the right card? What if the odds increased in your favor—would you be more willing to take the chance?

Suppose fate turned against you. If you had absolutely no chance of winning—the odds were stacked completely in favor of the house—would you even consider plunking down your entire earnings?

It's a ridiculous question, of course, yet thousands of Americans continue to play against that no-win chance. In this game they're not only gambling with their own lives but they're also playing with their children's futures.

Mothers who drink and smoke heavily during pregnancy dramatically increase their chances of either losing the child before birth or causing physical or mental damage to the fetus. Yet they hold onto the losing cards—cylindrical tubes of tobacco and enticing drinks decorated with olives and onions.

It's amazing the insight an ancient society had into the problems of pregnant drinkers. (Tobacco wasn't popular until the past century.) Rulers of the Greek city-states of Sparta and Carthage recognized that alcohol could have disastrous effects on the human fetus. To help eliminate the problem, they established strict rules, which forbade newly married couples from imbibing.

Unfortunately, their example was forgotten for hundreds of years. We find record of only one other society that was able to pinpoint the specific problems of alcoholic mothers. In 1720 the English Government lifted restrictions on distilling, and cheap gin flowed freely. For thirty years even the lower classes had access to virtually unlimited quantities of alcohol. And during this period came the first extant observations of what has come to be called the "fetal alcohol syndrome" (FAS).

Dr. Kenneth L. Jones and his colleagues at the University of Washington School of Medicine in Seattle identified and named the syndrome in 1973. During the past six years data have piled up to support their initial findings.

One of the early studies involved 633 volunteers who went to Boston City Hospital for delivery of their babies. Of these women, 9 percent were heavy drinkers, 39 percent

When one drinking mother's baby was born, the amniotic fluid surrounding it smelled "rather like a barroom."

were moderate drinkers, and 52 percent were rare drinkers.[1] The babies of the heavy-drinking women were almost *four times more likely* to have growth retardation and/or congenital malformations than those of the mothers who were moderate or rare drinkers.[2]

Symptoms of the syndrome

What exactly is the fetal alcohol syndrome? Boundaries of the syndrome are difficult to define precisely, because an enormous number of factors contribute to the physical and mental development of the fetus. But doctors are now able to identify patterns of abnormalities that are more likely to appear in the babies born to mothers who have drunk heavily during their pregnancies.

Not all of these abnormalities will appear in every instance, but some—if not all—are found in babies with the fetal alcohol syndrome. Below-normal weight both before and after birth; slower rate of growth; smaller head; lower IQ; defects of the eye, ear, heart, and genitals—these are the most frequently observed manifestations of FAS.

Because the syndrome is such a newcomer in the field of medical research, physicians admit that they don't have all the answers yet. One of the unanswered questions is the precise mechanism by which alcohol affects the fetus. It is known, however, that alcohol readily crosses the placenta to the fetus. And it travels through the bloodstream of the unborn baby in the same concentration present in the mother.

Dr. James W. Hanson, who specializes in the area of medical genetics in the department of pediatrics at the University of Iowa Hospital, explains how this was observed in one case: "The mother had consumed alcohol just before the time of delivery, and the blood-alcohol level was obtained from the cord blood—directly from the baby's umbilical cord—at the time of delivery. The level was .155 percent, which is far more than enough to get you or me thrown in the slammer for drunken driving."[3]

He gives other striking examples. A mother had been drinking shortly before birth. In the delivery room the medical team smelled alcohol on the baby's breath an hour or so after delivery! In a third case the amniotic fluid, which surrounds the baby, smelled "rather like a barroom."

Timing is a serious question. Does it matter when during a pregnancy the woman drinks? What if she has only occasional binges, then remains sober for the majority of her pregnancy? Which is worse—to drink heavily during the first, middle, or final trimester?

These are difficult questions, and doctors are still searching for definitive data. Dr. Hanson explains that it is nearly impossible to find a group of women who are heavy drinkers during only one stage of pregnancy and then to isolate their alcohol consumption from other possible contributing factors. He believes, however, that researchers' experience with other drugs—and on laboratory animals—shows that heavy drinking during certain periods is probably worse than at other times.

Dr. Ernest P. Noble, formerly director of the National Institute on Alcohol Abuse and Alcoholism, pinpoints the period between three months and four and one-half months as one critical period. That's when there is rapid growth in brain cells.

Lest a woman think she need curtail her drinking for just a short period, Dr. Hanson cautions: "With late drinking . . . you'd expect to find more subtle manifestations. You might get mental retardation or you might get some subtle behavioral alteration that wouldn't be as obvious as a frank birth malformation, but rather as a performance change like hyperactivity, which would become apparent years later."[5]

No safe levels known

The question to which women most want a specific answer is, During pregnancy how much alcohol is too much? Is there a "safe" level of drinking?

Different authorities give different answers. Dr. Noble admits that "safe levels of drinking are unknown." He warns that there are definite risks beyond three ounces of absolute alcohol—six average drinks—per day. "Between one ounce and three ounces, there is still uncertainty, but caution is advised."[6]

Others are more bold in their advice—and lower in their limits. The National Council on Alcoholism (N.C.A.) takes a clearcut stand—the pregnant woman should not drink any alcoholic beverage during her pregnancy.

"We cannot say a woman will have a defective child if she drinks mildly," says George Dimas, N.C.A.'s executive director. "What

One in every 2,000 babies born in the U.S. displays characteristics of the fetal-alcohol syndrome.

we're saying is that a safe and responsible decision is to abstain."[7]

The statistical frequency of the fetal alcohol syndrome is significant. Dr. Noble estimates that one in every 2,000 babies born in the United States displays the FAS characteristics.[8] The fetal alcohol syndrome is the third leading cause of mental retardation in infants. Dr. David Smith, one of the early researchers on FAS, believes that doctors are becoming aware of the symptoms of the fetal alcohol syndrome. The increased reporting is "a matter of recognition."

Even a woman who is not a heavy drinker needs to be cautious during her pregnancy. Although she may not produce an infant with the fetal alcohol syndrome, she should monitor her habits, especially during the time she is carrying a child.

"Definitely no butts"

Although the effects of alcohol on the fetus are the major concern of this article, the prospective mother should be aware that maternal smoking also presents risks. The primary ones are stunting the baby's growth and increasing the chances that it will die before birth. Dr. Hanson refers to large-scale, substantive studies when he makes this generalization: "A mother who smokes a pack a day runs twice the risk of the baby's dying as do mothers in the general population."[10]

The odds of damaging the unprotected fetus go even higher when a woman combines drugs during her pregnancy. Although it's nearly impossible to get "pure" test populations of smokers and drinkers whose habits do not overlap, Dr. Hanson speculates that together these two drugs are worse than either alone.

Dr. Stanley Garn, professor of nutrition and anthropology at the University of Michigan, Ann Arbor, sums up the prudent woman's stance toward smoking during pregnancy: "No if's, no and's, and definitely no butts."[11]

Father has responsibility too

The mother has traditionally been given total responsibility for the child from the day of conception until the day of birth. But Dr. F. M. Badr, a geneticist formerly with the Worcester (Massachusetts) Foundation for Experimental Biology and presently with the University of Kuwait, is exploring the possibility that a father who drinks heavily may also contribute to birth defects or fetal death in his offspring.

His initial research, conducted at St. Vincent's Hospital in Worcester, revealed a higher percentage of birth defects in children whose fathers drank heavily. Dr. Badr observed birth defects "very much like those seen in the fetal alcohol syndrome."[12]

In other studies conducted on laboratory animals he found that the sperm was more vulnerable to alcohol at some stages of its development and maturation than at others. Thus, as with the mother, the father is more susceptible at certain periods.

Dr. Badr says that these initial findings should lead fathers to consider their drinking habits carefully. "If a man wants to sire normal and healthy children, he must stop drinking."

A life style that includes heavy drinking has high risks for prospective parents who, by their indulgence in a so-called pleasure, may jeopardize a son's or a daughter's physical looks, mental capacity, and emotional development.

"Drinking is a totally avoidable problem," sums up Dr. Hanson. "There's no reason why a woman has to drink during pregnancy. So whenever a baby is damaged by that, as far as I am concerned, it's a tragedy, an unnecessary tragedy."[13]

REFERENCES

[1] "Critical Review of the Fetal Alcohol Syndrome," edited by Kenneth R. Warren, NIAAA, Division of Extramural Research. Presented at NIAAA press conference, Washington, D.C., June 1, 1977.

[2] Harrison W. John, "Harming the Innocent," *Listen*, August, 1978, p. 15.

[3] An interview with James W. Hanson, *Listen*, February, 1979, p. 19.

[4] "National Awareness of Fetal Syndrome Sought." NIAAA Information and Feature Service, Sept. 8, 1977, p. 1.

[5] Hanson, *op. cit.*, p. 20.

[6] "National Awareness of Fetal Syndrome Sought," p. 1.

[7] John, *op. cit.*, p. 15.

[8] "National Awareness of Fetal Syndrome Sought," p. 1.

[9] James Martin, "The Fetal Alcohol Syndrome: Recent Findings," *Alcohol Health and Research World*, Spring, 1977, p. 11.

[10] Hanson, *op. cit.*, p. 20.

[11] Barbara Utley, "No 'Butts' About It, Cigarettes, Alcohol Dangers in Pregnancy," *Rocky Mountain News*, Oct. 29, 1977, p. 60.

[12] "Can Alcoholic Fathers Cause Birth Defects?" a report in *Listen*, March, 1977. Based on a paper presented by Dr. F. M. Badr to the Second World Congress for the Prevention of Alcoholism and Drug Dependency, Aug. 22-27, 1976.

[13] Hanson, *op. cit.*, p. 20.

Pat Horning is associate editor of *Listen* magazine. Articles for the monthly drug-education feature are prepared and supplied through the courtesy of the editorial office of *Listen* magazine. *Listen* specializes in educational approaches to various drug problems, emphasizing positive alternatives to the drug way of life.

How to get more mileage out of your medical deductions

by Julian Block

For many persons, a key part of their tax planning is to take maximum advantage of their medical deductions. Your deductible payments cover many more items than just those obvious payments to doctors and hospitals. Also, deductibility can depend on *when* payment is made and, in some cases, *who* makes the payment. For instance, advancing or postponing a payment by a single day at year's end can save or cost you quite a few tax dollars. And there are steps you can take now that will help in case the Internal Revenue Service (IRS) later questions your deductions. Here are answers to some of the commonly asked tax questions on what or how much is deductible and how to avoid pitfalls.

Q. If I pass up the standard deduction and itemize, how much am I entitled to deduct for medical expenses?

A. There's a complicated three-step computation for this deduction, based on the 1 percent and 3 percent rules.

First, you can count your (and your dependents') expenses for medicines and drugs only to the extent that these expenses exceed 1 percent of your adjusted gross income (AGI). Your AGI is the figure you report on your return after deducting outlays for such items as business or moving expenses but before itemizing and before claiming your dependency deductions. For example, you spent $275 on medicines and drugs and your AGI is $15,000. That $275 must be reduced by $150 (1 percent of $15,000), leaving a balance of just $125. This amount still cannot be deducted as is, but must go through the next step in the computation process.

Second, other medical and dental expenses—including any medicine and drug expenses that top the 1 percent figure—are deductible only to the extent that they exceed 3 percent of your AGI.

Suppose, for instance, that you have $750 in other medical and dental expenses for yourself and your dependents. Add this amount to your $125 balance for medicine and drugs. From the $875 total subtract $450 (3 percent of $15,000) to arrive at an allowable deduction of $425.

In calculating your deductibles, be sure to include the payments you make for medical expenses incurred by your children, parents, and other dependents if you provide more than half of their total support for the year. This holds true even though you are ineligible to claim an exemption for, say, your father because his reportable income tops the $750 ceiling for a dependent.

Q. Can I deduct medicines and drugs that were obtained without a prescription?

A. Yes. There's a long list of possibilities. Deductibles include everyday household remedies usually bought and used without the advice of a doctor, such as aspirins, cold remedies, and laxatives.

But the IRS specifically rules out any deduction for vitamins and iron

Your payments for parents' medical expenses are deductible if you provide more than half of their support.

supplements and the like taken for general health purposes and not recommended or prescribed by your doctor. Other nondeductibles include maternity clothing, diaper service, toothpaste, and toiletries or cosmetics used for everyday purposes—such as shaving cream, face cream, and deodorants.

When a family illness calls for some of those new and costly drugs, be sure to keep some record of them, such as the prescription label listing the date and price, or a receipt on which the druggist notes these details.

Q. Is it true that there is a special break for the cost of medical insurance?

A. Yes. You can ignore the 3 percent rule and deduct half of what you paid for medical insurance—up to a ceiling of $150. Then you can add any insurance payments over $150 that are not deductible under this special break to your other medical expenses. Now the total is subject to the 3 percent rule.

For example, total your annual medical insurance payroll deductions and other payments for yourself and your dependents. Include major medical, Blue Cross-Blue Shield, contact lenses, and supplementary medical insurance under Medicare, but not disability insurance to replace pay lost when you are absent from work because of illness.

Let's assume that your medical insurance costs add up to $400. Since half of your payments equal $200, the medical insurance ceiling limits you to a $150 deduction. But you can claim the $150 even if the 3 percent rule bars any deduction for your other medical expenses. You then check to see whether the remaining $250 of medical insurance ($400 minus the $150 already claimed) and your other medical expenses exceed 3 percent of your adjusted gross income.

Q. Under my divorce agreement, I get custody of the children, and my exhusband's support payments entitle him to claim them as exemptions. What's the tax situation on payments for their medical expenses?

A. The medical deduction rules are tricky when a divorce or separation agreement spells out which parent gets to claim exemptions for the children. Medical payments for the children are deductible *only* if made by the parent who claims their exemptions. So, you and your exhusband can avoid wasting deductions only if he pays for their medical expenses.

Q. I know that I will not be able to claim a dependency exemption for my mother, because she already has received more than $750 in reportable income. Does this also mean I won't be able to include my payments for her medical expenses under my medical deductions?

A. Not necessarily. Even though you are not entitled to an exemption for a dependent, you still can include your payments for a dependent's medical expenses among your own so long as you provide more than half of his or her total support for the year.

Among the items the IRS counts as support of a dependent are medical and dental care, including premiums on health insurance. But support does not include the value of services you or a member of your family provide without cost to a dependent—for instance, nursing care.

If your mother contributes to her own support and her contributions appear to be outpacing yours, here's a year-end move that can help. In calculating the amount of support furnished by you for this year, include medical care that you provide by December 31, even if you cannot include the item with your medical deductibles for this year because you hold off paying until next year—say, a pair of glasses that you buy for her by December 31 but do not pay for until January.

Incidentally, your payments for a dependent's medical expenses provide a double tax benefit. They help you pass the support test, and, if you pass, you then include them with your medical deductibles.

Q. I know that ordinarily the cost of sending my child to a private school or college is a nondeductible personal expense. But do I get a medical deduction for the part of the school fees that includes a charge for health-care items, such as counseling for emotional problems?

A. Yes. A separately stated charge for health care counts as part of your deduction for medical insurance. If the charge isn't separately itemized, ask the school for a breakdown of your bill to back up this deduction in case the IRS later questions your return (Rev. Rul. 56-457).

Q. I get several tax breaks because my father came to live with me after his retirement. I not only

Parents can be supported in a household outside your home and still qualify you for a tax break.

claim a dependency exemption for him and include my payments for his medical expenses under my medical deductions but I also cut my tax bill some more by filing as "head of household" instead of as a single person. But I have to be away frequently, and he's had a prolonged illness. So I plan to place him in a nursing home. I've been told that I'll still be entitled to the dependency exemption and can deduct my payments for his nursing care. But can I continue to take advantage of the lower head-of-household rates?

A. Yes. Generally, the household of which you claim to be head must be your own home. But there's an important exception. Parents can be supported in a household outside your home and still qualify you for this tax break. And the IRS says you also continue to qualify as a head of household when you support a parent in a nursing home (Rev. Rul. 70-279). Note, however, that you can't use the head-of-household rates if you claim your father under a multiple-support agreement.

Q. I know that there is an exception to the more-than-half-the-support rule for dependency exemptions. Suppose that some of my sisters join me in contributing more than half the support of our father during the year, but no one of us contributes more than half the support. I've been told that my sisters can designate me to claim the exemption for our father, so long as I contribute more than 10 percent of his total support for the year and they waive their claim to the exemption by signing IRS Form 2120 (Multiple Support Declaration), which must accompany my return. But does this also entitle me to include my payments for his medical expenses under my medical deductions?

A. Yes. But if your sisters reimburse you for part of those payments, you get no deduction for the reimbursed payments *(Loring Litchfield v. the Commissioner of Internal Revenue).*

To avoid losing medical deductions, pay all the medical expenses yourself and have your sisters pay for other expenses. For instance, they can earmark their support payments for his food or clothing.

Q. It's difficult for my daughter to make do on her husband's salary, and they have some unpaid medical bills. If I pay their bills, do I get to take the deduction?

A. No one will get the deduction. You can't take a deduction for their expenses because they aren't your dependents. And they will lose out on the deduction unless they make the payment. So the tax-right way is for you to give or lend the money to them and let them pay those bills.

Q. If medical reasons make it necessary to permanently change my residence, am I entitled to deduct any of my expenses?

A. Usually not. The Tax Court did allow a medical deduction to a woman for the cost of traveling from Maryland to southern California because her doctor recommended a permanent move to a more healthful climate. But she was not entitled to a medical deduction for such items as breaking her lease or moving her furniture and other family members *(Lawrence Prem v. the Commissioner of Internal Revenue).*

Nor did the court allow travel expenses claimed by a patient under psychiatric care who traveled about the U.S. seeking a place to live after his physician advised him to move to a locality more suited to him and his personality needs *(Gunnar Erickson v. the Commissioner of Internal Revenue).*

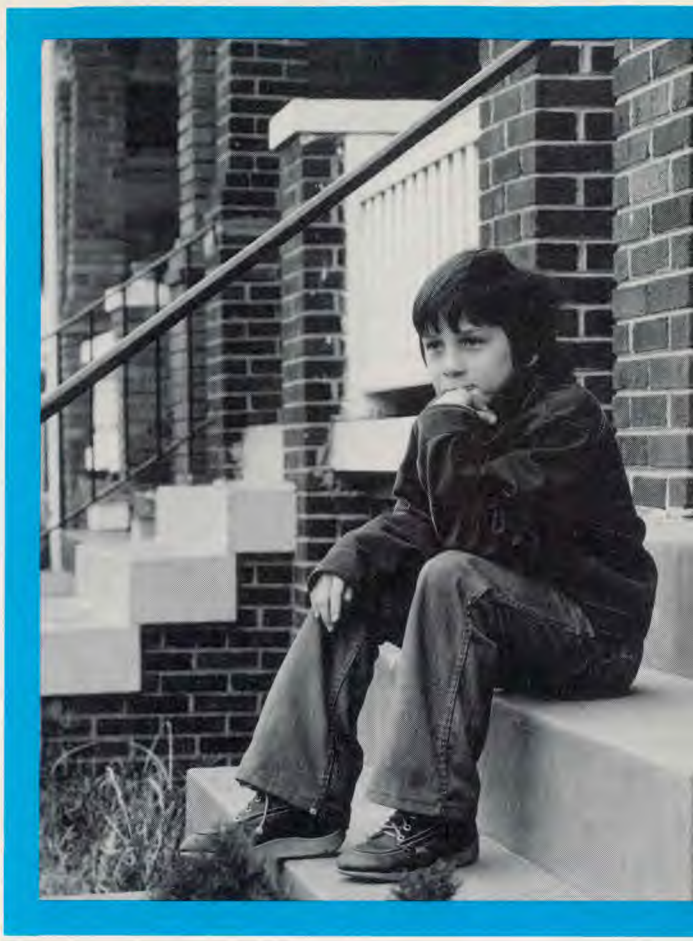
No deduction can be taken for a loss on the sale of a home, even though a doctor recommends an immediate move for medical reasons. Thus, no loss was allowed where the move was made to avoid psychological damage to a child *(Mark Harding v. the Commissioner of Internal Revenue)* or for moving from a two-story home to a one-story home to allow a child the maximum use of his wheelchair (Rev. Rul. 68-319).

Q. To save the expense of an accountant, I decided to complete the return myself. But trying to figure out the complicated instructions caused a nervous breakdown and I had to see a psychiatrist. To make things worse, the 3 percent rule knocks out any medical deduction for this expense. Since it was the IRS that drove me to a psychiatrist's couch, can I get around the 3 percent rule by claiming the expense as part of the cost of preparing my return?

A. Sorry. April 15 is painful for all of us. But the 3 percent rule still applies even when it's the IRS that causes your emotional hang-up.

Julian Block is a Larchmont, New York, attorney. He holds a Master's degree in taxation from New York University Graduate Law School and is treasurer of the American Society of Journalists and Authors.

Heart disease can begin in childhood



by Caroline Andrews

Cigarettes cause cancer. We're told that charcoal-grilled steaks, diet colas, and even miniscule maraschino cherries do so too. Sure, they make the headlines, but all the carcinogens combined haven't yet won for cancer the dubious honor long held by heart disease: "America's number one killer."

More than 26 million Americans suffer from some form of cardiovascular disease, which affects the heart and blood vessels. Although mortality rates from these diseases have been declining during recent years, heart attacks and strokes, high blood pressure, and atherosclerosis (hardening of the arteries) cause more than half of all American deaths each year.

White middle-aged males and older people are the typical victims, but no longer are they an exclusive risk group. Lately they have been joined by women, blacks, and—surprisingly—young people in the worst epidemic in American history.

Children are seldom struck by the more blatant outbursts of disease, such as heart attacks. But more and more evidence suggests that heart disease actually begins in childhood, progressing silently until it erupts suddenly, and often fatally, in adult years.

Many researchers believe that to better understand the insidious nature of this silent killer we must look not only at the adult sufferers of cardiovascular disease but also at healthy children. By closely examining children as they mature, scientists can trace the development of "risk factors," such as elevated serum lipids (high cholesterol), high blood pressure, obesity, and the effects of smoking, which are known to increase an adult's risk of heart disease. Knowing when and why they occur is the first step toward preventing them.

One of these researchers is Dr. Gerald S. Berenson of Louisiana State University Medical Center in New Orleans. As professor of medicine and head of cardiology at LSU, Dr. Berenson has long been familiar with the menace of heart disease. "It is very important," he explains, "to know the point at which children with normal levels of these risk factors begin to develop higher levels that will endanger their health as adults."

To study what he calls "the early natural history of cardiovascular disease," Dr. Berenson needed help. The skills of his staff and the wonders of his laboratory alone were not enough. But children could help, especially if there were plenty of them, all living in the same community. From his own hometown of Bogalusa, Louisiana, he obtained support and volunteers to develop one of the largest and most respected pediatric studies in the world.

More than 5,000 children involved

Thanks to a $6 million grant from the National Institutes of Health in Washington, D.C., Dr. Berenson and his staff started a Specialized Center of Research—Arteriosclerosis (SCOR-A) at Louisiana State University. In 1972 the Bogalusa

DON JEHLE

Heart Study began examinations on more than 5,000 children. Seven years later, SCOR-A is halfway through its second grant period (funded by another $7 million) and has unearthed an immeasurable amount of new knowledge about heart disease.

All of Bogalusa's 22,000 population have in some way been involved, but the children have made the research viable. SCOR-A examines several age groups of children every year and the remaining youth every two or three years. The examination sites are the fourteen Bogalusa schools. A mobile research unit adjacent to the school auditorium forms a convenient location for the screening designed to uncover the causes of heart disease.

The first procedure is venipuncture, a fancy word for taking a blood sample. This sample is later analyzed for lipids (fats in the blood, such as cholesterol), lipoproteins (molecules that carry the lipids through the blood), hemoglobin, and other factors.

Since the children have not eaten for about 12 hours, in order to ensure an accurate blood sample, they are then served brunch. Height, weight, and skin-fold thickness are measured next, and a physical examination is done by a physician from LSU Medical Center. If the doctor finds something wrong, he contacts the child's parents and family physician to arrange for further treatment.

After this come the blood pressure measurements and interviews to determine a child's health habits (including smoking), diet, and personality characteristics (which measure stress and other factors that may cause heart disease). All the data is strictly confidential; identification numbers are used instead of names.

All these procedures are rigidly controlled to minimize errors in collecting the valuable research material. Each nurse follows a detailed protocol—child after child, year after year. And even though staff members know the routines inside and out, they are regularly retrained to make sure the procedures are always done the same way, and especially the right way—one of the sacred rules of research.

The SCOR-A team's polish is apparent in the way they measure blood pressure. "One reading is not enough to convince us we know a child's normal level," explains Dr. Voors, the study's epidemiologist, "so we take nine measurements, three each on three different instruments with different nurses recording them. And we don't believe in white coats!" he adds. The screening site is as relaxing and natural as possible. This is more likely to produce accurate measurements than is a setting that creates anxiety.

Attention to such details rapidly earned the work of LSU SCOR-A a reputation as "sophisticated research" within the world scientific community. Now it's considered "valuable research," as well, as findings unfold from more than 4,000 hours of screening, 15,000 blood samples, and 40,000 blood pressure readings.

PHOTO BY AUTHOR

When does blood pressure get higher, and why? Starting with preschoolers, the Bogalusa Heart Study carefully charts blood pressure year after year for a whole population of children.

The main contribution of the heart study is a description—it provides a detailed picture of children from a typical American community, eating, playing, and growing. It also takes a close look at the patterns that may fix half of them on a course toward cardiovascular disease—following in their parents' footsteps.

"It's easy to see the trends in our society," Dr. Berenson points out. "More heart attacks in white males; more hypertension in black adults."

SCOR-A has noticed differences already occurring in school children. For instance, black children already have higher blood pressure than do white children. But they also have a protective factor in the blood. It's a higher level of alpha-lipoprotein, one of the carriers of cholesterol, which may lessen the risk for disease.

Children of both races have more of this "good cholesterol" than do adults. Adults carry more cholesterol in the beta- and prebeta-lipoprotein fractions, which is often associated with diabetes mellitus and risk for heart disease. SCOR-A wants to learn what reverses these levels between childhood and adulthood.

One is apt to blame our American way of life for many illnesses, including heart disease. SCOR-A researchers agree that environment may be a prime culprit. Cigarette smoking, a major risk factor in adults, is already a habit for many school children. "We administer our questionnaires starting with third-graders," says Dr. Saundra Hunter, social psychologist with the study, "and we would begin earlier if the children could read the questions. We know that even small children have tried cigarettes—it's fashionable because adults set the example."

Sugar and salt may be culprits

Another much-publicized factor in heart disease is diet. By Bogalusa statistics, the American child can thank "junk foods," loaded with sugar and salt, for 34 percent of his total calories. In SCOR-A monkeys fed diets high in these two ingredients, abnormally high blood pressure levels resulted. The LSU nutritionists also found a relationship between the level of a child's blood cholesterol and the amount of calories and saturated fat he eats.

By observing the same child many times as he grows up, researchers can see how these risk factors change. "Do children tend to track?" is one question SCOR-A has posed. That is, does a child maintain his same level of blood pressure, cholesterol, or obesity from one year to the next? If so, then a child whose blood pressure has jumped sharply may already be headed for adult hypertension.

SCOR-A has found that tracking *does* occur for children, as it does for adults. "It's the most important finding of our study," says Dr. Larry Webber, head of the planning and analysis section.

"We have also found that when these risk factors are high, they tend to 'cluster,'" he adds. In other words, if a child is obese, particularly an older child, he is likely to have high blood pressure and high cholesterol, as well. In adults, a combination of three risk factors increases the chances for heart disease not threefold but fivefold.

Risk factors have already emerged in school children and have begun to form patterns as these children grow older. When, then, does it all begin?

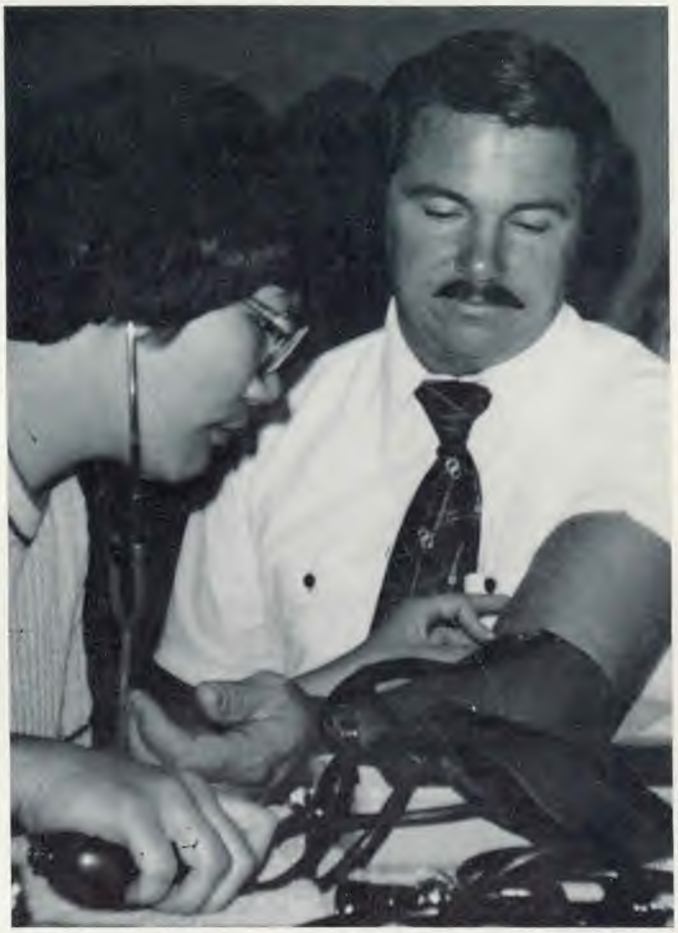
Perhaps as early as the first year of life. Cholesterol levels found in Bogalusa newborns, for instance, took a startling jump—all the way up to adult levels—when the babies reached age one. What is genetic, what is environmental? How do we alter the patterns before they are set? The questions facing research programs such as SCOR-A are tough.

"At least we're looking in the right place now," Dr. Berenson contends. "Childhood is where heart disease starts," he confidently states, "and that is where we'll eventually be able to stop it."

Someday—soon, perhaps—when the inklings and clues jell into answers, our nation's health patterns will change for the better. And America can thank its children—Bogalusa's and others—for a well-earned triumph against its major killer—heart disease. &

Caroline Andrews is medical writer and editor for the Specialized Center of Research-Arteriosclerosis, Louisiana State University Medical Center, New Orleans. She also does free-lance writing and photography.

Testing time for elementary school children (fourth- and fifth-graders) to determine high-risk families for coronary heart disease.



Blood pressure time during testing for risk of coronary heart disease.

PHOTOS BY THE AUTHOR

What can families do to cut risk factors?

by
Joyce W. Hopp, Ph.D., M.P.H.,
and Denise Dee Whisler

Even if your family has a history of heart disease, you can help your children lower their risk factors and prevent or postpone an eventual heart attack.

A two-year study of school children and their families demonstrated that, working together, they can change the relative risk of coronary heart disease for all members of the family. Conducted by the Loma Linda University School of Health (Loma Linda, California) in the Yucaipa (California) School District, this study selected the highest-risk families and educated them for a period of six months. Family members lowered their cholesterol levels and weight, stopped or reduced their amount of smoking, and increased their level of physical activity. Participants credited these positive effects to the support given by other family members.

High-risk families were located by means of tests conducted on all students who agreed to participate. In the first of the studies, seventh- and eleventh-graders took part; the next year fourth- and fifth-graders partic-

ipated. The tests taken included measurements of cholesterol levels, blood pressure, height and weight, and pulse rate. These simple measurements, plus the presence or absence of smoking, were combined in a multiple risk factor index. Students were then ranked, high to low, according to this index. Based on an earlier study by Ibrahim and associates in a Buffalo, New York, high school,* it was known that parents of these children would also be in a similar position with regard to the risk factors for coronary heart disease.

Health education as a family affair

The families at highest risk were invited to attend educational group sessions conducted by Master's and doctoral students in health education from LLU's School of Health. In the teen-age family study, large group sessions were held every Monday night for five months. This was found to be too intensive, so the following year families of the fourth- and fifth-graders met only twice a month. Three or four families would meet in one of their homes.

What do fathers look like in the kitchen? Some children saw their fathers preparing food for the first time, when family groups made low-cholesterol recipes. Mothers learned that the cookies that they were baking "for their children" were, in reality, for their own benefit—and their extra pounds. Weight control became a family challenge.

Fathers and mothers found it was impossible to forget their jogging when it became a family affair. Children became experts at monitoring progress in physical fitness by taking pulse rates. Some children experienced the joy of seeing their parents become nonsmokers for the first time.

Loma Linda University students gave the children advance information before each family group meeting. Children then could show off their knowledge at the next family session. Tired, Fatso, and Sweetie made their puppet debut on the stage of the fourth-grade theater. Children sorted shopping bags of food into the basic four food groups—or junk. Films and games helped students trace the circulation of the heart, the effects of stress, and nutrition principles. Imagine children choosing to eat apples instead of popsicles!

Choosing to change was the theme for the overall education program. Participants were free to choose which risk factors they wanted to learn more about—and to change. Value-clarifying strategies helped focus attention on factors that were of most importance to them, and to encourage the decision to take action.

Those who chose freely to do so were able to make the greatest changes. Significant alterations were made in eating habits, with the most marked change coming in the decreased use of butter, lard, meat, eggs, and ice cream. Levels of physical fitness rose as individual activity patterns were increased. The whole family celebrated when mom lost five pounds or dad found out he had lowered his cholesterol 100 mg. or the kids discovered that they could run circles around their families.

Changes made after classes ended

An interesting result surfaced during the retesting sessions, which occurred six months after the close of the educational sessions. More people had made changes after the classwork ended than were able to make them during the five months of group sessions. This was especially noticeable for those who cut down the number of cigarettes they smoked, or who quit entirely. Ten parents were able to quit during the school year, but fourteen more changed their smoking habits during the summer months that followed. This is quite different from the usual experience with smoking-cessation programs, where, although a high percentage may be able to stop, within six months many have started to smoke again.

It was quite evident to the health professionals conducting the classwork that it took several months for the families to become motivated. In fact, the study involving the younger set of parents indicated that they didn't begin to show interest until the last class.

Making changes in one's health habits is never easy. Nor is it fast. And it usually takes something to get us started, a trigger, if you please. In these studies, the trigger for many adults was having their child tested at school and finding out that their family was in the high-risk bracket for coronary heart disease. As they listened to the kinds of changes they needed to make, they were sometimes dismayed. But with the help of their family—perhaps their 12-year-old son or 17-year-old daughter—they were able to make these changes. The children were so proud of their parents' successes that the parents couldn't let their children down.

The Loma Linda study has shown that an attempt to make changes with family encouragement and support does indeed work.

REFERENCE

*M. C. Ibrahim, H. H. Borden, William Pinsky, J. Feldman, and W. Winkelstein, "Screening of the Coronary Prone by Study of Offspring," *HSMHA Health Reports* 86:6, 577-582 (1971).

Joyce W. Hopp, Ph.D., M.P.H., is a professor of health education at the Loma Linda University School of Health in Loma Linda, California. Denise Dee Whisler is a Master's-degree student at the LLU School of Health, majoring in nutrition and health education.

Denise Dee Whisler (left) and Joyce W. Hopp

SKIP BAKER

Ears can "read"

by Vivian Buchan

If you can read this, it may not interest you. But shut your eyes and think how you'd feel if you *couldn't* read it—or anything else. Your reading this article could be the means of expanding horizons for a relative or friend that would add a new dimension to his life. And it wouldn't cost more than the price of a stamp and an envelope.

Have you ever heard of "talking books"? I didn't know what they were until I visited a friend in Mexico who was "reading" one of them.

She said, "I'm 'reading' *Butterflies Are Free*, about a blind boy who wanted to live an independent life. I know how he felt, for when my eyesight began failing, I felt half alive. I couldn't watch TV or read anything. My talking books have made me a part of the world again."

To help the sightless or visually impaired person become a part of

the world is the aim of the Division of the Blind and Physically Handicapped. To accomplish this, libraries have been established across the country where materials designed for those with no eyesight or poor eyesight are loaned free of charge. These may include a great wealth of Braille materials and, for those who don't read Braille, talking books, tape or record players, magnifiers, headphones, and stands to place the machines on.

Any United States citizen, even those living abroad, can receive the talking books and equipment simply by writing and requesting them. A letter with the Social Security number of the individual applying and a doctor's statement that the person is unable to read is enough to get the materials on their way.

Within a short time, a catalog (in big print) listing the numerous books and magazines available and the record player with its stand and headphones (for listening in private) will arrive.

No charge is made for any of this; in fact, even the postage is paid both ways. The cartons are delivered to the door, and when they're ready to be returned, they may be dropped into a mailbox.

In addition to the talking books, throw-away plastic discs that have entire magazines, such as *Newsweek*, recorded on them are sent on request. The catalogs also include plastic discs that explain what books are available for those people unable to read even the oversized type.

The applicant has dozens and dozens of adult and children's books to choose from. Summaries help determine which books should be ordered. Best-sellers as well as long-enjoyed classics are on the lists. The selection is varied and extensive, with new books being added all the time. For example, the Iowa Commission for the Blind transcribes some 1,500 titles a year, bringing new books, old classics, and textbooks to persons unable to read them otherwise.

To determine which side of the record is to be played first, those using them can find the little raised marks that indicate side 1 and side 2. If the applicant prefers cassettes to records, they are also available and may be easier to handle if the person is also handicapped by arthritis.

The people chosen to record the books have been selected for their pleasing voices. In some prisons, inmates capable of reading well volunteer their services to the project.

Not only is reading material for pleasure available, but the person wanting to learn new skills may receive instructions for learning to play the piano, guitar, drums, or oboe. He can learn to sing or even compose music. If a special book is needed, the applicant can request it and, as a rule, have that book recorded for him. A volunteer told me that she was recording an entire textbook that a student in nursing needed for her course.

Music lovers can listen by the hour to the well-loved symphonies of great composers. And while listening, one can mull over what has been learned about the composer from the biographical sketch included with each record.

But that's not all. Have you ever thought how much ham radio operators do for the public? Or how many are needed to act in emergencies? There's a real need for more of them—regardless of age or sex—with or without sight. To encourage the partially or completely blind person to become a ham radio operator performing a much-needed service, the Hadley School for the Blind created a fourteen-lesson correspondence course some years ago.

The demand for this course was far greater than anticipated, so the enrollment was curtailed at first. But it has been expanded to accept all interested visually impaired persons, and by 1974, more than one hundred such persons were operating radio stations in their own homes, having been licensed by the Federal Communications Commission. Though blind or partially blind, these ham radio operators passed their course work and examinations by recording their answers on tape and sending them back to their teachers. Their ages vary from young to old, and they live all over the world. Many reside in the United States, of course, but others live in Mexico, Scotland, New Zealand, the Philippines, and India.

A sighted ham radio operator said, "We have a blind girl in our area who's doing a tremendous job. She calls the roll every morning and takes it every night. She's handled some of the greatest emergencies we've had, such as tornadoes, major catastrophies involving big accidents and fires, and locating corneas or kidneys for transplants—things like that. I don't know what we'd do without her."

And I suspect she wouldn't know what to do without her radio station. She's in contact with people around

the world, has unseen friends by the score, and is living an active and meaningful life.

Not just for the totally blind

The totally blind person has become aware of the help offered by the commission for the blind in his State, but it's the person with glaucoma, cataracts, or eye diseases who needs to be aware of this help, which not only can make his world less dark but far more productive.

My aunt is an example, for she had never heard of talking books until I urged her to avail herself of them. She was desolate when her eyesight failed so much she couldn't read or even watch television. She said, "The world was passing me by. I missed reading so much; I felt I was becoming an illiterate. But my talking books have changed all that. I keep up with world events and know more about what's going on than most of my friends do. I have a stack of books just waiting to be put on my playing machine. No one can understand how the near-blind person is shunted aside and feels so out of everything because mental stimulation is so hard to come by."

Another devotee of talking books said, "I was miserable when my husband was watching TV and I couldn't see what he was enjoying so much. I know it bothered him to have me keep asking what was going on. Now that I have my talking books I can put on my headphones and 'read' while he watches TV. It makes the evenings so much happier for both of us."

All it takes to be put on the mailing list and begin receiving materials is a simple letter addressed to the Division of the Blind and Physically Handicapped, Library of Congress, Washington, D.C. 20542. The applicant's request will be forwarded to the center nearest his home, and the people there will handle it.

In addition, many cities have organizations that perform a similar service.

Information about the ham radio operator's correspondence course and other courses can be had by writing to the Hadley School for the Blind, 700 Elm Street, Winnetka, Illinois 60093.

If you do not personally need this help, you may know someone who does. The new world that can be opened without cost for anyone who is losing his eyesight will be a world filled with pleasure, entertainment, self-help, and information. Not only that, but the person feeling left out of things may find that he's back into things once again. And to think that it's free for the asking makes that world even more delightful.

The dark and lonely world in which the sightless or near-sightless person lives can become a glowing and vivid one when he discovers that his ears can "read" for him.

Vivian Buchan has a Master of Arts degree in English and has taught creative writing, expository writing, public speaking, and literature to university students. For the past six years she has done free-lance writing and has sold more than 360 articles and feature stories to magazines and newspapers, including several to LIFE & HEALTH. Mrs. Buchan lives in Iowa City, Iowa.

Life & Health available in Braille and Talking Books

LIFE & HEALTH in Braille, produced by the Christian Record Braille Foundation, Lincoln, Nebraska, is enthusiastically received by some 6,100 readers, while the talking-book edition is enjoyed by 12,400 health-conscious individuals. Blind and visually impaired recipients of this journal are located in 54 countries around the world.

Letters of appreciation flow continually into our publishing facility at Lincoln. For example, J. de Tovar, from Madrid, Spain, says: "Thank you for sending me LIFE & HEALTH. . . . I am delighted with this magazine and read it with interest." Mandala Banda, from Malawi, Africa, writes: "Thank you very much for LIFE & HEALTH; . . . it helps me a lot." Summing up her thoughts, Agnes Benson, from Stanwood, Washington, declares: "I receive LIFE & HEALTH both in Braille and in talking-book form. . . . I find much pleasure and enjoyment in it. . . . The information presented is invaluable. Keep up the good work!"

—*Richard Kaiser,* Editor
Christian Record Braille Foundation

Don't be a victim of food poisoning

by Kathleen Cruzic, R.N.

The miserable condition we often dismiss as "just another bout with the flu" may actually be an undiagnosed case of food poisoning. U.S. Public Health Service officials say many of these attacks result from a salmonella or staphylococcus infection. On March 31, 1977, two unusual events occurred in Pontiac, Michigan. A Mexican restaurant was closed by the county health department, and two employees of a nearby hospital were admitted with signs and symptoms of botulism. Within days the number of victims had risen to thirty-nine. Yes, there was a connection between these two events—all of the victims had eaten at the same restaurant. Featured that day at the eatery was a hot sauce made from home-canned green jalapeño peppers and red-tomato sauce. Fortunately, none died in this largest single outbreak of botulism ever to occur in this country.

While most women work diligently to make foods *taste good*, little attention is given to how to make foods *safe*. Taking steps to avoid incurring food-borne illnesses is becoming increasingly important, especially in countries where more people are eating meals prepared away from home. Often food poisoning is simply shrugged off as "flu" or "indigestion." If the real facts were known we would probably be amazed that more people aren't seriously affected from carelessness in handling food.

In the United States more than $145 billion is spent annually on food and beverages. A whopping 150 million meals are served daily in food-service facilities. Approximately 30 percent of each family's food dollar

SKIP BAKER

is spent outside the home for meals. By 1980 it is expected that more than one half of all American meals will be eaten outside the home—mostly at fast-food restaurants.

And all too often this food becomes spoiled. Sometimes it's due to carelessness in handling or storing; often it's a sick cook or his infected finger.

While considerable food poisoning occurs when food is purchased away from home, probably much more occurs at home. The danger of food being contaminated at a food factory, however, can affect many more people. For example, suppose that the nation's largest hamburger chain sold burgers that had been prepared at a regional factory, and at this factory some poisonous material had been accidentally mixed with the hamburger. Potentially thousands could be rendered ill by the careless action of one person. At home it's somewhat simpler—only the family members and a guest or two are likely to be stricken with food poisoning caused by one person's lack of cleanliness or good sense.

Many people think food poisoning is caused by obviously spoiled foods only. While this is often true, it isn't the whole truth. Foods that show no signs of spoilage may harbor infection-producing bacteria or their poisonous products, too.

Food poisoning can strike every one of us if we aren't careful in preparing, cooking, and storing our food.

A group of Boy Scouts in Oregon became ill after eating a picnic lunch. The cause? *Salmonella* bacteria. At a church dinner in New York creamed chicken was served. Most of the people who ate the chicken became ill; this time it was *Staphylococcus* bacteria. A family in California developed botulism after eating home-canned peppers. Fortunately, botulism, the most serious kind of food poisoning, rarely occurs when proper precautions are taken in home canning.

Salmonella infections (Salmonellosis)

Salmonella is a bacterium found in raw meat, fish, poultry, and eggs. It is carried from contaminated food to clean food by dirty hands or on contaminated surfaces. Contamination often occurs when food is prepared and handled in the home.

An infection of *Salmonella* microorganisms produces nausea, vomiting, abdominal cramps and pain, diarrhea, and fever. Usually the symptoms last only two or three days, with spontaneous recovery.

Whether or not an infection occurs depends primarily on the amount of contaminated food eaten, and the age and physical condition of the individual. It is often more severe in infants and the elderly.

When medical treatment is required, drugs are given that relieve the symptoms. Antibiotics may be used in severe cases.

Staph food poisoning

Staphylococcus bacteria spread by way of sneezes, coughs, and unclean hands. The nasal passages of many, even healthy, people, are laden with these bacteria, and most of us carry them on our skin. They are also present in infected cuts or scratches.

The foods that commonly cause staph illnesses are custard, cream-filled bakery goods, cream sauces, salad dressings, puddings, and pies. Other offenders are meat and meat products, milk, and fish. Staph food poisoning is most apt to occur in foods that have been undercooked, contaminated after cooking, or allowed to stand at room temperature. It can also occur in foods kept warm for long periods under heat lamps, in steam tables, ovens, and food-vending machines. When the food is not kept hot enough to kill the bacteria or keep them from multiplying, the microorganism produces a poison in food that causes the symptoms. Further cooking will not destroy the toxin.

The common symptoms of staph poisoning are nausea, vomiting, retching, abdominal cramping, and diarrhea. The onset of symptoms usually occurs in two to four hours after eating the contaminated food. Symptoms last only a day or two. Most of the time recovery is uneventful. In severe cases intravenous fluids may be given to overcome dehydration and shock. Patients usually recover quickly with treatment.

Prevention

Taking the following precautions will guard against salmonellosis and staph food poisoning:

1. Don't place other foods, especially if they are to be eaten without further cooking, on the cutting board or counter where you have handled raw meat or poultry until you have thoroughly scrubbed the surface. Also wash dishes, knives, and utensils used in handling raw poultry or meat.

2. Don't use previously cracked eggs for cooking.

3. Carefully follow directions on package labels for storing, preparing, or serving quick-frozen foods.

4. People who have colds, boils, or infected cuts should not prepare food for others. Avoid sneezing or coughing over foods being prepared or served.

5. Do not let foods stand for long periods of time at room temperature.

6. Keep hot foods hot (above 140 degrees F.), and cold foods cold (below 40 degrees F.).

7. Refrigerate leftovers promptly and heat thoroughly before reserving (gravies should be reheated to a rolling boil). Freshly cooked foods rarely cause illness.

8. Do not thaw frozen meat or poultry at room temperature. Thaw in the refrigerator or use cool running water at 60 degrees F. or lower.

9. Do not stuff turkeys or chickens the night before cooking.

10. Refrigerate all dairy products promptly, including mixtures made from dry powders.

Because picnics pose special hazards, special safety precautions should be taken:

1. It is safer to keep foods cold than to attempt keeping foods hot. If foods require cooking before eating take them frozen and cook them at the picnic, especially meat or poultry.

2. Take only enough food to feed the intended group. Don't keep leftovers! Leftovers such as potato and macaroni salads are hazardous.

Botulism

The most serious food-borne illness is botulism. This rare, but often fatal, disease is caused by a toxin produced by the microorganism *Clostridium botulinum*, which can grow in the absence of oxygen. This toxin is so potent that even a tiny amount can kill thousands of persons.

Occasionally botulism poisoning results from commercially canned products when something goes wrong in the canning process or the cans have been damaged. Most often, however, it results from inadequately home-canned foods.

The home-cooked foods most likely to harbor this toxin are low-acid vegetables such as string beans, sweet corn, beets, asparagus, spinach, and Swiss chard. Occasionally such acid foods as tomatoes can cause outbreaks of botulism. Meat, fish, and seafood can also become tainted. Some recent cases of botulism in the United States have been caused by smoked fish that weren't properly refrigerated.

For home canning, the water-bath method of canning is not recommended for low- or medium-low-acid foods, because the temperatures used are not high enough to kill all bacteria present. The hot-pack method is recommended because it is safer, and a pressure cooker or canner is a must for processing.

Symptoms of botulism poisoning include double vision; shock; difficulty in speaking, swallowing, and breathing; loss of muscle control; and paralysis of the central nervous system. Incubation varies from two hours to eight days, with one to two days being the average. If any of these symptoms occurs, early treatment of the victim in a hospital may mean the difference between life and death. It is important to determine the source of the poison so that the specific type can be identified to aid in the treatment. Specific antitoxin is used, along with intravenous therapy and breathing support.

To safeguard against botulism:

1. Follow approved canning and preserving measures issued by the United States Department of Agriculture.

2. Never eat or even taste food from a bulging can or jar whether commercially or home canned. Discard it unopened.

3. Refuse to taste a doubtful food that has an unusual odor or appearance.

4. Boil home-canned vegetables for ten minutes before eating.

5. Avoid foods that have been thawed and held at room temperature for any prolonged period of time, such as meats, poultry, seafood, fish, vegetables, milk, and milk products.

You should periodically review all the basic rules for handling, cooking, and storing food, so your family won't suffer those annoying attacks of illness often thought of as "just a bout of flu." &

BIBLIOGRAPHY

Bradley, Hassell, and Carole Sundberg, "Keeping Food Safe," San Jose *Mercury-News*, October, 1975.

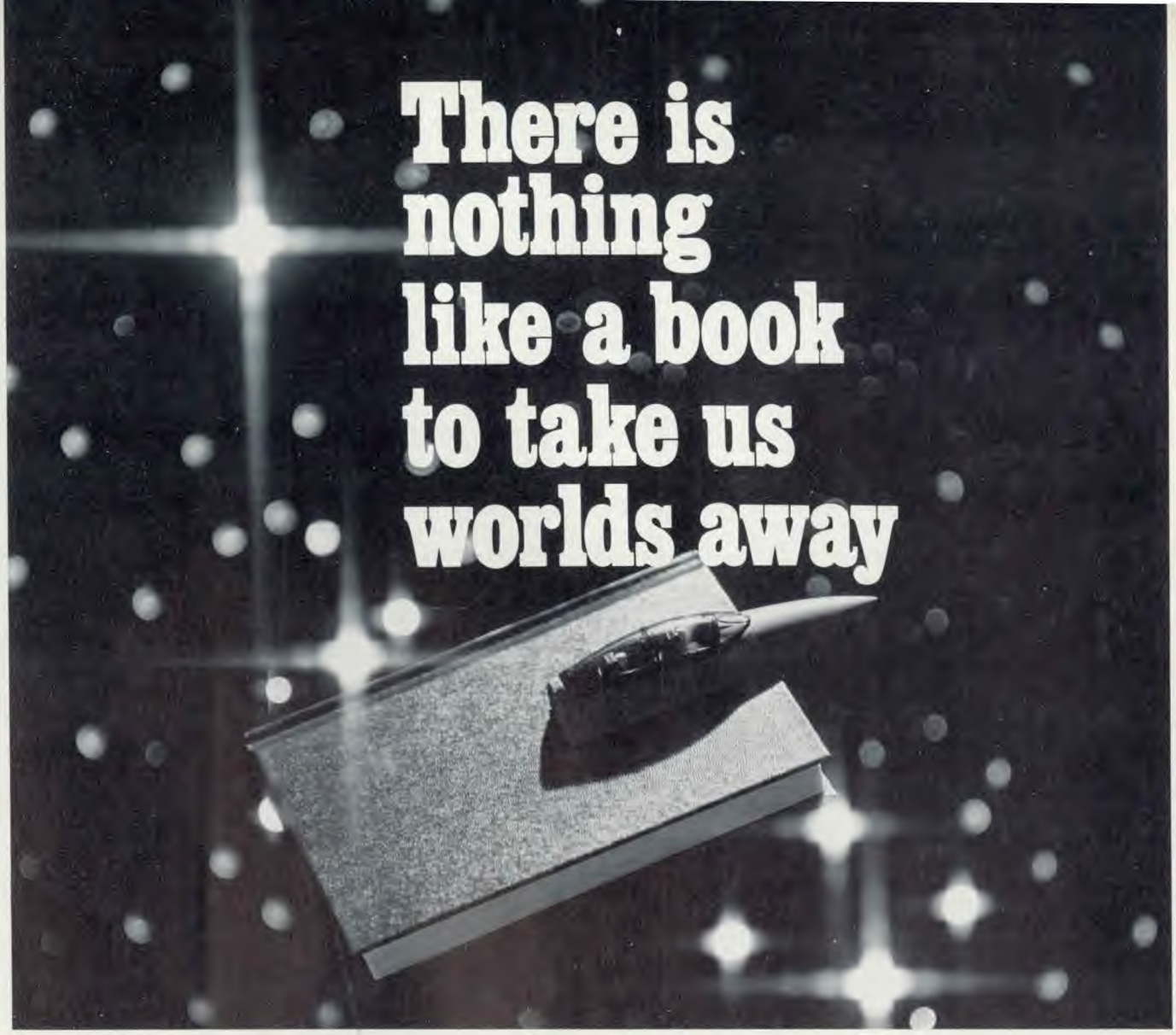
"Plain Talk About Food Poisoning," *Better Homes & Gardens*, April, 1972.

"Facts About Food Poisoning," *Better Homes & Gardens*, August, 1974. San Jose City Health Department Pamphlet, "Illnesses Attributed to Foods."

U.S. Department of Health, Education and Welfare, Food and Drug Administration, "Salmonella."

Kathleen Cruzic, R.N., lived in San Jose, California, at the time she wrote this article.

There is nothing like a book to take us worlds away



SKIP BAKER

by James Coffin

Recently a boy of 14 spent a weekend in our home while his mother was convalescing from an illness. Tom was a pleasant boy, but very difficult to entertain. Being very busy one morning and not able to give him my full attention, I took him into my study and showed him several books that I thought he might enjoy browsing through. Well illustrated with pictures, they showed scenes of interest in various countries. When I returned ten minutes later, Tom was sitting at my desk, staring vacantly at the wall, with a bored expression on his face. He had not so much as opened the books. His problem: he was illiterate.

Now, don't misunderstand me. Tom could read sufficiently well to be an almost average high school student, though his oral reading ability left much to be desired. His major problem was that he had no appreciation of the fulfillment that could be gained through reading. He didn't realize, as one author has said, that "there is no frigate like a book to take us lands away." His lack of vision caused a lack of motivation. And his lack of motivation meant that he simply did not read, which is nothing short of tragic.

No one who enjoys good reading has cause for loneliness or lack of occupation. But for many young people growing up in today's society, reading is all but a thing of the past. Educators are at wits' end to know how to correct the situation. Even prestigious Berkeley University—which carefully screens its applicants, rejecting the bottom seven eighths of applying high school seniors—is finding that up to 50 percent of its "elite" freshmen are having to be placed in "bonehead" English classes because of their inability to communicate.[1] A close relationship exists between proficiency in communicating ideas and in reading ability. Not only have reading skills deteriorated, but the love for reading has diminished as well.

The man who can read, but doesn't, is scarcely better off than the man who cannot read at all. What is more, as an old Hebrew sage pointed out thousands of years ago,

the results of the sins of the present generation only become glaringly apparent in the third and fourth generation. Today's nonreaders are breeding tomorrow's total illiterates.

Strangely enough, this is taking place at a time when book and periodical sales are higher than they have ever been before. We seem to be witnessing a polarization in reading habits. Those who are classified as high achievers are spending more time reading books and journal articles than ever before. The amount of well-researched and documented material available today is staggering. But those at the other extreme have all but lost their ability to read. Some authorities estimate that as many as 25 million Americans are functional illiterates.[2]

The importance of reading cannot be overemphasized. In spite of all our technological advances, the printed page still reigns supreme as the communicator of ideas. Innovative methods may provide pleasant variations, but writing is still the staple. Cassettes offer the added appeal of vocal inflection, giving more pathos or enthusiasm. They can also be listened to while one is otherwise engaged. But as a frequently used reference source, they are far too time-consuming. Screen productions may drive home a point with tremendous effectiveness. But most of us seldom have access to such a technically involved medium to express our personal thoughts. Therefore, everyone should become proficient at verbalizing thought. And books are models of carefully structured, verbalized thought. Wide reading will inevitably facilitate greater clarity of expression and open up whole new thought horizons.

If we study the lives of great men of the past, we find invariably that they were great lovers of reading. Abraham Lincoln read and reread books such as *Pilgrim's Progress* and the *Life of Washington.* He spent hours reading the Bible, and could repeat much of it from memory. Because his stepmother realized the constructive potential of good reading, she assisted and encouraged him whenever she could. As a result, Lincoln's world ceased to be bounded by the hills surrounding his little backwoods community. And by emulating the characteristics he read about, he became the great leader his models inspired him to be.

The children growing up in our homes may not be Abraham Lincolns, Winston Churchills, or Albert Einsteins, but it is our parental responsibility to give them every opportunity to be as great as those men—even if at the moment we cannot perceive such potential in them. Reading is a prerequisite to excellence in most fields of endeavor. Parents can aid in creating good reading habits in their children by adopting the following suggestions:

1. Have a good home library. Today's public libraries offer a wide range of beneficial services, but they should only augment, never replace, our home libraries. Children who haven't been assisted at home to develop a taste for wide reading will seldom find their way to the public library to any significant degree. So money spent on books is money well spent.

From the time children are toddlers their interest in books should be cultivated. Parents may bring them beautiful books with colored pictures of animals, plants, scenic wonders, and a variety of other interesting things. Or they may give them good storybooks of true adventures, which capture the child's imagination while portraying character traits that they wish their children to emulate. And there are exciting biographies of great people. James Reston once wrote in the *New York Times:* "The examples placed before a nation are vital. What we constantly observe we tend to copy. What we admire and reward, we perpetuate. . . . New models and styles are set daily by television. . . . The youth of a nation needs something more heroic as a model—a Gettysburg Address, or a Churchillian oration, or the daring flight of a Lindbergh."

As children grow up it is important to see that there are books available to give them increasing mental stimulus. We need to always be on the lookout for new and better books. There is an old maxim that "by beholding we become changed." And it is equally true that by reading we also become changed. Recognizing the molding potential of that with which we come in contact, we need to set the best possible examples before our children.

2. Tell and read stories to your children. The best incentive for your child to read is for you to be a reader yourself. Little children love stories. Often they will plead for a story, and if their request is granted they will plead for yet another. On the other hand, if their request is brushed aside, they will eventually cease to

ask. So it is important that parents have a repertoire of stories—and usually those stories will come from one's reading.

Unfortunately, we are not all gifted storytellers, so we may have to resort to reading stories to children; but even good storytellers will also want to read them as well as tell them, to make a pleasant variation. If we ourselves are not fluent oral readers, we may have to practice until we can read in an animated and interesting way. It is one of the greatest contributions we can make to the lives of our children. What is more, as we sit down beside them or hold them on our laps, they will inevitably ask questions about life. And it provides us with one of the most natural settings possible to share our ideals of what life should be.

Don't think that children who have already learned to read are too old to be read to. I remember, as a boy growing up, that every week after we came home from church and cleared away the dinner dishes we would gather in the front room while my father read to us all the stories from the youth paper we had received at church that day. Somehow he could make the stories much more interesting than when we read them ourselves. Even during the week, one night was set aside as family night. We would play games together, and we always had one chapter read to us out of a biography of some great man or woman.

Not only do children enjoy being read to, they also enjoy reading to their parents. And it is good to encourage such reading. It improves their oral reading skill, aids in proper pronunciation and diction, and again provides opportunity for parent and child to share in a meaningful transaction.

3. Spend time with your children. The greatest single gift we can give is our time. It is the one talent with which we are all born, yet it is probably our most selfishly hoarded commodity. It is often argued that quality rather than quantity is the significant factor in time spent with one's children. It is true that quality is important. It is vital. But children need a large quantity of high-quality time if it is to be effective.

When little Susie asks Mommy for a story and meets with the reply that Mommy is too busy, she may not be interested if and when Mommy finally decides to take the time. I am not advocating that parents drop everything to pander to the requests of their children. It is good to plan, however, to break up the day's activities so there is time between various jobs to sit down and share with the youngster. Don't always wait until *everything* is done before taking time for the child. Give him or her little time spots all day long.

4. Limit television viewing. Better yet, sell the TV—it is probably the greatest detriment to the development of good reading habits. As we move into the third and fourth generation of TV viewers, the implications of extensive viewing are becoming devastatingly apparent. The *U.S. News & World Report* of November 24, 1975, quotes a testing official as saying that the ultimate cause of plummeting achievement test scores across the nation probably rested primarily with television. Statisticians tell us that, on an average, children between the ages of 2 and 6 watch almost thirty hours of television per week.[3]

Perhaps the biggest myth about television concerns its educational properties. Statistics are cited by proponents of television that people who view educational programs such as Sesame Street are scholastically superior to those who are not viewers. I would suggest, however, that we are only hearing part of the story. It is to be expected that children who are ignored by their parents will be better off for having the mental stimulation of television, if the only alternative is to have no mental stimulation at all. But what of the children with whom the parents have spent hours of time engaged in structured and meaningful interaction? Might they not prove superior to the television viewers?

The suggestions offered here are by no means comprehensive, but they do offer a practical working principle from which to approach the problem. Reading is one of the greatest sources of mental food. We need to develop a taste for it because it is going out of fashion quickly. Until we develop such a taste, it will be difficult, if not impossible, to realize our full mental potentialities.

REFERENCES

[1] Joe L. Wheeler, "TV on Trial," *Review and Herald*, March 11, 1976.

[2] *Ibid.*

[3] Wilson Bryan Key, *Subliminal Seduction* (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1973), p. 67.

James Coffin was born in the United States (in Iowa), received his theology training at Newbold College in England, and is presently serving as youth pastor of the Avondale Memorial church in Cooranbong, New South Wales, Australia. As all this might indicate, one of his main interests is travel.

Something better speaks for itself

by Leo R. Van Dolson, Ph.D., M.P.H.

Wilbur Wright arrived in France in 1908 intent on demonstrating the superiority of his flying machine over the experimental models being produced there. Understandably, quite a bit of hostility greeted him, since the French were committed to defending their own aviators' claims of priority.

Wilbur first exhibited the flying ability of his craft at Le Mans on August 8 of that year. When a catapult shot him thirty feet into the air to begin his flight, the large crowd of spectators gasped with surprise. They were used to seeing long and often unsuccessful takeoffs.

Then his flying machine dipped its left wing sharply and banked for a turn. The crowd panicked. This was the first they'd seen or even heard of an airplane turning like that, and they thought Wilbur was going to crash. Up to then the few flights that had taken place in France involved wide, jerky, level-winged circles as the only means of turning.

As Wilbur continued to gracefully circle the grandstand, the frightened gasps of the spectators turned into wild, enthusiastic cheering. When he gently landed on the field after his performance, the shouting, applauding mob thronged about his plane. Everyone tried to shake his hand at once. Even the French aviators present acknowledged that the Wright brothers had come up with the best approach to manned flight and a greatly superior flying machine. Something better speaks for itself.

Yet, every day people shy away from practicing good health habits, convinced that what is good for them is *bitter* rather than *better*.

We'll all be further ahead if we come to understand that health-behavior change not only is good for us, but can be more enjoyable, too. Whether it be stopping smoking or just learning to drink five or six glasses of water each day, when we take a positive approach and accept the necessary life-style changes as something *better* rather than something *bitter*, they become an enjoyable experience in themselves.

But somehow we've come to look upon the laws that govern life and health as restrictive and "taking all the fun out of life." What perverse quirk of mind causes us to think that it's fun to hurt ourselves, as well as those whom we love and who depend on us, by continuing to practice health-destroying habits that can only kill us in the long run?

The "more abundant life"

In the Bible our Creator offers us a "more abundant life" (see John 10:10). If we're not experiencing a joyful, happy, healthful, "more abundant" life, whom are we cheating? Mainly we're *cheating ourselves*—robbing ourselves of both quantity and quality of life.

Every day, people shy away from practicing good health habits, convinced that what is good for them is *bitter* rather than *better*.

Think of the cost involved. I was shocked the other day to learn of the unexpected death of a good friend who had been my major professor in graduate school. We were working together on materials for my doctoral dissertation in the field of health education, and were particularly involved in the question of motivation. He challenged me to develop a conceptual model that would help predict health-behavior change.

He himself suggested smoking cessation to illustrate the model, and became keenly interested in this project in spite of the fact that he was an incessant chain smoker. The professor made several suggestions that greatly strengthened the conceptual model, and his enthusiasm got to me. Finally, I mustered up enough courage to ask him why he continued to puff away when he seemed to understand so clearly the reasons for stopping smoking.

"Oh, I enjoy it," he said. "I know it doesn't do me any good—in fact, it's detrimental to my health. But I really enjoy it and don't want to quit."

The conversation was the first of many in which we earnestly discussed his smoking habit.

For about two years I'd been out of touch with him. Then a friend told me that he had passed away. When I expressed my shock, the friend exclaimed, "Oh, hadn't you heard? It was a tragedy—he was only 45. He died of lung cancer." What a terrible price to pay for clinging to a death-dealing habit just because he enjoyed it so much!

Most of us are in the same boat, whether we realize it or not. We continually violate health laws in some way or other, probably only vaguely aware that what we're doing is harmful.

Of course we enjoy it. We wouldn't be doing what we're doing unless we did. If we're aware of breaking a law, it may add a little excitement and the thrill that comes along with being a daredevil. But inevitably it catches up with us. A law of life isn't a law if we can break it with impunity.

Can you remember the days when you felt really alive? You had the whole world by the tail and looked forward to wading into the challenges of that particularly glorious day. A sense of well-being made you feel that it was truly great to be part of everything that was happening.

How would you like to feel that way most of the time? The point is—you can. By cooperating with the laws of life and actively putting them to work for you, you will find a renewed vigor and joy of life that you may have thought you'd never experience again.

A complicated task

One of the great tragedies in the health field today is that people ordinarily do not become concerned about their health until something goes wrong. All too often, efforts at health education follow this same pattern and are based on the negative: fear of death, fear of disease,

and fear of failure. How much more effective is the challenge to accept "something better"—a happier, healthier, more abundant way of life.

Motivating human behavior is a far more complicated task than merely wagging a threatening finger or presenting factual statements in lecture form. Scientists have so concentrated on the "what" and the actual that too often the "why" or the philosophical is overlooked. As a result, man has mastered the outer physical world to a much greater extent than he has been able to master the world within his own being.

Social scientists, however, have begun to take a new interest in the field of behavior and motivation. Ernest Dichter reports on developments in his book *Motivating Human Behavior*. He believes the old carrot-and-stick approach is still one of the best ways to get results.

"In a recent experiment, a psychiatrist succeeded in stopping men from having extramarital experiences or dreaming of other women by administering electric shocks to them each time a picture of a woman other than their wives was shown to them. At the same time, sweet music was played when a picture of their wives was shown. The psychiatrist reported that within a few weeks, these unhappy men lost all interest in other women—at least as goals of amorous pursuits. This is, indeed, a successful method of changing human attitudes. It is one of the oldest techniques in training and education. Our whole process of civilization is brought about with more or less success as a result of scolding the child and lauding it." [1]

But in showing the superiority of the positive approach, Dichter points to recent marketing research:

"To the international organization S.O.S. Kinderoerfer, which builds villages for orphans and underprivileged children in various parts of Europe, we suggested that a smiling child be shown instead of an abandoned or starving one—that this smile was the beautiful thing the giver was buying. Our headline, then, was 'How much is this human smile worth to you?'" [2]

Dichter also emphasizes that attempting to change human behavior inevitably involves one in a discussion of values.

Currently educators are concerned with "value clarification strategies." The most effective motivation in behavior change actually has to do with our values. And religious values are coming to be recognized as among the strongest of motivating factors.

An example is found in the nationwide sample of smokers polled by the agencies connected with the National Clearinghouse for Smoking and Health in 1970 and reported on in 1971. According to Selwyn M. Waingrow, assistant to Dr. Daniel Horn of the National Clearinghouse, there is a definite correlation between permanent smoking cessation and religious motivation. In a talk presented to the Public Health Association of Seventh-day Adventists meeting Tuesday evening, November 14, 1972, in Atlantic City, New Jersey, Mr. Waingrow stated that the only clear predictor that an individual will stay off smoking permanently is that he is motivated to do so by religious convictions of one kind or another.

Religion, of course, is more than a mere motivating factor. It involves behavior. In its best sense religion doesn't *push* an individual to change his habits, it *pulls* him. It leads to a new and better way of life that involves the whole man—physically, mentally, socially, and spiritually.

Of course, all of us want the most accurate and latest health information available, but we are quickly bored unless we see a practical application. Dry facts, piles of statistics, scare tactics, and the hard-sell approach so often used in health presentations all seem to turn us off.

Modern research shows that we are dynamic in nature—that there is a wide band of potentialities available to us. At rare moments we glimpse the horizons of what could be. We witness the achievements of others and take courage that we, too, may achieve what they have. We need, somehow, to abandon our fears and recognize our God-given potential and talents. From infancy, however, we hear many more saying No than we hear saying Yes.

Dichter makes some very practical applications of this thesis. He points out that physicians, when prescribing reducing diets, too often concentrate on the diet and the prohibitions rather than what is more significant—the continuous reassurance the dieter needs that progress is being made.

The same thing is true concerning religion. Too many people see it in terms of prohibition rather than in terms of encouragement and challenge to heighten the potential of one's life. Certainly we need to change the restrictive structure within which we usually perceive religion, and recognize that what God has to offer is far *better* than anything we have yet discovered for ourselves.

Today's health problems are admittedly more difficult to cope with than the epidemics of the past, since they involve socioeconomic factors and our whole way of life. For too long many practitioners of health care have, it seems, been deliberately ignoring one of the most useful motivational instruments in health-behavior change—religion. Recently, this fact has been receiving attention and growing recognition. The subsequent development of the holistic approach to health care, which includes the spiritual along with the physical, mental, and social, gives great promise of developing a truly effective approach to the prevention and treatment of today's health problems.

This article is adapted from a chapter in Dr. Leo Van Dolson's book *Better Isn't Bitter*. You will enjoy reading the entire volume, which is available for only $2.00 (U.S. dollars), postpaid. Send your order to Home Study Institute, Takoma Park, Washington, D.C. 20012. Please include check or money order.

REFERENCES

[1] Ernest Dichter, *Motivating Human Behavior* (New York: McGraw-Hill Book Co., 1971), p. 11.
[2] *Ibid.*, p. 13.

SKIP BAKER

One of the effects of scoliosis—one side of the back being higher than the other—can be seen on this patient.

NATIONAL ORTHOPAEDIC & REHABILITATION HOSPITAL, ARLINGTON, VA.

Patient has her brace checked for proper fitting.

Scoliosis—the dangerous curve

by Diane Klein

"Karen, dear, please stand up straight. This hem still hikes up on one side." For the occasional times when the tall, slender 12-year-old needed to wear a dress instead of her usual blue jeans, her mother noticed a problem adjusting the hemline, but never attached any importance to it.

"We thought it was Karen's posture or the way she was standing," says Mrs. Davidson, a tall, dark-haired woman with a warm, friendly manner. "Karen was a big girl for her age, and we thought she was slouching to minimize her height, the way girls do when they suddenly find themselves a head taller than all of their friends.

"But just before Karen's fifteenth birthday, my husband, Kenny, and I visited her at summer camp. And when I saw her standing in a swimsuit, I noticed that one hip seemed higher than the other.

"I still wasn't alarmed, though fortunately I mentioned it casually to a friend whose teen-age daughter had recently seen a doctor for a postural defect. She convinced me to take Karen to see an orthopedist as soon as she returned from camp.

"So one hot morning in late August, Kenny, Karen, and I sat in the doctor's office, and a chain of events began that deeply affected all of our lives. The orthopedist X-rayed Karen and diagnosed her problem as scoliosis, curvature of the spine, something we hadn't even heard of before. We were numb with shock as he told us that Karen had a rather severe spinal curve, that she would probably require delicate major surgery, with up to six weeks in the hospital, as well as several months of lying immobile at home in a body cast afterward.

"When his words gradually dawned on us, we all burst into tears in the doctor's office, unable to accept the reality of the terrible news."

Scoliosis often overlooked

Sadly, this is the way most parents discover their children have scoliosis—almost by accident. It's common for the youngster to be brought to the doctor for "poor posture," "high shoulder," "slouching," because "one leg is longer," and similar reasons. Usually it's an outsider who notices something is wrong, for there's no pain when a child has a spinal cur-

vature, and the progression of the defect is slow. Thus it's easy for parents or even doctors to overlook. Girls, especially, are very self-conscious about their bodies in adolescence, and parents rarely have a chance to carefully inspect a child's physical appearance.[1] According to Dr. Louis Shifrin, "a long-term study of untreated scoliosis has shown a significant incidence of physical impairment and early death." The approximate degree of the handicap varies with the degree of the spinal curvature. As the curvature increases, the chest cavity becomes narrower and room for lung expansion is decreased. Eventual heart and lung failure can be two of the grim complications of moderate or severe untreated scoliosis.[2]

People with even lesser deformities also suffer from ill effects. In an age when physical beauty is idealized, a "crooked spine" can be a considerable psychological burden for any young woman. And frequent back pain is very common, especially past middle age, since continuous abnormal stresses on the spinal column wear down the disks and joints, leading to degenerative arthritis.[3]

Nevertheless, scoliosis isn't a rare disease. At least one study suggests curvatures of five degrees or more affect from 4 to 9 percent of the population.[4,5] Yet, a mild curve of this type that becomes progressive can cause deformity and disability. Successful treatment depends upon early discovery of the abnormality, as often a serious operation can be avoided when scoliosis is treated in the early stages.[6]

Causes unknown

What causes scoliosis? Although many exciting discoveries have taken place in medicine within the last few decades, we're still no closer to knowing the cause of the vast majority of cases of scoliosis, known as idiopathic scoliosis. About 80 percent of patients with spinal curvature are said to have this type—with girls outnumbering boys about five to one. The onset commonly appears when the child is 10 to 12 years old. And the younger the child when the structural curve develops, the more serious is the prognosis.[7]

Dr. Hugo Keim, director of orthopedics at Columbia Presbyterian Hospital, points to increasing evidence that idiopathic scoliosis is genetic in origin, though we don't as yet clearly understand the specific genetic patterns.[8] We do know, however, that the appearance of scoliosis in more than one child in a family is not unusual, and the routine screening of brothers and sisters of scoliosis patients often results in early recognition of the disease.

Other types of scoliosis exist, but they are less common. With all types of scoliosis, however, there's a desperate need for early detection and frequent evaluation of the young patient through the use of X-rays.

The Milwaukee Brace, developed 30 years ago, has proved to be a safe and effective method of nonoperative treatment of scoliosis. The results, however, are good *only* if the curve is found early and the brace is applied promptly, maintained until the child's growth is completed, and then removed gradually. Even then, it is only a holding measure. It doesn't improve the situation, but keeps it from worsening. Attempts to treat large or severe curvatures of more than 30 degrees by bracing have proved worthless, so that major surgery remains the only answer for children with such curves.[10]

Dr. Robert B. Winter and Dr. John H. Moe stress, "One of the saddest problems of orthopedics is to see a child come in with a severe curve requiring surgery, with X-rays taken many years before showing a mild curve that could easily have been treated with a brace."[11]

Simple test

The test to discover a crooked spine is not a complicated one. The youngster, with his back bare, is asked to bend forward, knees extended and feet together, both arms hanging down as the doctor, school nurse, or even the parent looks straight down the back. The two sides of the chest should be absolutely symmetrical. If one side is higher, a curvature is present, provided the child has bent forward correctly. The level of the shoulders, the level of the hips, and the prominence of one or both shoulder blades should also be examined.[12]

Obviously, it would be a tremendous help if all children had their backs examined routinely when seen in the doctor's office or the hospital, no matter what the problem happened to be at the moment. If your doctor neglects to do so, ask that your child's back be looked at, especially during the most vulnerable years, between 10 and 13.

According to Dr. Martin Wolpin, youngsters who need the Milwaukee Brace generally must wear it from the recognizable onset of the curvature until maturity. The children are encouraged to run and play in the brace and even to bike-ride, skate, and go horseback riding. Swimming for an hour a day without the brace is also a beneficial form of exercise for these children.[13] They are seen frequently for brace adjustment and new X-rays are taken every six months. When the X-rays show that the patient is nearly mature, the youngster is gradually weaned away from the brace over a period of one to two years. Eventually the brace is worn only at night until the spine is

completely mature. Of course, it's understandable that many children are deeply upset by having to wear the corrective appliance, because it's large and cumbersome. So a rather unique social group called the Turtles Club has been formed at Fairview Hospital in Minneapolis, Minnesota. The "turtles" are children who must wear a brace, and they meet to talk over their problems and participate in social activities. They share feelings of self-consciousness and boost one another's morale. They also help new youngsters about to face the same traumatic experience. The parents are involved, as well, in helping one another to deal with the physical and emotional difficulties of their children.

Some patients with scoliosis unfortunately do not respond to the brace. Dr. Robert Winter believes that many children with a congenital curvature who require treatment will eventually need surgery.[14] The appliance is then used as a temporary device until the child is mature enough so that an operation can be performed.

Happily, newer methods of postoperative care have made life a lot easier for most children and their families, even after surgery. Whereas Karen spent six months in bed after her spinal operation five years ago, many youngsters today are out of bed in two weeks.[15] Although it has been only relatively recently that some orthopedists have proved that patients can get out of bed without damage after spinal surgery, it is now the most common form of treatment.

Perhaps the most encouraging development in trying to fit together the pieces of this medical puzzle is the new method of collecting data on the disease. Under the auspices of the Scoliosis Research Society, every physician who belongs to the Society sends yearly information on each scoliosis patient to the organization. It is hoped that with the accumulation of large amounts of data, more insight into the causes of scoliosis, its prevention, and better methods of treatment will be found.[16] Research and early detection are the best weapons in preventing the deformities still all too common throughout the world today. No one seeing Karen now, a tall shapely college student, could ever imagine she might have faced life with a severe physical handicap.

New scoliosis treatment

Some teen-agers with scoliosis are benefiting from a new technique developed by a Case Western Reserve University-University Hospitals of Cleveland team.

The technique, still in the experimental stage, involves the implantation of very fine wires through the skin into muscles on the curved side of a patient's spine, and painlessly stimulating those muscles electronically at intervals throughout the night.

This process has been developed as a possible alternative to the use of the Milwaukee Brace, which is worn twenty-two hours a day for three or four years to prevent the need for surgery.

J. Thomas Mortimer, Ph.D., associate professor of biomedical engineering and director of the Applied Neural Control Laboratory of Case Western Reserve University, designed and developed the technique. He and Clyde Nash, M.D., an orthopedic surgeon at the hospital and professor of orthopedic surgery at the CWRU Medical School, first applied it to patients at Rainbow Babies and Children's Hospital.

The technique has been under investigation for more than a year in five adolescents 12 to 14 years old. "We're pleased with the results so far," says Dr. Nash.

The principle of muscle stimulation is not new. Dr. Mortimer and Hunter Peckham, Ph.D., of CWRU, had been experimenting for years in the use of small wires placed through the skin into muscle to stimulate the paralyzed muscles of spinal-cord-injury patients. Dr. Mortimer then adapted this technology, with funding from the National Institutes of Health, and applied it to the problem of treating scoliosis as a means of avoiding surgery.

REFERENCES

[1] Louis Z. Shifrin, "Scoliosis—Current Concepts," *Clinical Pediatrics*, vol. 11, No. 10, p. 596.
[2] A. Nachemson, "A Long-term Follow-up Study of Nontreated Scoliosis," *J. Bone Joint Surg.* 51-A:203, 1969.
[3] Jan Bjure and Alf Nachemson, "Nontreated Scoliosis," *Clinical Orthopedics*, June, 1973, p. 44.
[4] "The Epidemiology of Scoliosis," presentation at the Scoliosis Research Society, Wilmington, Delaware, 1972.
[5] Robert B. Winter and John H. Moe, "A Plea for the Routine School Examination of Children for Spinal Deformity," *Minnesota Medicine*, May, 1974, p. 423.
[6] *Ibid.*, p. 419.
[7] James Hardy and Burr Curtis, "Current Concepts in Scoliosis," *Connecticut Medicine*, December, 1972, p. 680.
[8] Hugo Keim, "Scoliosis," *Clinical Symposia*, vol. 24, No. 9, 1972, p. 2.
[9] Louis A. Goldstein, "Current and Developing Aspects in Management of Scoliosis," *N.Y. State Journal of Medicine*, Dec. 15, 1972, p. 2,977.
[10] Winter and Moe, *op. cit.*, p. 423.
[11] *Ibid.*, p. 419.
[12] *Ibid.*, p. 422.
[13] Shifrin, *op. cit.*, p. 601.
[14] Robert B. Winter, "Congenital Scoliosis," *Clinical Orthopedics*, June, 1973, p. 79.
[15] Correspondence with Dr. Theodore Waugh, secretary of the Scoliosis Research Society, June, 1975.
[16] Keim, *op. cit.*, No. 1, 1972, p. 32.
[17] *Medical World News*, May 5, 1975, p. 28.

Diane Klein, a free-lance writer, lived in Lawrence, New York, at the time she wrote this article.

STOP WASTING FOOD, Time, Energy, Money
SAVE! MAKE BREAD

Total Juices®, hot soups, all grain cereals, flour, instant dinners, salads, hamburgers, cakes, peanut butter, baby foods, bland diets, purees, party drinks, chopped ice, freeze "ice cream."

TOTAL JUICER®

"3600" VITA MIX® makes them all INSTANTLY . . .
SIMPLE AS *ONE, TWO, THREE* . . .

The one that throws NOTHING away!

Now is the time to start saving money and the nutrition in your food

Use patented "impact" method—not old separation "throw-away" method.
U.S. Dept. Agriculture handbook says:

	extracted juice only*	peel and everything*
LEMONS (VIT. C)	**90 mg.**	**346 mg.**
ORANGES (VIT. C)**	**109 mg.**	**319 mg.**

**Fresh, ripe Cal. Valencias *per pound of fruit

Now you can get up to the nutrients shown above the Vita Mix way.

("Peel and everything" is the VITA MIX® way)

SUPER 3600 STAINLESS STEEL VITA MIX® BREADMAKER

The easy way to make home made bread — not only fresh-baked but of fresh-ground grain with precious, fragile vitamin oils retained for that yummy "3-minute fresh" flavor.

Only VITA-MIX® can grind grain, mix and knead the bread all in one easy 3-minute operation.*

No need for old fashioned, oversized bowls, kettles, dough hooks or stone grinders that clutter your kitchen and take so much time.

* 3 minutes for us
5 minutes for you if you are new at it

1. MERELY PUT FOOD IN PATENTED "SPLASH GUARD ACTION DOME"®
Always wide open. Safe for hot liquids! Your "3600" juices, freezes, cooks boiling soup, porridge, pudding, etc. in a never-ending stream as long as you continue to add food through the wide open top.

2. FLIP FULL-IMPACT LEVER — THAT'S THE DIFFERENCE!
Hammer blades revolve and reverse — smash into foods up to 1,000 times harder than any one-way appliance that just pushes food around.

3. OPEN THE PATENTED PRESSURIZED SPIGOT
serve Total Juice® "ice cream", hot soup—over 800 recipes—by dish, glass or by gallons. No lifting, pouring or lid handling. Continuous usage for the first time — right at the table. Large or small quantities.

Free Recipe Book

TOTAL JUICES!
COOKS!
FREEZES!

CHECK THESE FEATURES

- ☐ **Full 5 Year Parts Replacement**
- ☐ **U.S. Made, Nation-Wide Service**
- ☐ **Self Cleaning**
- ☐ **Commercial Super Powered Motor**
- ☐ **Save Food, Time, Money—Now!**
- ☐ **(UL) Listed—Heavy Duty Quality**
- ☐ **265 MPH Blade Tip Speed—*Instant head-on impact in safe, heavy,* stainless steel concussion chamber**
- ☐ **Safest Stainless Steel Construction**
- ☐ **No Other Appliance Has Vita Mix® Features**

WRITE TODAY! — OR PHONE Continental US (800) 321-2790
In Alaska and Hawaii (800) 321-8640

We will RUSH TO YOU A GIANT FOLDER giving you the complete, never-before, exclusive details . . . plus WHERE TO BUY information . . . and SPECIAL PRICE.

SPEED IS IMPORTANT - Supplies are limited. We will do everything possible to prevent slowdowns due to lack of materials. WE WILL FILL ORDERS AS THEY ARE RECEIVED — on a strict and fair first-come basis .

SEND THIS COUPON TODAY to: VITA MIX® Corporation: "3600" Division, Dept. LH 379
8615 Usher Road, Cleveland, Ohio 44138

YOUR NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP CODE _____

DON JEHLE

"I don't want to grow old—I'll die if I do"

by Richard K. Jantz, Ph.D., and Carol Seefeldt, Ph.D.

They can't walk very fast, they're not very strong." "They have heart attacks at 90 and die." "They go to church a lot." "If they are crippled or something like that, they can be sent to homes." These are children talking about older people. Children do not see growing old as being much fun. They really don't want it to happen to them. Although children seem to like older people, they just don't want to become one of them.

We interviewed 180 children, ages 3 to 11, asking them what they thought about old people. Additionally, we were curious as to how children felt about their own aging.

Children apparently have very limited contact with seniors, especially those outside of the family unit, and also seem to have mixed feelings on this subject. They like older people as individuals, reporting that they are "rich, friendly, wonderful, and good." Yet at the same time they viewed seniors as being "sick, ugly, and sad."

Physical characteristics of age seemed to bother children. They often commented on gray hair, wrinkles, and glasses. They also view the elderly as a passive group using canes and sitting in wheelchairs.

Children felt they could "talk to

older people on the porch," "watch TV with them," "play checkers," or "go to church with them." A number of children indicated that they would like to help older people and made such comments as "I could help them cross the street, bring in the wood and feed the chickens and I could stay with them in case something goes wrong."

A few children thought people in the upper-age group could help them do things. These children said that an older person could help them "learn more about life," "teach me things," or "help me fix things." One child said, "Well, older people have lived longer, so they're smarter and know more than I do."

When asked how they felt about getting old the children we interviewed responded negatively. More than 89 percent responded that growing old was "terrible," "awful." A large number of children connected growing old with their own limited futurity. "I don't want to grow old—I'll die if I do."

Eleven out of the 180 children took a philosophical view, responding, "Well, there's just not much you can do about growing old." "It's just one of those things that we all have to do." But for the most part, the children said things like, "I don't want to get old; I want to stay in this world longer."

Stereotypes

Their ideas of growing old could be considered negative stereotypes, since they are not based on information or facts.

It's hard to challenge stereotypes about a group of people when there is little or no contact with the individuals that make up that group. Children need to come to know older people who are active, happy, and living fully.

Often it's not easy to arrange for children to be with older folks. In many cases, families no longer live in the same city or State as grandparents. Neighborhoods are age-segregated, with younger families and children living apart from older people. Nevertheless, it's still possible to give children continual contact with people in the older generation.

Becoming involved with a community organization, church, or synagogue is one way. Through these organizations, some families have "adopted" grandparents who join the family for holidays, sharing the love and enjoyment of the family circle.

As children have experiences with older people they will see for themselves that aging is a part of living and that older people are very similar to younger people. They like the same things, do the same things, and have the same feelings.

Grandparents and older relatives need to realize that keeping close ties is important, even when separated by many miles. "Grandparent Books," or family history books, with pictures, photos, stories, news clippings, and bits and pieces of the past, help children to feel the continuity of human life. When grandparents are able to visit, they might, when possible, recall their past, telling the children of the "olden" days. They can tell what they did when they were younger, how they felt as they grew, the games they liked to play.

Society at fault

Society, in one sense, is responsible for convincing children that young is better than old. The young, tall, skinny models children see on television and programs that ridicule older people seem to tell youngsters that there is nothing to value about being old.

When older people are represented in the media as silly, stupid, inactive, or unable, parents should ask children if they think all in that age group are silly, or point out examples that directly challenge them.

Aging does bring things of value, and many senior citizens continue to make great contributions to our society. It's not hard to point out the contributions senior citizens make and to help children see that age brings a certain perspective on life, along with skills, knowledge, and understanding that can only come from living and experiencing.

Focusing on the aging process may help children who are afraid of growing old view their own aging more positively. Keeping scrapbooks of the children's lives helps them to recall and adapt to the changes that occur as they age. Records of height and weight, photos taken at different ages, samples of schoolwork, and notes about their favorite sayings or activities are not only fun to go over on a rainy day but are constant reminders to children that even if they do grow and change they will still be the same person.

Children who live fully each day, who have developed the skills of creativity, curiosity, or facing life with wonder and joy, will not fear their own aging, for they are not being cheated out of anything good life has to offer.

Implications for us all

Children's attitudes toward older persons undoubtedly have far-reaching implications for all of society.

In Great Britain the National Old People's Welfare Council actively encourages the study of the aging by the young. The council believes that it is only as the young learn to adjust to their own aging that they will be able to treat seniors with dignity and respect.

With a realistic view of aging and through continuous contacts with active, happy, fufilled older people, children may be able to reverse the negative perceptions they hold regarding senior citizens, and may, in turn, form a society that values and respects the contribution senior citizens can make and are making.

BIBLIOGRAPHY

Jantz, R. K., C. Seefeldt, A. Galper, and K. Serock, *Children's Attitudes Toward the Elderly.* Final report submitted to the American Association of Retired Persons and the National Retired Teacher's Association. College Park, Maryland, University of Maryland, 1976.

National Old People's Welfare Council, *Annual Report for the Year Ending March 31, 1966.* British Information Services, London, 1966.

Richard K. Jantz, Ph.D., and Carol Seefeldt, Ph.D., are associate professors in the College of Education at the University of Maryland, College Park, Maryland.

GAZETTE

New medicine dropper provides accurate dosages

A first-of-its-kind medicine dropper that holds precisely one full 5cc teaspoon has been designed by Apex Medical Supply, Minneapolis, Minnesota.

The scientifically calibrated and versatile Super Dropper is designed to dispense medicine in any of three ways—by the fractional or full teaspoon, by the metric cubic centimeter (cc), or by single or multiple drops.

Calibrations are precisely molded right into the dropper so the user is always assured of accuracy, and the calibration markings will not wear off.

"Health-care experts have been very concerned about the problem of accurate dosage of liquid medications," says Darrow Beaton, president of Apex. Recent studies reveal that the common kitchen teaspoon varies in capacity from 2cc to 9cc—a 450 percent variation! An underdose of medication means symptoms may persist, or complications may develop. An overdose of today's more potent medications could prove harmful.

The Super Dropper can be easily operated with two fingers of one hand, so a mother's other arm is free to hold a child to whom she may be administering the medication. Another important feature is that the device puts medication at the back of the mouth, beyond the taste buds.

Further information may be obtained by writing to Apex Medical Supply, Inc., 9701 Penn Avenue South, Bloomington, Minnesota 55431. Telephone (800) 328-2935.

Garbage Disposal?

I have a question about a potbelly,
Though I hesitate to ask it—
But could it be
Possibly
Called a waist basket?

—Ruth M. Walsh

Simple home test available to detect early pregnancy

A simple in-home test to detect early pregnancy is being introduced in over-the-counter markets throughout the United States by the J. B. Williams Company.

The test can be done by an individual, and it recorded a 97 percent accuracy rating in extensive clinical testing, according to officials of the Williams Company, the New York-based consumer products firm that will market the product through drugstores.

The simple urine test, called Acu-Test, was developed and tested over a three-year period. It can detect pregnancy nine days after the first symptoms are noted.

This is appreciably earlier than definitive results generally obtained through procedures involving rabbits, frogs, or other technical methods.

A major benefit of the easy, in-home test is that it will enable women to seek earlier prenatal medical care to safeguard the health of the child and mother, according to J. B. Williams officials.

Considerable medical attention is being focused on the effects on prenatal child development of such factors as the mother's health, diet, exercise, smoking, use of alcohol and drugs, and other influences.

The Acu-Test procedure involves only mixing a urine specimen with two chemical agents in a test tube and letting it stand for two hours. If a brown ring appears at the bottom of the test tube, it indicates pregnancy.

For further information, contact Hank Meyer Associates, Inc., 2990 Biscayne Boulevard, Miami, Florida 33137.

GAZETTE

A new way to store dangerous drugs

An estimated 500,000 children will be victims of accidental poisonings this year. Ninety percent of them will be less than 5 years of age. MEDI+GUARD ends frustrations of unsafe storage of drugs or harmful medicines. It takes both hands to depress all four door latches and slide the door open. Children under age 5 usually do not have the handspan or coordination to open this safety chest. MEDI+GUARD is available in white high-impact styrene and includes mounting screws or tape. It is an ideal gift for families with young children. Weight 6 oz., $5.95 postpaid. Better Home Products Corp., 905 Fee Drive, Sacramento, California 95815.

International directory of "Access Guides" available free to disabled and elderly

A 16-page directory listing 275 "Access Guides" to cities and transportation facilities throughout the United States and around the world is available free to disabled and elderly persons as well as to organizations serving their needs.

"Access Guides" are handbooks (most of them free) that describe an area's hotels, restaurants, theaters, churches, transportation facilities, and other features in terms of their physical accessibility to persons with limited mobility. They are essential guides for people in wheelchairs, for instance, who need to know whether a hotel's doors are wide enough for their wheelchairs and whether steps or other barriers will make use of a particular restaurant difficult if not impossible.

Individuals may order their free copy of the 1978-1979 international directory of "Access Guides" by writing: Access Guide Directory, Rehabilitation International U.S.A., 20 West 40th Street, New York, New York 10018.

Organizations serving the disabled and elderly may order copies in quantity.

MOVING?

Eight weeks before you go, let us know.

For faster service, attach your current address label (from magazine cover or wrapper) in the space indicated. Then fill in your new address and mail to LIFE & HEALTH Circulation Department, 6856 Eastern Ave., NW., Washington, D.C. 20012.

NEW ADDRESS:

Name

Street or P.O. Box

City

State Zip

Attach your address label from current issue here.

Multiple electrical outlet consoles for physically disadvantaged persons

Three new multiple electrical outlet consoles (UL Listed) have been designed primarily for the physically handicapped to allow them to safely and conveniently centralize the switching of power to various electrical devices throughout the home, office, or a variety of other applications.

These three new designs, which have a wood-grained vinyl finish, are available with four outlets, six outlets, and eight outlets, located on the back of the desk-top consoles. Switches are located on the front of the panel, which features built-in pilot lights.

All units are equipped with push-to-reset circuit breakers and are available with 6- or 15-foot power-supply cords. Models are maximum rated at 15A, 125VAC, 60Hz continuous duty, and incorporate three-wire "U" ground outlets.

SGL Warber Electric manufactures more than 360 (UL Listed) models of multiple-outlet strips for a variety of electrical applications. Catalogs are free and available upon request from the company at 300 Harvard Avenue, Westville, New Jersey 08093.

Meals on Wheels

Each noon
She waits for the food
Prepared with tender loving care
And the chat
With someone who calls her My Friend.
Meals on Wheels! Recess in a
Long day.

—Dorothy Shank

Liver's role in immune system established

New proof that the liver has an active part in the body's immune system is detailed in research done by a physician at the University of Texas Health Science Center at Dallas.

Thomas M. Rogoff, M.D., is winner of the American Liver Foundation's first annual Research Prize for his work in isolating Kupffer cells and discovering the role they play with blood lymphocytes, or white cells, in disposing of antigens, or foreign materials in the liver. The work was supported by both training and research grants from the National Institutes of Health.

"Dr. Rogoff's work, carried out in the laboratory of Dr. Peter Lipsky, adds a new immunological dimension to the liver," said Dr. Burton Combes, chairman of the board of the foundation and one of the country's foremost liver researchers. The liver has long been looked on as a chemical regulator, manufacturer, and treatment plant, but this work has clearly shown that it also has an immunological function, a role that had been suspected.

A lot of information showed that Kupffer cells, a type of macrophage, take up foreign material circulating in the body. However, before Rogoff developed his method for isolating the Kupffer cells, it was not possible to obtain enough cells to observe their workings. It is now clear, Combes explained, that these cells work in a cooperative effort with lymphocytes, a kind of white cell present in the blood and other parts of the body. The Kupffer cells first process foreign substances and then pass along signals about their presence to the lymphocytes, which are capable of mounting an immune response to these materials.

For further information, contact the University of Texas Health Science Center at Dallas, 5323 Harry Hines Boulevard, Dallas, Texas 75235.

A manual for parents—How to survive school open house

by Jean Fehrenbach

All books on parenting should include a chapter on the parent in school. I don't mean how to handle parent-teacher conferences. I'm talking about instructing parents on how to survive the annual school open house.

Kindergarten is a good place to start for both children and their parents. Enjoy yourself—it won't last. In the little people's world, there is an aquarium in one corner and a terrarium in the other. And the walls are papered with family portraits. Before every open house, every kindergarten teacher assigns every student the task of drawing his or her family. Plan some extra time to find your family members because all the stick people lining the wall have one thing in common. Every mother, father, brother, sister, cat, and dog has hair pointing heavenward as though he, she, or it had received a massive jolt of electricity at exactly the same time they were observed by their kindergartner.

In this miniature environment, only one hazard exists. Don't try to sit on the chairs. One father I saw crashed to the floor during a teacher's explanation of how she instructs her class on public behavior.

Another man, attempting some comfort in chairs with seats seven inches off the floor, crossed lanky legs and slipped one foot behind the chair leg. After fifteen minutes in this yoga position, he needed assistance from two other men to help him to his feet.

Desks are still a gamble through fourth grade. At another open house, a rather plump parent proudly slid into the seat only to become stuck. While her husband pushed on one side, the teacher pulled on the other. Fortunately, the incident was resolved short of the rescue squad.

During those primary years, line up a support group of parents—you'll need them at the junior high level. It's easy. Before you leave home, find out who the others in class are who play with their gum, comb their hair in class, and talk too much. As you enter the classroom, scan the name tags. Usually you'll find your group sitting in back of the classroom, looking desperate. Don't worry about formal introductions. They'll know your name too. As long as you are part of a group highly motivated to avoid the teacher's eyes, talk about anything and you'll have a captive audience.

While grade-schoolers beg you to look inside their desks, the junior-higher warns you to stay out of his locker. Because a locker never looks better than a teen bedroom, take his advice one step further. When passing his locker, walk on tiptoes and hold your breath. Keep in mind that if that locker springs open, a reincarnated Houdini couldn't put the contents back inside it.

During these years, the parent is in a vise and the teen is squeezing one side. For the first time, the child expects the parent to look and act right. If you're really interested in pleasing your teen, prepare to spend a month losing ten pounds, restyling your hair, and shopping for clothes

ART BY JOHN NEVINS ANDREWS FIRST GRADE

that must be a combination of conservative, stylish, and appropriate.

Early teens' instructions on parental behavior are full of negatives. Don't do anything to embarrass their friends' parents, don't show teachers their baby pictures, and don't ask dumb questions. I suggest bargaining. A clean bedroom is worth a commitment to refrain from broadcasting all the cute things your teen did as a toddler.

By this time the child is manipulating the system, and clues on his school conduct are more subtle, but still there for an informed parent. If he says, "I've turned over a new leaf today. I hope Teach noticed," you'll have a special reason to look for your friends at the open house. When they see you, they'll probably greet you with more enthusiasm than your own mother would.

Remember, hands off

Try to keep your hands off objects in the classroom. This rule is harder than it sounds because there are so many interesting things. The urge to pick up a skeleton's arm and wave it at the teacher is difficult to control. Overhead projectors are even more fun and offer limitless possibilities for holding quickie cat-and-mouse games. I knew a mother who was caught tuning a cello.

If you have attended open house in the lower grades regularly and have developed the necessary skills, the high school open house will round out your experience. Highschoolers are ready to change the world and are curious about why you bother with kids' stuff like attending a school open house. However, your absence ensures them a couple of hours alone with the house and the telephone. So, they'll shrug and make their classic statement, "OK, go ahead, if that's what turns you on."

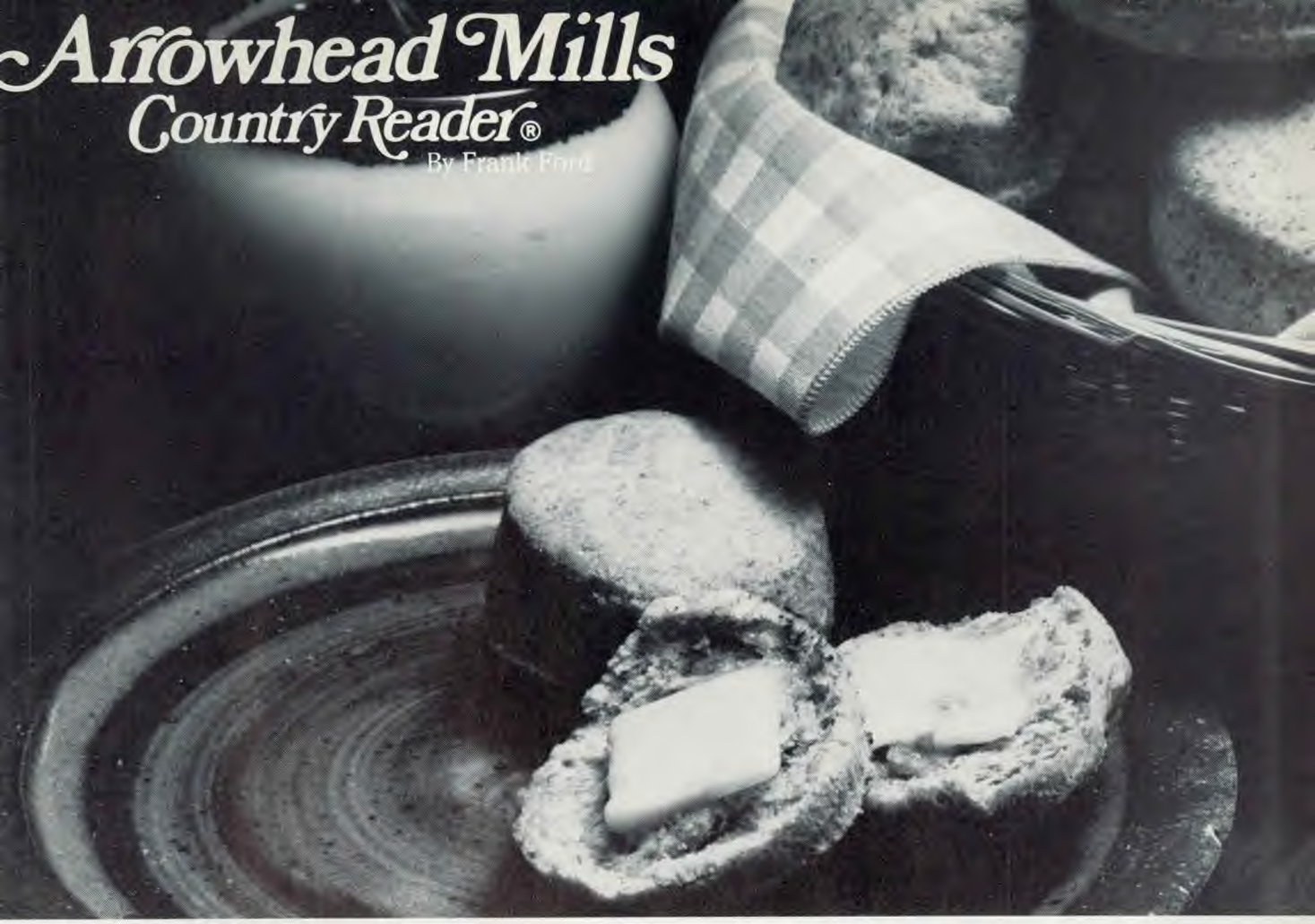
With self-consciousness buried years behind you, zip up and down those wings as though you know where you're going.

Take at least one night for parent-watching. In every class, a back-slapper, usually a father, sweeps through the door and pumps the teacher's hand while reminding him loudly of the great golf game last week. Usually, the teacher looks longingly at the desks in the back row.

Some people use the event as a platform to denounce education, metrics, or whatever else comes to mind. Others utilize the question-and-answer system by asking a history teacher how life in the United States would be different today if the South had won the Civil War.

It's almost over. Say goodbye to the other parents in your support group. Tell them you'll never forget how all of you grew gray together. Before you leave, don't forget one stop. Peek into the biology room—where you will see an aquarium in one corner and a terrarium in the other. &

Jean Fehrenbach has been a free-lance writer for nine years, specializing in humor, travel, people features, hard news, and crafts. For fun she sews, logs fifty miles a year at her local pool, and uses her ten-speed bike for summer transportation. She is a mother of six, and grandmother of one.



Introducing our Multigrain Biscuit Mix. Or how to be as good to your body as you are to your taste buds.

The problem with biscuits made from most frozen dough and packaged mixes is that the only flour they contain is bleached white flour that has natural flavor and nutrition processed away. They also contain refined sugars, preservatives and other artificial ingredients. So although you get hot, freshly baked biscuits, you also get a lot of empty calories.

The ideal way to make biscuits that do more than just satisfy your taste buds is to bake them from scratch, using whole grain flours. But in these busy modern times, we realize that just isn't always practical.

That's why Arrowhead Mills is introducing a new Multigrain Biscuit Mix. It contains a special blend of all whole grain flours, including whole wheat flour, triticale flour and whole grain pastry flour.

The grain we start with to make these flours is grown by natural farming methods. That means using compost and trace minerals instead of chemical fertilizers. And controlling pests and weeds with beneficial insects and mechanical cultivation instead of chemical pesticides and herbicides.

It also means that once these grains are harvested, they're cleaned and stored without the use of fumigants. Then they're stone ground to preserve all the goodness and flavor of the whole grain.

So what our Multigrain Biscuit Mix contains is everything you need except a little vegetable oil and water to make delicious, piping hot, home baked biscuits. What it doesn't contain is chemical preservatives or sweeteners.

And that means you can enjoy freshly baked biscuits that not only taste good, but also provide your body with wholesome nutrition.

At Arrowhead Mills we believe that natural foods should provide the very best in both taste and nutrition. We are doing our best to provide the finest foods from this fertile growing area to natural health food stores everywhere.

Hereford, TX. 79045

"We treat food with respect, not chemicals."

Not for rabbits only

by Mary Alice White, R.D.

Of course carrots are good for your eyes; you've never seen a rabbit wearing glasses, have you?" I've heard that many times, but it still makes me laugh. Glasses or not, some people who dislike carrots seem to feel they should be limited to serving as rabbit food. But carrots are not just for rabbits, they are an excellent people food also!

The carrot, cultivated in the Mediterranean area before the time of Christ, was used by the ancient Greeks and Romans for medicine, but not for food. By the thirteenth century carrots were being used in China and the northwestern part of Europe. When the carrot was first introduced into England, women were so captivated by the green, lacy, fernlike carrot tops that they used them to decorate their hair and hats.

Classified as a root vegetable because the root is the portion that is consumed for food, the carrot is a convenient vegetable to use because it is available year round, stores well, and combines excellently with most slow-cooking foods. It is also a very versatile food: carrots can be eaten raw or cooked and may be canned, frozen, or dehydrated. They may be prepared and used for the main course of a meal or incorporated into cookies, cakes, and pies for a dessert.

Carrots are available in prepackaged form or in bunches with the tops still intact. When purchased, they should be smooth, firm, well-shaped, and have a bright color, free from spots of soft decay. If purchased with tops, choose those with tops that are fresh and green. Avoid buying carrots that have large green "sunburned" areas at the top or those that are flabby from wilting. Remove the tops, place the carrots in plastic bags or in aluminum foil, and store them in the vegetable crisper drawer of the refrigerator. Fresh carrots will keep approximately four weeks under refrigeration.

Carrots contain a large amount of carotene, which gives the vegetable its bright-orange color. Carotene has the same biological effect in promoting growth that vitamin A has. Inside the body (within the intestinal wall) carotene becomes physiologically active and a chemical reaction converts it to vitamin A.* Vitamin A is necessary for vision (night blindness is commonly caused by a lack of this vitamin), for maintaining the health of the skin and the membranes that line all the passages that open to the exterior of the body, and for bone and tooth growth and development.

Carrots vary in the amount of carotene they contain, depending upon their maturity. Small young carrots and old carrots have less carotene than those harvested at their prime. The carotene content of carrots is resistant to destruction by ordinary cooking methods but is susceptible to oxidation (combining with the oxygen in the air) when carrots are dried, resulting in some loss of carotene.

Carrots also provide a liberal quantity of potassium and contain small amounts of riboflavin (vitamin B_2), ascorbic acid (vitamin C), and iron. As with most root vegetables, the carrot furnishes a fair amount of thiamine (vitamin B_1).

Carrot Information

Differently prepared carrots provide caloric value as follows:

Raw:

1 medium carrot = 30 calories

1 cup grated carrots = 45 calories

Cooked:

1 cup sliced = 50 calories

Approximate weight and amount equivalents of carrots:

1 bushel = 50 lb.

6-7 medium (7 in.) carrots = 1 lb.

1 medium carrot = ¾-cup grated

*One should remember that vitamin A is fat-soluble and is stored in the body. Excessive amounts are toxic to the body. One serving a day of a food high in carotene or vitamin A is adequate for normal human needs.

Recipes

Carrot loaf

1½ cups grated raw carrots
1 cup cooked rice
1 cup milk
1 egg, slightly beaten
1 medium onion, diced
½ cup chopped nuts or ⅓ cup peanut butter
½ cup breadcrumbs
1 tsp. soy sauce
¼ tsp. salt
⅛ tsp. sage

Combine all ingredients (or blend in blender). Place mixture in an oiled casserole dish and bake for 1 hour at 350°F. Serve with white sauce garnished with parsley, or with a favorite sauce or gravy.
Yield: 6-8 servings.

Carrots amandine

3 cups sliced raw carrots
1 cup sliced celery
¼ cup diced onions
2 Tbsp. oil
2 Tbsp. water
2 tsp. lemon juice
¼ tsp. salt
½ cup toasted slivered almonds

Toast almonds in oven until delicately browned. Combine all ingredients, except almonds, and cook until carrots and celery are crisply tender. Remove from heat and toss with toasted almonds.
Yield: 4 servings.

Carrot supreme

4 cups raw carrots, diced or sliced
1 medium onion, diced
1-2 Tbsp. oil
1 tsp. salt
2 Tbsp. chopped parsley
1 tsp. dill weed
½ tsp. paprika
1 cup yogurt

Sauté onion in oil. Add carrots and salt and a small amount of water; simmer until carrots are tender. Drain any remaining liquid and mix remaining ingredients. Heat just until warm. Do not overheat, as this will cause the yogurt to separate.
Yield: 4-6 servings.

Carrot pie

1¾ cups mashed cooked carrots
1⅔ cups milk
2 eggs, beaten
½ cup brown sugar
¾ tsp. cardamom
½ tsp. salt
½ tsp. vanilla

Combine all ingredients (or blend in a blender). Pour mixture into an unbaked pie shell. Bake at 425°F. for 15 minutes. Reduce temperature to 350°F. and continue baking for 35 minutes. Sprinkle top of pie with chopped nuts after baking.
Yield: One 9-inch pie.

Stuffed carrot curls

With a potato peeler, cut lengthwise strips of raw carrots. Wrap the strips around green or ripe olives. Insert picks to keep the olive wrapped. Serve on a relish platter along with other vegetables.

Carrot-bean croquettes

1 cup baked beans, mashed
1½ cups raw carrots, grated
½ cup breadcrumbs
1 medium onion, diced
¼ tsp. sage
pinch of salt

Combine all ingredients and mix well. Form into 2-inch balls and roll in bread crumbs. Place in ungreased baking dish and bake at 375°F. for 15-20 minutes. Serve with favorite sauce.
Yield: 5-6 servings.

Carrot-fruit toss

1½ cups raw carrots, grated fine
1 medium banana, diced
½ cup crushed pineapple (unsweetened), drained
½ cup chopped nuts
½ cup unsweetened coconut, shredded
¼ cup raisins
¼ cup dates, chopped
⅛-¼ cup fruit juice

Mix all ingredients together and toss with fruit juice (may use pineapple, orange, or apple juice). Serve on lettuce leaves garnished with sprigs of mint.
Yield: 6-8 servings.

Mary Alice White teaches home economics at Toronto Junior Academy in Toronto, Ontario, Canada.

GARDENING BREAKTHROUGH

A new miniature greenhouse system requires no installation or artificial heat and protects your plants down to 22°

John E. Bryan
Author, Small World Vegetable Gardening
Former Director, San Francisco's Strybing Arboretum

It's a miniature greenhouse system. You can now grow vegetables months earlier this year with a greenhouse system so practical it doesn't require installation or artificial heat---even when it's 10° below freezing.

I've been growing vegetables for 24 years. I've tested every kind of greenhouse for home gardening. And just like you I've been alarmed at the cost of building and heating a greenhouse. But now I've found a miniature greenhouse system that needs no installation, yet protects plants down to 22° without using artificial light or heat.

It's true! I've grown vegetables in freezing cold weather when I've used these miniature greenhouses. Without artificial heat I've grown vegetables months ahead of outdoor growing seasons. With GUARD 'N GRO I've grown cool weather crops like carrots, spinach and lettuce when it's too cold to grow anything outside. Without any installation these miniature greenhouses have protected my plants down to 10° below freezing. And now to help my friend who invented GUARD 'N GRO I want to tell gardeners everywhere about this superb gardening system.

***Energy-Saving Double Wall Construction.** Even on cold cloudy days, thermal air cells sealed between each GUARD 'N GRO panel traps and seal in solar heat to provide a constant warm climate for your plants.*

DEVELOPED IN CALIFORNIA

These miniature greenhouses were developed in California by my friend who named them GUARD 'N GRO. He spent years testing every possible kind of solar enclosure on plants and watching the plants react to each enclosure. From these years of testing he developed GUARD 'N GRO, the miniature greenhouses with sealed in thermal air cells.

When he sent GUARD 'N GRO to me I tried them on plants in freezing cold weather. GUARD 'N GRO kept my plants growing even in 22° cold. Soon my friend started selling GUARD 'N GRO to gardeners in other states.

It has produced superb results in Minnesota, Michigan, Colorado and Iowa. 2,000 GUARD 'N GRO systems are being used by gardeners in 46 states.

Last winter I gave GUARD 'N GRO to expert, experienced gardeners to test for themselves. They reported "We don't believe it but it's true, GUARD 'N GRO protected plants down to 22° without artificial light or heat." Thats what hard boiled experts say.

But even more important to you is what other average gardeners say. Here's a typical letter...from Mrs. Ruby Schultz of Tucson, Arizona. "Last winter I put my geraniums and tender plants in our GUARD 'N GRO...it was freezing cold - at least 18° to 20° above zero. I like GUARD 'N GRO very much. We have a larger greenhouse, but it gets cold in the winter as it is not insulated - it has to be heated in cold weather."

The basic GUARD 'N GRO unit is 42" long x 18" wide x 21" tall. Extensions that add another 40" to each unit let you connect individual units together. You can expand GUARD 'N GRO to six, nine or twelve feet...or as long as you like.

GUARD 'N GRO is different from any cold frame or geeenhouse you've ever used. It folds flat for storage, sets up anywhere outdoors and doesn't require installation. Without using artificial heat each unit creates a dependably warm growing environment even when it's 10° below freezing outside.

Your entire garden can be protected by the GUARD 'N GRO system when you join individual units together.

Think what this means to you! Now at last you can grow your own vegetables weeks, even months earlier this spring. You can protect your plants from killing frosts, freezing cold, hail and sleet...and never spend a penny for greenhouse heating or lighting. You can extend your growing season **at least** 4 weeks, spring and fall. You can grow cool weather crops like lettuce, carrots, broccoli, spinach, beets, Brussels sprouts, cauliflower, onions and broad beans, and do away with buying these vegetables at stores.

QUALITY FEATURES

Don't confuse GUARD 'N GRO with those plastic "bag-like" greenhouses that puncture easily. GUARD 'N GRO is made of tough, shatterproof polyproplene...won't shatter, rip, or puncture. Patented, galvanized metal fasteners anchor GUARD 'N GRO against strong winds. Solar panels trap and seal in the sun's heat...keeps your plants warm even on overcast, freezing cold day s

Grow vegetables weeks, even months earlier this spring. GUARD 'N GRO - with it's themal air cells - keeps soil and plants warm and moist even in 22° temperatures. No installation, no artificial light and no artificial heat is needed. In 46 states GUARD 'N GRO is saving time and money for home gardeners. Now at last you can grow vegetables weeks, even months ahead of normal growing seasons...and never spend a penny for greenhouse heating, lighting or building.

NO RISK TRIAL

No longer do you have to wait until warm weather to enjoy vegetables from your garden. Order GUARD 'N GRO...the miniature greenhouse system that needs no artificial heat...on a trial basis. Then really test the system. Use GUARD 'N GRO anywhere you like...use it as often as you like...to prove it's plant growing powers.

See for yourself how GUARD 'N GRO creates an ideal growing climate for your plants. See how it traps and seals in the sun's heat...how it keeps plants warm and moist...even when it's 10° below freezing outside.

Use it to grow lettuce, carrots, spinach, beets, broccoli...most any cool weather vegetable you like to eat.

Put GUARD 'N GRO to every test. If you don't agree it's the greatest gardening breakthrough you've ever used...if it doesn't pay for itself many times over in the vegetables it gives you, you have used it entirely free. It won't cost you a penny.

FREE BOOK

To get your GUARD 'N GRO system now, mail coupon below. Order now and receive free my 26 page gardening book. It's packed full of tips for year round gardening with the GUARD 'N GRO system. Don't delay. Supplies are limited. Mail the coupon now.

MAIL NO RISK COUPON TODAY

GUARD 'N GRO
c/o LIFE & HEALTH
6856 Eastern Avenue NW.
Washington, D.C. 20012

Please send at once _____ GUARD 'N GRO unit(s) at $22.95 each postpaid with 26 page GARDENING BOOK. If GUARD 'N GRO does not protect my vegetables down to 22 °F this spring...if it doesn't pay for itself many times over in vegetables it provides, then you will refund my money.

SAVE! Order 3 for $59.95, 4 for $75.00

Expand your GUARD 'N GRO SYSTEM with GUARD 'N GRO Extensions. Each extension is 40" long. Doubles length of each GUARD 'N GRO unit (you can add as many extensions as you like). Also lets you connect GUARD 'N GRO units together to protect your entire garden!

Send me _____ EXTENSIONS with metal connectors at $15.95 each, postpaid

Total amount enclosed $_____

Sales Tax where applicable $_____

Final Total $_____

☐ Check ☐ Money Order

Name_____

Address_____

City_____ State_____ Zip_____

(Please type or print)

HEALTH SERVICES DIRECTORY

In order to maintain a state of high-level wellness, it is necessary to take a preventive approach to healthful living. Seventh-day Adventist health service centers throughout the country are staffed with personnel qualified to advise you in the essentials of preventive care. Charges, if any, are modest. In calling the phone numbers listed, ask for the *Health Services Director* and indicate your interest in any of the topics or programs.

Health information kits on the following topics.

1. Personal exercise and physical fitness
2. How to save money on food
3. Simple treatments for the home
4. Dental hygiene
5. Stress and tension control
6. Heart-disease prevention and coronary-risk screening
7. Weight control
8. Stopping smoking
9. Cancer prevention
10. High blood pressure
11. Backache
12. Nutrition for health
13. Alcohol and drug abuse
14. Low-cholesterol meals
15. Diabetes and low blood sugar
16. Vegetarian diet

Ask for by number. $1.25 each (U.S.), set of 16 @ $15.00

Health Education Programs

- ★ Five-Day Plan to Stop Smoking
- ★ Stress Control
- ★ Vegetarian Cooking Classes
- ★ Wa-Rite Weight Management
- ★ Cancer Prevention Seminar
- ★ Coronary Risk Screening
- ★ Health Age Appraisal
- ★ Century 21 Better Living Institute
- ★ Your Health and Your Future Series

Not all are offered at every location. Call the numbers listed for further information.

Alabama
(205) 272-7493

Alaska
(907) 279-2455

Arizona
(602) 244-9851

Arkansas
(318) 865-1483

California
Central
(408) 297-1584
Northern
(415) 687-1300
(916) 877-9361
Southeast
(714) 689-1350
Southern
(213) 240-6250

Colorado
(303) 733-3771

Connecticut
(617) 365-4551

Delaware
(301) 461-9100

District of Columbia
(202) 362-3668

Florida
(305) 898-7521

Georgia
(404) 629-7951
(404) 755-4539

Hawaii
(808) 524-3160

Idaho
(208) 375-7524

Illinois
(312) 485-1200
(312) 846-2661

Indiana
(317) 844-6201

Iowa
(515) 223-1197

Kansas
(913) 478-4726
(816) 361-7177

Kentucky
(615) 859-1391

Louisiana
(318) 865-1483

Maine
(207) 797-3760

Maryland
General
(301) 461-9100
D.C. Area
(202) 362-3668

Massachusetts
(617) 365-4551
(617) 665-1740

Michigan
(517) 485-2226

Minnesota
(612) 545-8894

Mississippi
(205) 272-7493

Missouri
(816) 353-7113

Montana
(406) 587-3101

Nebraska
(402) 488-2323

Nevada
(702) 322-6929

New Hampshire
(207) 797-3760

New Jersey
(609) 392-7131

New Mexico
(806) 353-7251

New York
Northern
(315) 469-6921
Southern
(516) 627-9350

N.Y. City
(212) 586-2336

North Carolina
(704) 535-6720

North Dakota
(701) 252-1431

Ohio
(614) 397-4665
(614) 252-5271

Oklahoma
(405) 721-6110

Oregon
(503) 233-6371

Pennsylvania
(215) 374-8331
(215) 242-6930
(215) 326-4610

Rhode Island
(617) 365-4551

South Carolina
(704) 535-6720

South Dakota
(605) 224-8868

Tennessee
(615) 859-1391
(615) 228-3403

Texas
Eastern
(817) 921-6181
Western
(806) 353-7251
Southwestern
(214) 943-4491

Utah
(702) 322-6929

Vermont
(207) 797-3760

Virginia
General
(703) 886-0771
D.C. Area
(202) 362-3668

Washington
Eastern
(509) 326-1550
Western
(206) 632-5862

West Virginia
(304) 422-4581

Wisconsin
(715) 344-1800

Wyoming
(307) 237-2503

Canada
Alberta
(403) 276-4491
B.C.
(604) 853-5451
Man.-Sask.
(306) 244-9700
N.B.-N.S.
(506) 855-8622
Nfld.
(709) 576-4051
Ontario
(416) 725-6543
Quebec
(514) 651-4240

2ND ANNUAL EAST COAST
LIFE & HEALTH MARATHON
APRIL 22, 1979

LOCATION Frederick Seventh-day Adventist Community Center, Frederick, Maryland (40 miles north of Washington, D.C., and 40 miles west of Baltimore).

FEATURES Runners' Open House—April 21, 1979, 7:30-9:00 P.M. Featuring slides of the 1978 race, runners' dialogues, discussions of training habits, and more.
Races—26 miles, 385 yards; 9:00 A.M. (RRCA certified).
—13 miles, 192 yards; 9:15 A.M.
— 6 miles; 10:15 A.M.
Other Activities—2-mile run/walk; vegetarian meal (after races).
A FREE six-month subscription to LIFE & HEALTH magazine.

AWARDS Trophies for 1st-, 2nd-, and 3rd-place men and women in the marathon, half-marathon, and 6-mile races. Certificates for each finisher.

PRICES

Race and meal	$6.50
Race and meal for additional family member	$3.25
Meal for nonrunner	$2.50
T-shirt	$3.50

COURSE DESCRIPTION Flat, slight roll, one $\frac{1}{4}$-mile hill.

REGISTRATION Will be by mail—no standing in long lines to register on race day. Your race number, fact sheet, map, and directions will be mailed by April 1, 1979.

DEADLINE First 2,000 runners or March 26, 1979, postmark.

MAIL ENTRY TO Life & Health Marathon, 6856 Eastern Ave., NW.
Washington, D.C. 20012. (202) 723-3700, ext. 272
Sponsored by LIFE & HEALTH magazine and the Frederick Seventh-day Adventist church.

Office use only
Date received: _____ Race Number: _____

ENTRY FORM—ONE RACE ENTRANT PER FORM
Please Print

NAME _____

ADDRESS _____ AGE _____

CITY _____ STATE _____ SEX _____

RACE ENTERED _____ PHONE _____ ZIP _____

In consideration of this entry being accepted, I, intending to be legally bound, hereby for myself, my heirs, executors, administrators, waive and release any and all rights I may have against the sponsors and officials of the LIFE & HEALTH Marathon to be held on April 22, 1979, of any and all injuries suffered by me in said event. I attest and verify that I am physically fit and have sufficiently trained for this event.

Signature _____ Date _____
(parent/guardian's signature if under 18)

I have enclosed $_____
to cover the costs of the following:

☐ My entry fee for ___-mile race.
☐ Additional entries for: _____

_____

☐ T-shirt size S M L XL
☐ Meal tickets (for nonrunners)

_____
(Number)

☐ Please start my free six-month subscription to LIFE & HEALTH magazine with the July issue.

☐ I already receive LIFE & HEALTH. Please extend my subscription free for another six months.

Want to enjoy the Good Life with GOOD HEALTH?

You can find out how in LIFE AND HEALTH, the one magazine completely dedicated to your good health... with an emphasis on prevention of disease and on *total* health.

Each well-illustrated issue is crowded with features and articles on vigorous, vibrant living.

A typical issue might have an article on:

- **the latest news on prevention of cancer**
- **jogging and what it can do for you**
- **how to brighten up a boring job**
- **recipes for nutritious and tasty meals**
- **how to find health through enjoyable hobbies**

You'll receive in each issue of LIFE AND HEALTH helpful information worth much more than the $1 newsstand price. What's more, with a full-year subscription for just $9 you save $3 from the newsstand price.

So, to start enjoying the good life that starts with good health, fill in the coupon below and mail it today.

Yes, I want to enjoy the good life that starts with good health. Start sending my one-year subscription to LIFE AND HEALTH at $9 as soon as possible.

Enclosed is my check for $9 ☐ **Money order** ☐ NA 105

Name _____

Address _____

City _____ State _____ Zip _____

LIFE & HEALTH 6856 Eastern Avenue NW Washington, D.C.20012

Offer expires August 31, 1979.