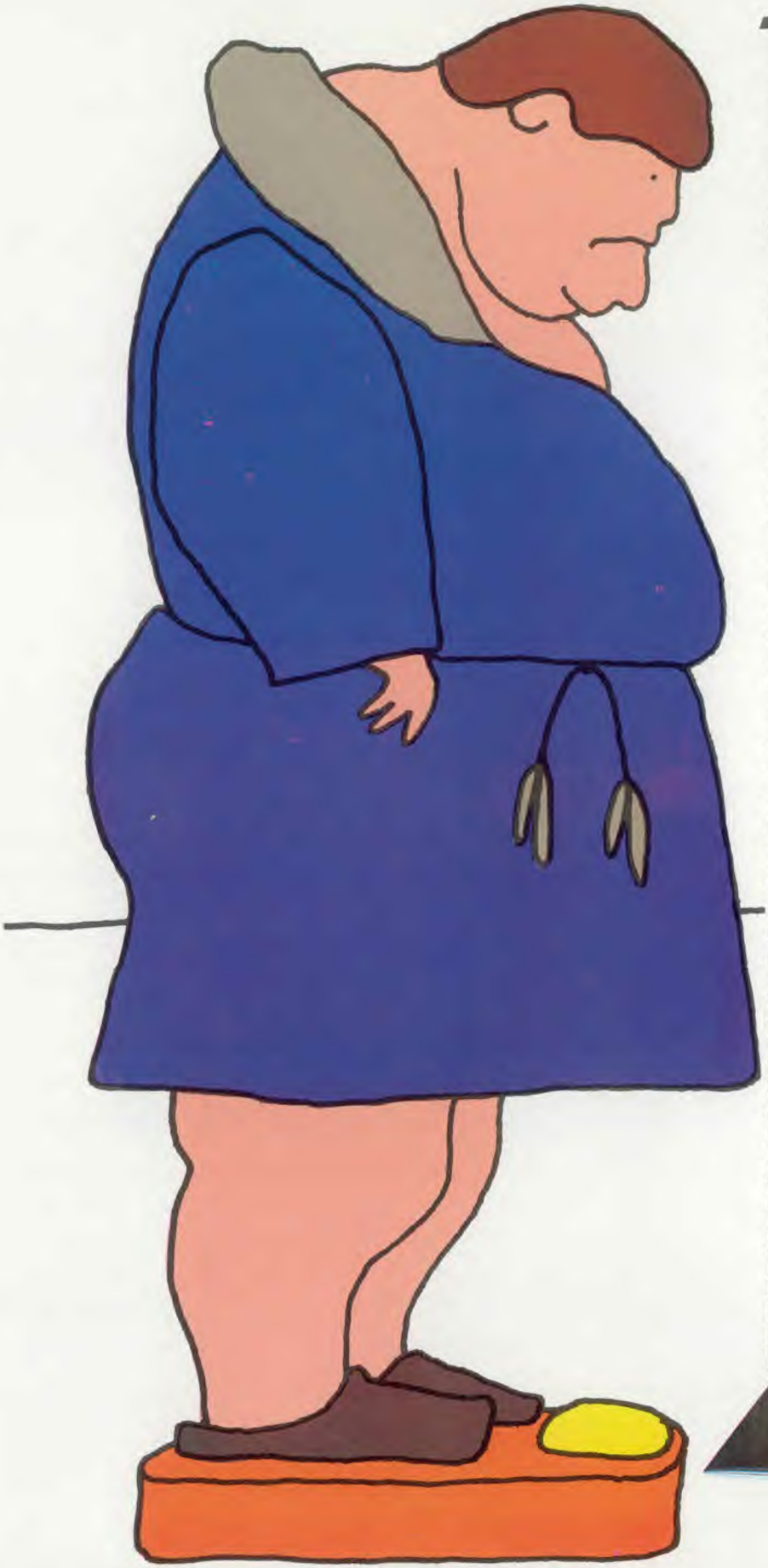
LIFE & HEALTH

national health journal • feb 76 • $1

Getting enough iron? • When joints wear out
Ill-fitting shoes are a pain!
Low self-esteem among adults



"i wonder if it was the maraschino cherry?"

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OB 205

national health journal

LIFE & HEALTH

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COVER PHOTO: SKIP BAKER

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MANUSCRIPTS: LIFE AND HEALTH gives consideration to unsolicited manuscripts provided they meet certain requirements. Submissions can be up to eight 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.

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More American women show an interest in nutrition

Redbook magazine ran a food quiz to find out the attitudes, knowledge, and usage patterns of its women readers. It especially inquired about the kinds of food used and how often, sources of nutrition information, menu planning, attitudes regarding labeling of foods, use of frozen foods, kinds of beverages used, and trying new recipes.

More than 85,000 women responded. Their answers revealed an increasing interest and concern for nutrition information and food ingredients. However, some of the answers indicate a lack of knowledge in a number of important areas.

The average respondent is married, 30.7 years old, has 1.8 children, with an annual family income of $13,574. One half are employed outside the home.

Some of the survey results that may interest our readers are listed without comment:

1. General nutrition and labeling
   - *a.* 87 per cent read articles on nutrition.
   - *b.* 76 per cent are self-taught cooks.
   - *c.* 62 per cent have never taken a course in nutrition.
   - *d.* 95 per cent believe that all food products should carry nutrition information on the label.
   - *e.* 96 per cent think there should be a law requiring packaged foods to have all ingredients listed on the labels.
   - *f.* 58 per cent have made changes in the foods they buy and serve because of all the talk and publicity about nutrition.
2. Use of recipes
   - *a.* 89 per cent use recipes taken from magazines.
   - *b.* 79 per cent use a cookbook.
   - *c.* 44 per cent use recipes on food labels.
   - *d.* 74 per cent prefer recipes using ingredients that are easily obtained.
   - *e.* 55 per cent try a new recipe at least once a month.
   - *f.* 69 per cent use recipes received from friends or relatives.
3. Most-used recipes
   - *a.* 77 per cent main dishes
   - *b.* 62 per cent desserts
   - *c.* 51 per cent special types of foods
4. Main meal of day

   95 per cent have dinner at night as the day's main meal. The dinner would likely be composed of red meat, vegetables, often a salad, and sometimes a dessert.
5. Preferred beverage with meals
   - *a.* 67 per cent of children preferred milk.
   - *b.* 63 per cent of adults preferred milk.
   - *c.* While virtually all women knew milk is an important source of calcium, only half knew it is an important source of protein. Only about one in ten thought it is important for thiamine and half that many (one in twenty) thought that it is important for vitamin C.
6. Cholesterol
   - *a.* Recent publicity probably helped 95 per cent of the women know that eggs are rich in cholesterol; yet only 42 per cent were aware that the same is true of beef, and only 23 per cent knew lobster is also a rich source.
   - *b.* Despite this knowledge concerning cholesterol content of food, only 13 per cent said they were constantly concerned with cholesterol when they plan their menus.
7. Diets

   Almost half the families have one or more members on a low-calorie weight-control diet.
8. Vitamins
   - *a.* About half the families use vitamin supplements.
   - *b.* While three out of four knew carrots are a good source of vitamin A, only 43 per cent knew sweet potatoes, 29 per cent knew liver, and 20 per cent knew cantaloupes are also good sources.
   - *c.* Almost all knew oranges are an important source of vitamin C. However, only 33 per cent knew strawberries, and 23 per cent knew green peppers to be good sources.
9. Bread and unrefined foods
   - *a.* Only one in ten regularly bakes her own bread.
   - *b.* 38 per cent feel yeast breads are the most difficult basic foods to prepare.
   - *c.* 48 per cent never use any unrefined or natural food, such as whole-wheat flour, brown rice, soybeans, honey, or granola.

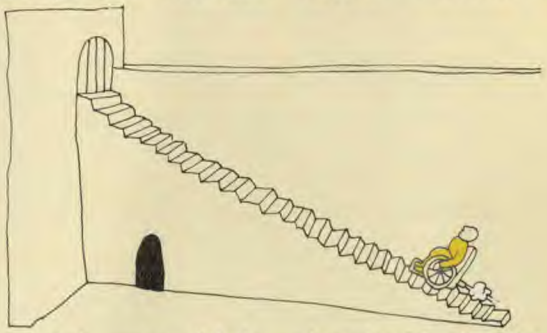
How do you feel about food? What do you know about food? The results of a *Redbook* reader survey, May, 1974.

Better Life Gazette

Focus

Devices for the handicapped

Undergraduate engineering students, under the direction of faculty members of the University of Washington in Seattle, have developed a number of devices helpful to physically handicapped patients. Included among their successful designs are a counterbalanced wheelchair that climbs curbs and an ingenious page turner for persons without arms.

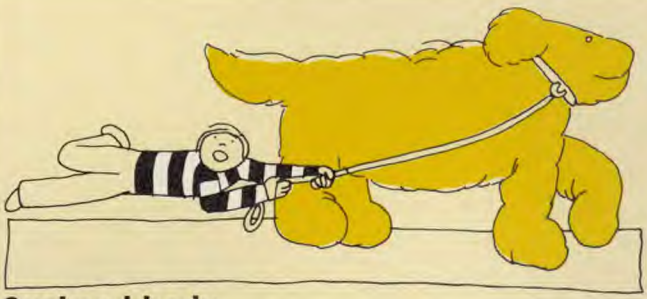


The page-turning "microfiche" consists of a light-relay method of shifting a microfilm board on a projection screen. The device is activated by a small light strapped to a patient's glasses or head.

Another class project is a reclining wheelchair that aids in better blood circulation. It won last year's National Student Design Award from the American Society of Mechanical Engineers. The device, designed by Ed Strand, permits quadraplegics employed in certain types of endeavor to continue work without having to take time off to lie down.

Dr. Gordon Kirkpatrick, research instructor in the department of orthopedics in the university's school of medicine, praises the enthusiasm of the undergraduates for their work. "They like the challenge of building real things, not paper shuffling and cardboard models," he reports. "They are extremely enthusiastic about seeing a human application for their engineering training. They like the idea that they directly affect patient care."

News Release. University of Washington Health Sciences Center, Seattle, Washington, June 24, 1974.



Soul and body

Some time ago a cartoon appeared in a national magazine showing a very little boy attempting to lead a huge Saint Bernard dog on a leash. The dog was perversely protesting and insisted upon trying to drag the boy off in the opposite direction. The lad suddenly braced his feet, turned upon the dog and angrily exclaimed, "Here now, let's get this straight! You are my dog. I'm not your boy!"

Some such *sacred stubbornness* as the boy showed is needed by all of us. We are often hauled off in a direction we should not go by powers unworthy to be our leaders. Some of these leaders are in politics, some in education, some in religion, and some in entertainment. But *most often* they are inside us. The beasts that tug us away from our best course are our selfishness, vagrant wishes, untamed moods, primal passions, fears, hostilities, and all those other inner refusals to be what we ought to be and to do what is best. We need the perspective of the lad with the dog, so that the soul will say to every other aspect of our nature, "Now, let's get this straight. You belong to me, and not I to you!"

Did you know?

. . . that airplane pilots suffer greater hearing loss than do people in general—the noise levels in the cockpit damage the sensitive ear.

Kenneth J. Kronoveter and Gordon W. Somerville. Airplane cockpit noise levels and pilot hearing sensitivity. *Arch. Environ. Health* 20: 495-499, April, 1970.

POLLY COOK

Bicentennial

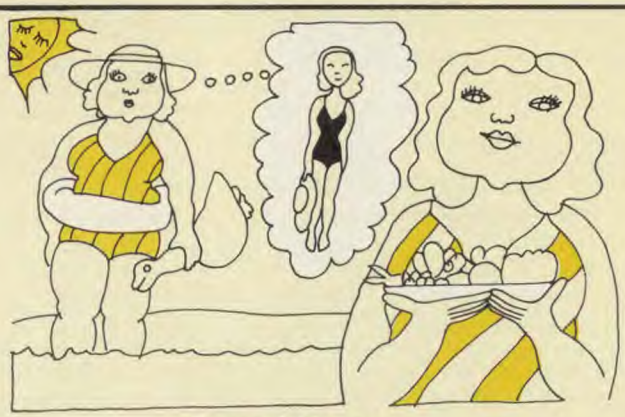
Benjamin Franklin, considered by some to be the most versatile and creative of the founding fathers, was plagued during the last thirty years of his life by gout, and a painful bladder stone, probably a uric-acid stone.

If it had been possible to test Franklin's blood for its uric-acid content, it most certainly would have been high—gouty arthritis is a complication of hyperuricemia (elevated uric acid in the blood). The high level of uric acid in the blood reflects an excess of this substance in the body. It seems that patients with gout overproduce uric acid, and fail to properly eliminate it through the kidneys.

During one of his acute attacks of gout, Franklin matched wit with pain and wrote a humorous dialog between himself and Madame Gout. When he asked her what he had done to deserve his cruel sufferings, she replied, "Many things; you ate and drank too freely, and you have indulged those legs of yours in their indolence." Franklin ends by promising to live more temperately and to exercise daily. Madame Gout flounces off, saying, "I know you too well. You promise fair, but after a few months you will return to your old habits. Your promises will be forgotten like the form of last year's clouds."

Today, gout is the most treatable of the rheumatic diseases. Acute attacks of joint pain due to gout are rare—or should be! Medications such as allopurinol decrease the excessive production of uric acid and others, like phobenecid, promote loss of uric acid via the kidneys. Moderate restriction of purine-containing foods and abstinence from alcohol are recommended. The judicious use of specific medicines under the guidance of the physician, combined with a healthful life-style, should eliminate at least the disabling assaults of Madame Gout.

Adapted from *Gout, A Clinical Comprehensive*, produced by MEDCOM, Inc. 2, Hammarskjold Plaza, New York, N.Y. 10017.



Pound Down

By Corinne Adria Bariteau

I cut the grass
And shovel snow,
With fondest hopes
The pounds will go.
But though I work
And jog and swim,
In dogged effort
To get slim,
The exercise
That sheds *my* weight
Is shoveling *less*
Upon my plate!

What's new?

Lifesaver Firestarter

Used, tested, and proved by the United States armed forces since 1967, the Lifesaver Firestarter is intended for both indoor and outdoor use. It is handy for lighting campfires, fireplaces, and indoor and outdoor gas appliances (especially helpful for hard-to-reach-and-heat pilot lights and lantern mantels). Leakproof, waterproof, and corrosionproof, the firestarter will burn continuously in emergency situations for approximately nine hours with a 1 1/2" flame height.

Lifesaver Products Inc.
32405 Lake Pleasant Drive
Westlake Village, CA 91361

Health highlights

Traffic accidents

More Americans lost their lives in traffic accidents in one year in the United States than in 12 years of combat in Vietnam. Another tragic fact is that 7,000 of these annual deaths are innocent children under the age of 15, who are unprotected passengers in motor vehicles. Many parents do not realize that most car seats are not adequate protection and that mother's lap is especially dangerous while riding.

There are two pamphlets that explain how effective protection can be obtained in seconds. "Stop Risking Your Child's Life" may be

purchased by sending 25 cents and a self-addressed envelope to Physicians for Automotive Safety, 50 Union Avenue, Irvington, N.J. 07111.

"Automobile Safety Belt Fact Book" may be ordered by sending 25 cents to Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Ask for Stock No. 5003-0068. It devotes 35 pages to proving the protection and safety advantages provided by seat belts.

"Red tide" results in shellfish poisoning

Four persons developed symptoms of paralytic shellfish poisoning, one seriously, after eating steamed mussels gathered on a New Hampshire beach. Fortunately, all recovered after treatment. The poisoning resulted from eating shellfish that had eaten large numbers of a toxic species of small marine plants (dinoflagellates) containing a nerve poison. These microscopic-sized plants multiply excessively at certain times of the year and often turn the ocean waters a deep amber, hence the name "red tide." Shellfish harvesting is halted at such times. However, the mussels causing this episode were harvested *during* such a time.

Paralytic shellfish poisoning. *Morbidity and Mortality Weekly Report* 23:318, 323, Sept. 20, 1974.

Nutrition labeling

If you want to know which foods simply taste good and those that are good for you, you'll soon be able to decide for yourself. The U.S. Food and Drug Administration's new regulation requires food manufacturers to indicate the nutritional content of the food. So you'll soon be getting a liberal education from the labels on cans and packages at your grocers.

If your favorite food label mentions that it's high in proteins, vitamins, or minerals, there must also appear on the label a clear analysis of the exact percentage of each and the recommended daily allowance (RDA) of all listed nutrients.

Manufacturers are not permitted to declare that their products are adequate or effective in the prevention, cure, or treatment of any disease or symptom. Should a label state that vitamins or minerals have been added, the exact amount must be given in each serving, and should the amount be 150 per cent or more than the RDA, the food will be classified as a drug and be subject to drug, rather than food, regulations!

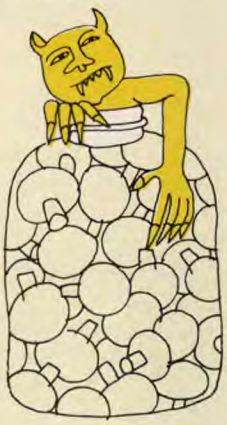
Of course, as may be expected, the costs of such food analysis and labeling must be shared by the manufacturer and consumer. Therefore you must anticipate the price of your food to go up accordingly.

Institute of Food Technologists. Nutrition labeling. Scientific status summary. *Food Tech.* July, 1974.

Home-preserved mushrooms cause botulism

Two elderly Rhode Island sisters, ages 78 and 79, developed symptoms of botulism two days after eating some home-marinated and canned mushrooms. The mushrooms were soaked for 24 hours in an oil, vinegar, and seasoning marinade, boiled in this liquid for 15 minutes; and "hot-packed" into presterilized glass jars with vacuum seal lids.

Type B botulism from homemade, marinated mushrooms. *Morbidity and Mortality Weekly Report* 24:7, Jan. 10, 1975.



Marijuana findings

Allowing 28 healthy young men to smoke as much marijuana as they wished for 72 days produced more than a lengthy high.

Ten weeks of unlimited pot also produced significant pulmonary impairment in research described by Donald P. Tashkin, M.D., Los Angeles, at the International Conference on Lung Diseases at Montreal. Dr. Tashkin's investigation indicated long-term use of marijuana causes mild but significant airway narrowing.

News Bulletin, American Lung Association, May 19, 1975.

Bored with life? Depressed? Need some satisfaction? Think on these

Things That Satisfy

By Martha J. Beckman

1. Parking on another guy's nickel.
2. Finishing cutting the lawn just before it rains.
3. Having something you planted show signs of life, or be ready for harvest.
4. A good-newsy letter from a friend.
5. Having your new son look like you.

6. Graduating.
7. Being right.
8. Getting a raise no one else got when you didn't even ask for it.
9. Tired, happy muscles after hard work.
10. A brook rippling, a sleepy bird song at dusk, a hummingbird hovering over an apple blossom, a red maple leaf glistening wet.
11. Having your daughter say "I love you," for no reason you can think of.
12. Having company or family rave over a meal you cooked, sincerely.
13. "The meeting is adjourned."
14. Burning the mortgage.
15. Having a child turn 21, and you're sure he's O.K.
16. Money you didn't expect in the mail.

"AUNT EMMA OF 'JOHN'S SECOND LIFE' HAS ENCEPHALITIS..... IS THAT SERIOUS?"

Quotes

Tune up your brain!

Sluggish in the upstairs at times? Doubtless you're driving yourself too far, for too long, in too high gear. These speed-ups sneak up on you.

Try giving 15 minutes morning and afternoon to thinking about something completely away from it all. That trip to Mayan ruins that you plan to take someday, that avocation that may turn into your retirement career, that course you took in college and vowed that someday, when you had time, you'd pursue further. Or mark off a time for pure pleasure. A remembrance. A beautiful spot.

What are you carrying in your head that you could off-load by writing it down and filing it away? You won't lose it. It's there when you need it. But you can rest the machinery by not carting it around from day to day in the meantime.

Problems in a pig-pile? Fish one out. Deal with it. Then fish out the next one.

Are there outside pressures? Many of us carry the whole house to work, and the whole office home with us. If the plumbing is pressing, take a half-day. Straighten out the home scene. Then come to work free to work!

Above all, don't skip rests, work-breaks, vacations. They're built into the system because they're needed.

Tune Up That Cerebellum! *Executives' Digest*, May, 1974, p. 3.

THE LIVING BODY By Irving Jones, M.D.

The skeletal framework and how it moves

Michelangelo, lean, irascible, was the most famous of the great Florentine artists. He was by nature inclined toward sculpture, and so, when he picked up the painter's brush to create the magnificent frescoes of the Sistine Chapel in Rome he produced three-dimensional figures. The Renaissance artists and sculptors were not content with the study of the outward form of the human body. In order to better depict its beauty, they sought access to the bodies of the criminal dead so that they could expose, see, and touch the various muscles.

Among the most gifted of these artist-anatomists was Leonardo da Vinci. With scalpel and crayon he explored the intricacies of the human organism, leaving hundreds of pages of sketches and notes. Such artist-anatomists carefully examined the attachments and relationships of the muscles to the bony frame beneath, because their primary interest was to picture the action, the beauty, and the grace of the human body.

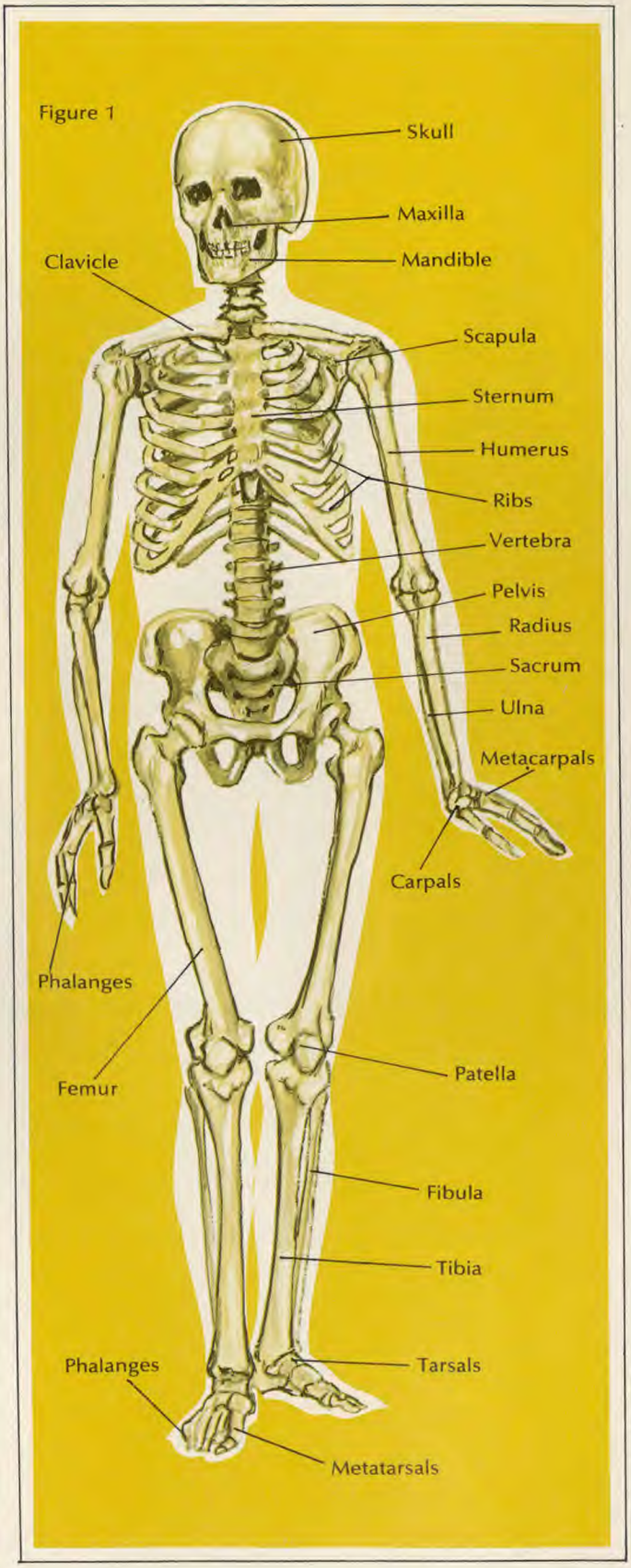
Every detail of the bony framework, the joints and muscles, is a masterpiece of engineering design.

But it doesn't take artistic genius to appreciate the beautiful symmetry of the human form. Perfection is evident in the size, shape, and appropriateness of each of the 206 bones and more than 400 muscles.

Bones The spine is the stabilizing unit of the skeletal framework. (See Fig. 1.) It is firmly anchored to the pelvis below, and atop its upper segment rests the skull, which carries within its bony vault its priceless treasure, the human brain. The thoracic cage, protecting the lungs and the heart, is joined into its midsection. The paired upper and lower limbs are gracefully attached via ball-and-socket joints to assure maximum maneuverability.

It doesn't require much time or effort to master the

Figure 1



ILLUSTRATED BY TOM DUNBEBIN

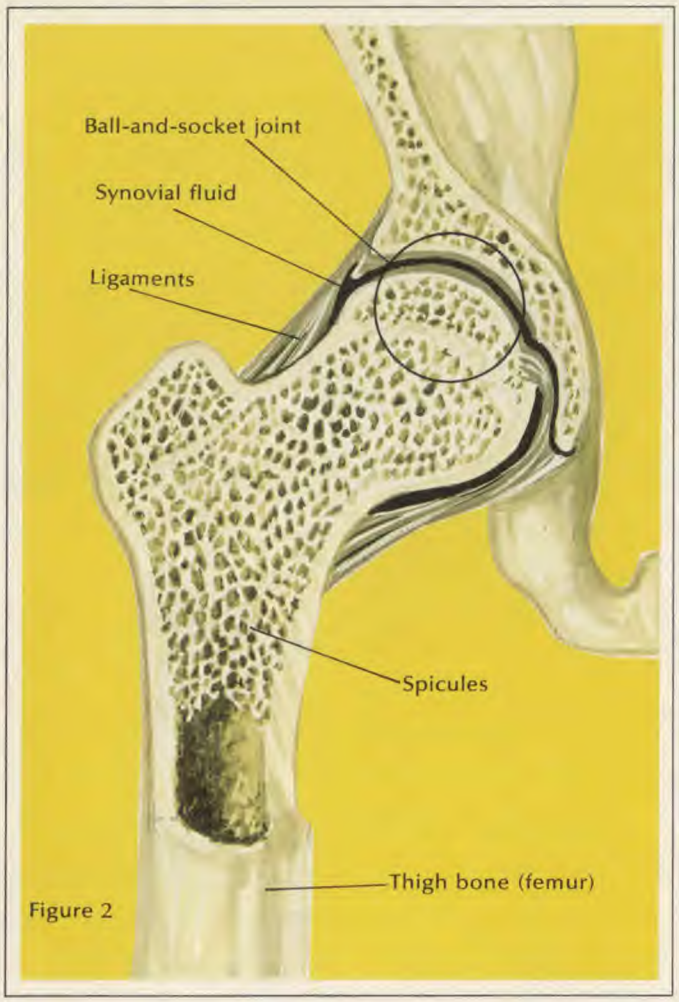


Figure 2

names of the major bones. It is interesting to study the Latin derivation of these words. *Femur* simply means "thigh," whereas *radius* means "a staff," "a rod," or "a ray." *Ulna* means "elbow." *Humerus* or *umerus* is the Latin for "shoulder."

The bones are like molded tubing with an outer compact layer and an inner spongy portion, with its spicules arranged to furnish strength much like the struts of a bridge. (See Fig. 2.) Between these spicules of the bone millions of red blood cells and white blood cells are "mass-produced" daily in the bone marrow factories.

Joints "The leg bone's connected to de thigh bone. The thigh bone's connected to de hip bone." So goes the old spiritual about Ezekiel's vision of the dry bones. Those "connections," the joints, between each bone, vary in type from hinge joints in the knees and elbows to ball-and-socket joints in the hips and shoulders to cushion and swivel-like joints of the spine and the simple articulations of the pelvis and skull. Perhaps the most remarkable feature of the joints is their built-in lubrication system. A viscous substance, called synovial fluid, is secreted by cells that line the inner surface of a membrane that surrounds the joint. This fluid spreads over the glistening surface of the layer of cartilage, protecting the ends of the bones at their points of contact. (See Fig. 2.)

Muscles The human body has often been called the most nearly perfect of any machine. This is mainly because of its highly economical use of fuel for energy. While most machines struggle along at 10 to 15 per cent efficiency, the muscles of the body function at an astonishing 50 to 60 per cent efficiency. But aside from its efficiency, the muscular system is a "thing of beauty and a joy forever."

The Olympic games are a spectacular display of finely tuned, disciplined muscles. The graceful skaters and gymnasts, the sleek swimmers, the muscular discus and javelin throwers, the straining sprinters, all have spent years practicing, building strength and stamina into their muscular systems. These feats of running, jumping, throwing, are made possible by groups of muscles that flex, extend, rotate, or lift the skeletal frame. The largest muscle masses occur in the thighs and the back. The smallest muscles occur in sensitive structures like the eyelids. The muscles are attached to the bones by tough, fibrous tendons capable of tolerating stresses one thousand times the weight of the muscle mass itself. (See Fig. 3.)

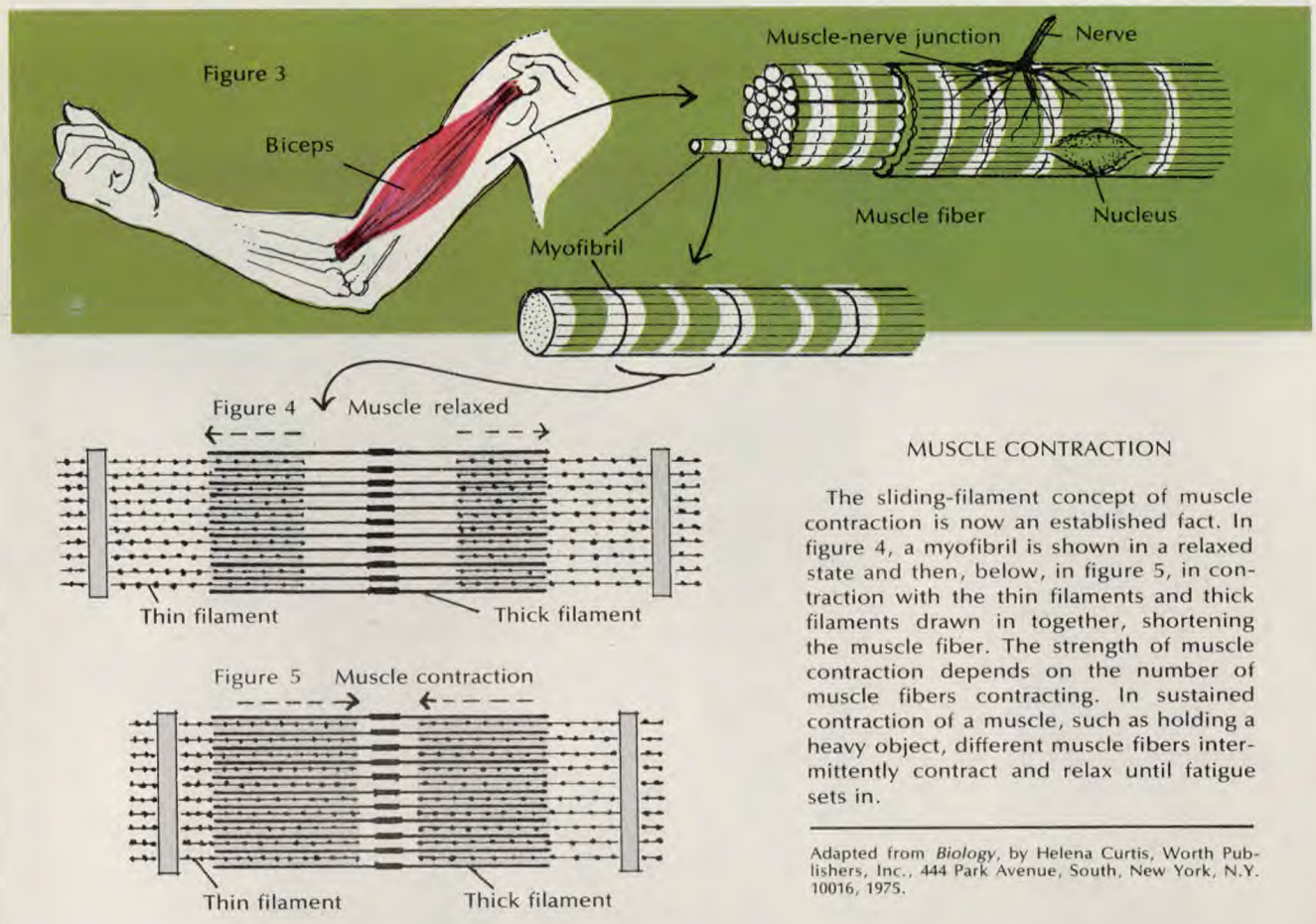
Every detail of the bony framework, the joints, and the beautifully proportioned muscles is a masterpiece of engineering design. "I am fearfully and wonderfully made: marvellous are thy works; and that my soul knoweth right well" (Psalm 139:14).

THE LIVING CELL By Irving Jones, M.D.

The miracle of muscle contraction

Movement of the body depends upon shortening of muscle fibers that contract when appropriately stimulated. Skeletal muscle consists of bundles of these fibers.

The filaments that permit muscle cells to contract lie parallel to one another. (See Fig. 3.) Between the filaments in each cell are thousands of mitochondria. (See Fig. 5.) These tiny power plants of the cell produce energy by the combustion of glucose and fatty acids. The



MUSCLE CONTRACTION

The sliding-filament concept of muscle contraction is now an established fact. In figure 4, a myofibril is shown in a relaxed state and then, below, in figure 5, in contraction with the thin filaments and thick filaments drawn in together, shortening the muscle fiber. The strength of muscle contraction depends on the number of muscle fibers contracting. In sustained contraction of a muscle, such as holding a heavy object, different muscle fibers intermittently contract and relax until fatigue sets in.

Adapted from *Biology*, by Helena Curtis, Worth Publishers, Inc., 444 Park Avenue, South, New York, N.Y. 10016, 1975.

energy thus produced is stored in molecules of ATP and can be released on demand by the action of an enzyme.

Contraction and relaxation of muscle fibers is an extremely complex electrochemical and mechanical process and is still the subject of intensive research. Two proteins *actin* and *myosin* are long filaments that face each other in the muscle cell. These have projections resembling the teeth of a comb and are partially interlocked. When the electrical signal from the brain reaches the point of contact between nerve and muscle a substance called acetylcholine puts the muscle cell membrane "on alert." (See Fig. 3.) This results in the diffusion of calcium and other minerals. Enzymes act upon ATP, releasing energy, and muscle contraction occurs. (See Fig. 5.) Relaxation occurs when acetylcholine is inactivated by another enzyme.

Muscles require and have a rich blood supply. So abundant is the vascular network that in response to ten minutes of vigorous exercise there occurs a thirtyfold increase in volume of blood flow through the muscles. This increased flow carries away waste and provides replacement supplies of nutrients and oxygen for the regeneration of energy stores for future contractions of the muscle fibers.

The human body has often been called the most nearly perfect of any machine.

When Michelangelo was painting the ceiling of the Sistine Chapel he often worked far into the night, remaining for hours in a contorted position, tilting his head. His beard became soaked with paint that dripped from his brushes. At home he would often drop onto his bed exhausted, not even troubling to undress. But when the scaffolding was removed, a work of breathtaking beauty emerged, revolutionizing the art of painting. Anatomical renderings of such beauty and strength called admirers from all parts of the world to behold, and having beheld, to remain astonished and speechless.

By Jacalyn Golston

SCOTTY WARD

For Scotty Ward, life is as fragile as a porcelain figurine. During his 13 years he has broken his legs 24 times, his arms once each, several of his back vertebrae, and his neck. He has had major surgery six times.

Scotty is a victim of a rare bone disease, osteogenesis imperfecta, an affliction that can cause bone fractures from a sneeze or even the pressure of a muscle against a bone, and may result in a small stature.

Scotty was born in Fresno, California, an alert, round, cute baby who appeared normal in every way. Then three months before his first birthday he tripped over a small protruding root and broke his leg. For most parents this would have been an unusual but unalarming accident. For Mr. and Mrs. James Ward, it was tragic, because they realized Scotty had the dreaded illness Mrs. Ward has had since her own childhood.

"We were living in Idaho then," she recalled. "And two doctors told us that our children would not have the disease. Grant, Scotty's 14-year-old brother, has no traces of it."

Brittle bones is an inherited disease in which the bones lose their calcium and become soft and porous. There are three types of the disease and its cause has not been established. Both Scotty and his mother have the infantile type in which the infant appears normal at birth, and the disease is discovered only after repeated fractures.

"There are varying degrees of the disease," explained Scotty's doctor. "Some patients break only a few bones, and in others the illness is extremely severe. Scotty's condition is average."

A person with the disease can lead a relatively normal life, his doctor added. "But a lot depends upon family attitude. The victim can be treated as tissue paper or he can say 'I've got it, so what, I'll do wheelies in my wheel chair.' "

Wheelies—balancing on the back two wheels of his wheel chair—is one of Scotty's activities that worry his parents and doctor. They wish he would be more cautious, but confess they do not want to restrict his activities.

Scotty, like many other 13-year-olds, takes care of a menagerie of animals, swims, looks for rocks and seashells at the beach, sings, draws, and writes poetry.

His accomplishments are not owing to some miraculous treatment or cure. Scotty's doctor says there is no cure for the disease, only treatment for its effects.

His abilities come from his love of life and his attitude toward living. What makes him happy? Simply, "being alive," Scotty replies.

"A lot of people think I feel bad because I can't go and play with other kids," he said, while stroking his puppy, Muskie. "I do everything I would if I wasn't in a wheel chair. And I can do a lot other people can't."

Scotty's outlook has been directly influenced by his mother's will and determination to lead a normal, complete life. By the time Mrs. Ward was 20 years old, she had broken 13 major bones and had surgery more times than she could remember. But despite numerous operations and hospital stays, she graduated from high school, lived alone in an apartment and was self-supporting until she got married.

Though also confined to a wheel chair, Mrs. Ward lives a full life. She maintains her household, drives a car with special hand controls, and does everything she wants or needs to do.

Scotty has followed her example. A home teacher comes for an hour every day, and Scotty receives the same amount of instruction as his seventh-grade-level class. He attended junior high school at the beginning of the 1974-1975 school year—until his leg broke and he had to wear a body cast.

A sensitive and unselfish person, Scotty sees the beauty of nature and realizes the value of friendship. He wrote: "A friend is someone you shouldn't take for granted but to look for in your time of need. A friend is someone you can take the time to be serious with for a while. A friend is one you can trust and depend on. A friend is someone you can wait for and know he will show up. A friend is one who will give you his true opinion and not lie. And a friend is someone nobody should be without."

A month ago, one of Scotty's good friends, Glenda Ruminson, was hit by a car and seriously injured. Since then he has been her constant companion and has helped her through recuperating stages.

"When I was in a wheel chair, he showed me how to work it," said Glenda. "And later he helped me with my crutches, telling me little ways to do things that he had learned from experience. He even helped me cook. And I can talk to him—he understands. He seems much older than he is."

As for the future, Scotty's doctor explains that at puberty the bones tend to mature and there is less danger of breaking. In the meantime, the disease must be treated with casts and surgery.

"I've never known Scotty to feel sorry for himself," says the physician. "He's a fantastic person." &

Scotty's goat Toby inspects the six-week-old rabbits he and his father, James Ward, are raising.

Getting the mail is part of Scotty's daily routine.

PHOTOS BY RICHARD DARBY

ILL-FITTING SHOES ARE A PAIN!

By Florence M. White

I dragged my aching feet over the threshold of my orthopedist's office.

"Operate," I begged. "I can't live with these feet any longer. And I can't find a pair of shoes to fit them." I groaned. "Besides," I added sardonically, "they've spoiled my good looks and my fine temperament."

"Go barefoot," the doctor smiled. "We weren't meant to wear shoes, you know." He bent down and looked sympathetically at my bulging bunions, then shook his head.

"Try to live with them," he advised. "They aren't any worse than before, and surgery on bunions isn't a sure thing."

"I'll take an unsure thing," I retorted.

The doctor tried again. "You'll be out of commission for several months."

"I'll have more time to write," I countered.

"It'll be a year before you feel that your feet are your own," he warned.

At that I succumbed. My house was mortgaged, as was my car, my furniture, and my color television set. I had to have something I could call my own, at least for another year.

"O.K." I reluctantly agreed. "You win, doctor."

At this moment of my life it seemed wisest to abide by my doctor's advice. I would have to seek relief in other directions.

VICTOR TAYLOR

I remembered the huge bag of shoes I had brought with me. It was in the waiting room. I went to get it, then emptied it over the doctor's expensively carpeted floor.

"Please look at these shoes and tell me what's wrong with them."

The doctor and I gazed down upon a small fortune in shoes—high heels and low, open toes and closed, thick soles and thin, step-ins and sling-backs.

"Why can't I wear them?" I asked, desperation in my voice. "They're all my size."

The doctor looked them over. "They're bad," he pronounced. "Badly constructed."

"Why?" I asked, puzzled.

"Because most shoe manufacturers make shoes to fit their fancies, not women's feet," he answered.

"There must be some shoes that are properly made," I said.

He nodded.

"What do you suggest?" I asked with a glimmer of hope in my heart.

The doctor looked at me as if to say, You know better than to ask.

Yes. I knew. Of course, I knew. The orthopedic kind, made only for comfort and not for looks, just as those on the floor were made only for looks and not for comfort.

The doctor mentioned several names of manufacturers that made comfortable shoes. I was familiar with some of them, but had rejected common sense in favor of vanity.

"Why can't they make shoes that are both good-looking and comfortable?" I wanted to know.

Since the next patient hadn't arrived, the doctor took time to visit with me, something a bit unusual nowadays.

I learned that this good man was an activist—a doctor who took time out of a busy practice to appear before the State legislature and plead the cause of better shoes and healthier feet.

"In our State," he had told an august body of senators and assemblymen, "the men who shoe the feet of the horses that run on our race tracks must be licensed, but the men who manufacture shoes for the people of our State are free to disregard rules of common sense and good health."

My shoes made no sense whatsoever and were ruining my feet.

The doctor continued. "In this country women waste millions of dollars on shoes they can't wear. Then they must spend more millions for doctors and for pain killers for aching corns, calluses, and bunions, for headaches and backaches—all caused by ill-fitting shoes." He stopped, then looked at me with a new twinkle in his eyes.

"Do you know what?" he asked.

"No. What?" I queried.

"If you and the millions of women in America would stop buying shoes for one month—just one month—you would have the shoe manufacturers at your feet."

We both laughed.

There was a buzz, and his secretary announced the arrival of the next pair of aching feet.

I thanked the doctor, swept my shoes into my bag, and left. As I drove home, I thought about the conversation I had just had with my orthopedist. Here is the *cause celèbrè* of the century!

Are horses more important than women?

Must we suffer unnecessary mental and physical pain because of ill-fitting shoes?

Must we waste our hard-earned money on shoes that we must discard?

We have freed ourselves from tight-fitting corsets. We must now free ourselves from ill-fitting shoes.

If we are to stand proudly beside our brothers we must have good shoes to stand in.

If we are to do the world's work we must have good shoes to work in.

If we are to enjoy life we must have good shoes to play in.

If we want our heads to be in the right place our feet had better be in the right shoes.

I say to you, earnestly and passionately: Ladies, join ranks! You have nothing to lose but your corns, your calluses, and your bunions! &

Florence M. White has had extensive teaching experience on both the elementary and adult levels. She has an L.L.B. degree from the St. Johns University School of Law in Brooklyn. Specializing in the writing of learning materials for children, she has a number of books to her credit, as well as educational films. An avid world traveler, she is presently teaching part-time in the film industry.

Low self-esteem among adults

Self-esteem is not only vital to a child's emotional and physical health; it is also important to his spiritual well-being. Those children who feel inferior are usually more vulnerable to destructive group pressure and often conclude, "Even God hates me!" The article which follows is fourth in a series on this topic, quoted from Dr. James Dobson's best-selling book *Hide or Seek* (Fleming Revell Co.).

By James Dobson, Ph.D.

Question: How common is low self-esteem among adults? What help can you offer those of us who suffer from feelings of worthlessness?

Feelings of inadequacy and inferiority are extremely common among people of all ages in our society, although we do our best to hide them from each other. For this reason we often misinterpret the behavior of a person with low self-esteem, thinking they are "stuck up" or self-sufficient. The opposite is more likely to be true, for one does not build defenses around strengths. Not only do laymen fail to understand each other. It has been discouraging for me to see how often my professional colleagues (psychiatrists, psychologists, and counselors) have overlooked inferiority as a most obvious root cause for emotional distress. Lack of self-esteem produces more symptoms of psychiatric disorders than any other factor yet identified.

Time and time again in my case work as a psychologist, I sit talking to a person with deep longings to be respected and accepted. How badly he needs human affection and kindness, as well as emotional support and suggestions for change. Yet if that same needy patient had gone to Dr. Sigmund Freud in his day, the immortal grandfather of psychoanalysis would have sat back in detached professionalism, analyzing the patient's sexual repressions. If the patient had sought treatment from Dr. Ivan Janov, the current psychological innovator, he would have been encouraged to roll on the floor and scream like a baby. (How foolish that form of "therapy" appears from my perspective!) Other modern therapists would have required the same patient to assault, and be assaulted by, other members of an "encounter group," or remove his clothing in a group, or beat his mother and father with a belt. Believe it or not, one of the major areas of controversy at current psychiatric conferences involves the wisdom of female patients having sexual intercourse with their male therapists! Have we gone completely mad? Whenever men abandon their ethics they cease to make sense, regardless of their professional degrees and licenses. Perhaps this is why psychiatry is called "the study of the id by the odd." (No disparagement is intended to the more orthodox profession of psychiatry, itself.)

The most successful approach to therapy for a broken patient, I firmly believe, is to convey the following message with conviction (though perhaps not with words): "Life has been tough and you've had your share of suffering. To this point, you've faced your problems without much human support and there have been times when your despair has been overwhelming. Let me, now, share that burden. From this moment forward, I am interested in you as a person; you deserve and shall have my respect. As best as possible, I want you to quit worrying about your troubles. Our concentration will be on the present and the future, and together we will seek appropriate solutions."

Suddenly, the beleaguered patient no longer feels alone—the most depressing of human experiences. "Someone cares! Someone understands! Someone assures me with professional confidence that he is certain I will survive. I'm not going to drown in this sea of despondency, as I feared. I have been thrown a life preserver by a friend who promises not to abandon me in the storm." This is real therapy, and it exemplifies the essence of the Christian commandment that we "bear one another's burdens."

This same Christian principle of-

DON SATTERLEE

fers the most promising solution to your inferiority and inadequacy, as well. I have repeatedly observed that a person's own needs and problems seem less threatening when he is busy helping someone else handle theirs! It is difficult to wallow in your own troubles when you are actively shouldering another person's load and seeking solutions to his problems. For each discouraged reader who feels unloved and shortchanged by life, I would recommend that you consciously make a practice of giving to others. Visit the sick. Bake something for your neighbors. Use your car for those without transportation. And perhaps most important, learn to be a good listener. The world is filled with lonely, disheartened people like yourself, and you are in an excellent position to empathize with them. And while you're doing it, I guarantee that your own sense of uselessness will begin to fade.

For those of you who have struggled with inferiority throughout your lives, isn't it about time you made friends with yourself? Aren't there enough headaches in life without beating your skull against that old brick wall of inadequacy, year after year? If I were to draw a caricature that would symbolize the millions of adults with low self-esteem, I would depict a bowed, weary traveler. Over his shoulder I would place the end of a mile-long chain to which is attached tons of scrap iron, old tires, and garbage of all types. Each piece of junk is inscribed with the details of some humiliation—a failure, an embarrassment, a rejection—from the past. He could let go of the chain and free himself from that heavy load that immobilizes and exhausts him, but he is somehow convinced that it must be dragged throughout life. Like the troubled seminarian, he is paralyzed by its weight. So he plods onward, digging a furrow in the good earth as he goes.

You can free yourself from the weight of the chain if you will but turn it loose. Your inferiority is based on a distortion of reality seen through childish eyes. The standards by which you have assessed yourself are themselves changing and fickle. Dr. Maxwell Maltz, the plastic surgeon who authored *Psycho-Cybernetics,* said women came to him in the 1920's requesting that their breasts be reduced in size. Today they are asking that he pump them up with silicone. False values! In King Solomon's Biblical love song, he asked his bride to overlook his dark skin that had occurred from exposure to the sun. In his day, right meant white. But now the brown brother of Solomon would be the pride of the beach. False values! Women of the seventies are ashamed to admit that they carry an extra ten pounds of weight, yet Rembrandt would have loved to paint their plump, rotund bodies. False values! Don't you see that your personal worth is not really dependent on the opinions of others and the temporal, fluctuating values they represent? The sooner you can accept the transcending worth of your humanness, the sooner you can come to terms with yourself. I must agree with the writer who said, "While in the race to save our face, why not conquer inner space?" It's not a bad idea. &

Dr. James Dobson is a widely known psychologist on the West Coast. He is associate clinical professor of pediatrics at the University of Southern California School of Medicine, director of behavioral research and director of child development for the Children's Hospital of Los Angeles, and assistant director of the department of education at the American Institute of Family Relations in Los Angeles. No stranger to the art of parenthood, he lives with his wife and two active children in Arcadia, California.

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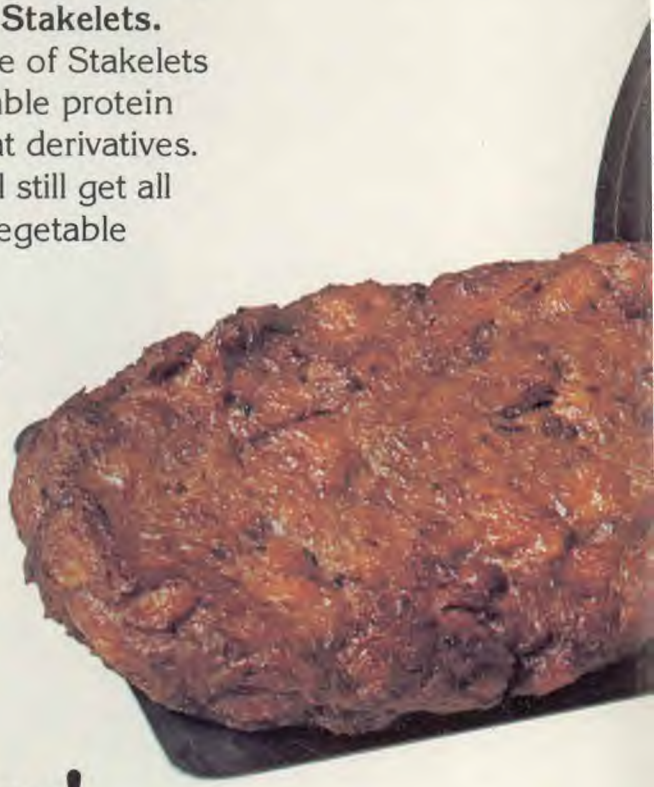

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By J. D. Henriksen, M.D.

When joints wear out

Ten years ago the patient with severe osteoarthritis of both hips was a cripple, suffering constant pain with little hope of much relief. Today, with the development of the total hip replacement arthroplasty by British orthopedic surgeons, many who have been in pain for years can have a new life.

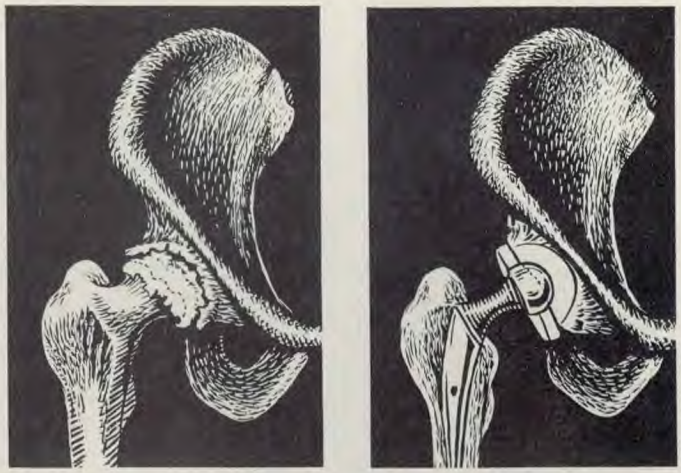
Osteoarthritis, the most common form of joint disease, is caused by "wear and tear" on the joints. The most frequent sites are the weight-bearing joints—the hips, the knees, the spine, and the joints of the feet. According to a recent national survey, 37 of every 100 adults have some osteoarthritis.

It occurs primarily after age 45 and affects men and women equally, in contrast to rheumatoid arthritis, which is more frequent in women, and gouty arthritis, which is more frequent in men.

Occasionally, osteoarthritis can be traced to a joint injury, but most often the patient has a slow, gradual onset of symptoms—pain, some swelling, some limitation of movement. There may be quiescent periods with relatively little pain. Pain is worse when weight is borne on the affected joint, especially if the patient is overweight. Progressive limitation of movement is caused by erosion of joint surfaces and bone spurs around the joint.

There are many ideas as to why joints begin to wear out. One is that the joint is no longer properly lubricated. Another is that the wear on the joint from rubbing takes place faster than the body can make repairs. But most probably, the damage is owing to repeated hard impact. Aging cartilage and bone are less elastic, and can't stand up to continual shock. The ability to absorb the impact is gradually lost through the years. Because of reduced blood flow, the cartilage lining of the joint can't get the supply of oxygen and nourishment it needs. Cartilage thins out, particles break away, and the surfaces become pitted. The body responds as to a foreign substance, and the result is an inflamed and thickened joint capsule, along with deterioration of surrounding ligaments. The joint becomes unsteady and painful.

Because the above process is slowly progressive, both physicians and patients have taken a rather negative attitude toward treatment. "Take two or three aspirins four times a day and don't do too much walking" has been the usual advice.



S. E. BOHLMANN

Today there is hope. Positive action to prevent further deterioration of the joint, and to enable the patient to better handle the problems he or she already has, can be rewarding. But it calls for discipline on the part of the patient and good judgment and encouragement by the physician.

Weight reduction is essential for those who are 10 per cent or more above average weight. (See recent issues of LIFE AND HEALTH—November and December, 1975—for some practical suggestions on weight reduction.)

Periods of rest during the day are needed to lessen the constant impact on the joint surfaces. It is so easy to become absorbed in a task and continue bearing weight on the joints for hours at a time, especially if medication has been taken to decrease the pain. Muscles and tendons around the joints have been damaged by inflammation and are not able to give good support to the joint.

Correct posture and good walking habits may be difficult to maintain when your feet are hurting and your knees are wobbly. Low-heel shoes are a must—shoes that adequately support all parts of the foot. Calluses and corns, which lead to incorrect gait, should be removed.

Protection of the affected joints from stress and further damage means learning to do familiar tasks in slightly different ways. Using the arms of the chair to push up when rising helps take some of the stress off the ankle and knee joints. By installing rails beside the toilet and using a raised toilet seat one can protect the hip and knee joints. Opening jars with the right hand and closing them with the left hand protects the main knuckle joints of the hand and helps prevent hand deformity. Dusting with a dust mitt or using a large sponge instead of a cloth avoids tight grasp and encourages straight fingers. Early protective measures can delay or avoid permanent deformities and loss of function.

Exercise promotes strength of muscles. This is the best protection for the joints. Progressive resistive exercises will increase muscle tone and make work and walking easier. For osteoarthritis in the knees, it is important to strengthen the front thigh muscles. Sitting on the edge of a table, let the legs relax, then raise them to full extension, and hold them there for a count of 5. Adding sandbags of gradually increasing weight (2, 4, 6, 8, 10 pounds, et cetera) gives added work and benefit. Exercise for the osteoarthritic back must be performed on a firm mattress, which is also ideal for rest at night.

Heat and massage relieve pain and muscle spasm. Various methods can be used for the application of heat. These include the hydrocolator pack which can be applied by a family member or a physical therapist, the thermal heating pad, the heating compress, the hot tub bath, and the heating lamp. Deeper local heat may be produced by ultrasound or diathermy treatment by a physical therapist.

Medications to relieve pain should be used sparingly, since the body tends to build up a tolerance. The motto should be "use only when needed." Drugs have side effects, and the risks must be weighed against the benefits. This is especially true of some newer drugs. By relieving pain, drugs tend to encourage more activity than is advisable, and thus allow further damage to the joints.

New surgical procedures developed during the past 15 years have greatly improved the management of *severe* osteoarthritis. While most patients are best served by an intensive conservative approach, some will require surgical treatment. The good judgment of the physician will dictate when this is the best course.

Often it is possible to permanently relieve the symptoms of osteoarthritis. Early diagnosis and scrupulous attention to such simple things as wearing proper shoes with rubber heels to reduce the impact on the joint, or using a cane to relieve the pressure on a joint, can make a profound difference in the functional capacity of an individual. Most important—don't give up. Seek expert help. Intelligent use of a variety of procedures will save the joints and give many happy years of work and play. &

An apology to the medical profession

By Miriam Wood

I'm apologizing to the medical profession. Now no one likes to face the necessity of admitting that he/she was completely wrong, and I'm no less chagrined than anyone else would be in a similar situation. Nonetheless, honesty demands that I set the record straight.

Here it is, in all its shame. For years—all my life, in fact—I have given lip service to the theory that exercise is absolutely necessary for the health and well-being of human beings. I've heard talk after talk on the subject; I've read article after article. I've been lectured by physician after physician—personally lectured. Always I nodded piously, then announced, with convincing, but pseudo, sincerity, "I just *must* get more exercise!" Actually, I should have said that I needed "some" instead of "more," since I wasn't getting any at all after my children grew up and I no longer dashed about taking care of their wants. I really hated exercise, though I never said so; I did boast, however, of being an armchair athlete and I think I really came to believe that my interest in spectator sports was "exercise." I kept myself ambulatory to the extent of making it from the front door of my house to the door of the car and to the door of the school or office. And I did not believe that exercise made a bit of difference.

During my years as a high school teacher, my classroom was located on the third floor, which meant that during frequent fire drills I had to walk down the three flights of stairs and out onto the grassy area beyond the building. Getting down the stairs was no problem. Getting back up them was an entirely different matter. I'd always find myself breathing very heavily by the time I'd negotiated two flights, and occasionally I would stop on a landing to catch my breath.

After one such drill, as I was plodding my weary way upward, one of my students, also a member of the varsity basketball team, passed me in a blur of motion. He was taking the steps two at a time; he wasn't short of breath; he was obviously enjoying himself hugely. (Of course, he should have been walking sedately, the rules said, but that's beside the point.)

When I finally made it to my classroom and tottered in, there he was sitting, all smiles. He observed carefully my dispirited progress to my desk. Then he announced, loudly enough so that the entire class would hear, "Mrs. Wood, you're in *terrible* shape!"

Discomfited, I replied, "Well, you'd hardly expect me to be able to take the stairs the way you did, would you?"

He wasn't one whit deterred. "Maybe not, but I think it would do you a lot of good to run around the track in the afternoons after classes with the basketball team!"

The mental picture of their small, meticulously dressed and coiffed English teacher running around the track with the basketball team was too much for the class. They dissolved into shouts of laughter, me along with them.

And so it went. I found myself less and less energetic as time went along, to the point where going out in the evening was an actual chore, no matter how attractive the occasion. I wanted nothing so much as to collapse on the couch in the recreation room. During this period, Friend

HELCIO DESLANDES

Husband surprised me with a new three-speed bicycle; he purchased one for himself also, and painted a glowing picture of the wonderful times we'd have in the evenings pedaling merrily over hill and dale.

"You just *must* get some exercise," he announced firmly.

Well, I'd ridden a bicycle through the days of my childhood. I'd loved it. And besides, I loved him and he had bought the bike for me. So I viewed my new possession proudly, all shiny and glittering in its black paint and silver trim.

"Let's try them out right this minute!" I exclaimed.

Suiting the action to the word, we hopped on and started out. It was absolutely glorious. I whizzed down the street next to ours, clear to the bottom of the hill, the breeze cooling my cheeks and the sense of speed and motion exhilarating my earthbound body.

Then I turned the corner to start back up again. What in the world had happened? I couldn't get going. I couldn't even push the pedals over. Friend Husband, who'd already pedaled halfway up the hill, glanced over his shoulder, saw my plight, and rode back to investigate.

"Why don't you come on?" he asked.

"Because I *can't!*" I shrilled, with some degree of asperity. "There's something wrong with this miserable bicycle."

He smiled. (I thought his smile had just a trifle of superiority in it, but I could be mistaken.)

"That's where the exercise comes in," he informed me. "You'll really have to work to make it back up the hill. There's not a thing wrong with the bicycle. You didn't think you were exercising when you were coasting down the hill, did you?"

Speechless, I attempted the hill again, but after a few yards my legs ached so badly I dismounted, and, with what dignity I could muster, pushed the bicycle the rest of the way home, watching my bikemate disappear into the distance, pedaling furiously and happily. When he returned home I was ready for him.

"If that's supposed to be *fun,*" I told him, "then there's something the matter with *me.* After a hard day of teaching, if anybody thinks I'm going to get out and suffer like that he has another think coming."

And there the matter rested, along with the bike, the latter propped up against one wall of the garage. Oh, I was persuaded to try it once in a while, but in winter it was too cold and in summer it was too hot, and in both winter and summer my precious hairdo had to be protected. My bikemate kept on riding, though. And he kept on being able to walk up the stairs without panting. And he could stay awake during the evenings.

At this point I became very ill with gallstones and had to have surgery. Never having been really sick before in my life, the whole episode proved somewhat traumatic for me, especially when, after returning home from the hospital, I developed complications and had to return to the hospital for a second go-round. By the time I finally got home to stay, I had lost about 20 pounds, was too weak to carry on normal activities, and was suffering from a severe

case of depression. Nothing seemed worthwhile. I was convinced that I would never again be a normal human being, able to eat what everyone else ate, and do what everyone else did.

During all the testing that preceded my surgery, my family doctor had discovered that I had an extremely high cholesterol count. He'd questioned me closely regarding my diet and activities. When he found that I consistently avoided fatty foods and sweets, since I refused to be as chubby as once I was in my girlhood, he'd asked, "Do you get any exercise?"

"Well . . . not really," I admitted.

"But you must have exercise. It's absolutely essential. Now I want you to put yourself on some sort of exercise program that you'll stick with," he had ordered, and I had grudgingly agreed. But then surgery came right afterward, then the complications, and then, temporarily, very poor health, and then a change of jobs, and then . . .

Well, you can see what I mean.

I had tried to finish out the school year. I barely made it, but it seemed wise to get into another profession, and so after six months I became an administrative secretary. Now I didn't even have the exercise of walking around the front of the classroom, something I had always done before.

My doctor, to my annoyance, insisted on frequent cholesterol tests, and while the count was somewhat better (perhaps the removal of the gallstones helped) he still kept harping on my need for exercise.

Half-heartedly, I started doing five situps and five toe touchings a day—when I didn't feel too tired.

About this time I needed a routine eye examination. I wasn't prepared for what the ophthalmologist found. He wasn't too specific, but he made an appointment with a retinal specialist and, with grave apprehension, I listened to the latter's diagnosis. Actually, it didn't turn out as badly as I had feared.

"You are very lucky," the specialist told me. "The retina of your right eye seems to have tried to detach itself, but it seems now that it is in the process of reattaching. But any retinal trouble cannot be taken lightly. You'll need to check with me every six months—and there'll be some restrictions on your activities. You must not jog, do situps or pushups, or lean over to touch your toes."

I stared at him in amazement. Deliverance! And from such an unexpected quarter. I couldn't wait to tell Friend Husband. You could never have found a more pleased and purring self-righteous creature than I when I informed him that doctor's orders were to restrict . . .

"Well," he replied, smiling slightly, "there's no doubt in my mind but that you'll follow *these* orders to the very letter."

Our evenings were something less than ideal. After fixing my husband a tray with a light meal to eat while he watched the evening news, I'd bathe, get into my nightwear, then collapse on the couch. I'd be asleep in five minutes, waking up only to stagger upstairs at bedtime.

"This is kind of a lonely existence for me," Friend Husband remarked wistfully one evening.

"I know it is, but I can't help it," I told him sadly.

And I couldn't—then.

A few months ago, though, something happened that has changed my life so drastically and so much for the better that I have felt the need to make my confession. I was

looking at myself in a bathing suit. I certainly did not like what I saw.

"I expected to get older, but I didn't expect to get all soft and puddinglike," I wailed to one of my daughters.

She grinned and patted me. "We love you anyway," she assured me.

"But I don't love myself!" I wailed.

It is simply amazing what a woman will do for her appearance's sake.

I, who had avoided even the word *exercise* for all these years, now gathered all the last remnants of my pride and will power. I thought it over. Would I just give up and let nature take her cruel course? All my Irish ancestors who'd given me something of a combative nature decreed against that spineless course. So, I came to a decision.

I would buy an Exercycle. It would really fill the bill. It could sit in the basement. I could exercise at times that suited me. My precious hair would not suffer. I didn't need to go out in the dark. There'd be no transporting myself to a tennis court. (Yes, I'd tried that also, briefly.)

Glowingly, I confided my plan to F. Husband. He wasn't overly enthusiastic. I really couldn't blame him. He'd seen me try so many things and give up. But he was willing to hope for the best.

"I think this would be wonderful if you stick to it," he told me realistically. "And so, to make sure that you do, I'm not going to buy the Exercycle for you. If you want it badly enough to take money out of your own savings account, knowing you as I do, I think you'll be much more likely to stick to it."

Momentarily I was miffed. Then I drew myself up to my full height (five feet) and announced, "You just watch!"

And so I bought the Exercycle. I had thought that I could hop right on it and pedal away for the 15 minutes per day that I had set as my goal. But to my horrified chagrin, after 30 seconds of fast pedaling that first time I was so winded that I had to rest and start over again. The next day all my muscles screamed in rebellion. But I doggedly kept going. (Friend Husband was right. That hole in my savings account pained me deeply.) Gradually I have gotten so that I can pedal for moderately long periods of time, while the handlebars plunge my torso back and forth. I pedal with "no hands." I pedal backwards. I keep increasing the brake pressure so that I work *hard*. No matter how tired I feel at night, I hop on the machine and get going. I pedal until I'm streaming perspiration and my heart is pounding.

But here's the miracle. *That heavy feeling of depression has simply disappeared.* I wake up every morning with a zest for living. I have all sorts of projects that I'm involved in. It's like being young again. And I don't go to sleep on the couch in the evenings. I can stay awake until the respectable hour of 10:00 or 10:30. I can walk up flights of stairs without puffing. I can shop and enjoy it.

Exercise has to be the reason for these blessings, since it's the only new factor in my life. That's why I'm apologizing to the medical profession. If I'd listened, I'd have spared myself much mental suffering.

On the other hand, I don't recall anyone's ever telling me that exercise might help when one is depressed. But perhaps I just wasn't listening. Now I don't claim that an Exercycle is the answer for everyone, but it's been wonderful for me. Do I enjoy it? No, I hate it—but I wouldn't give it up for the world! &

SKIP BAKER

Big boys do cry

By J. L. Butler, Sr.

The pain was sudden, excruciating, radiating from his chest into his shoulder and down the left arm. There was no way he could keep it to himself. An ambulance was called, and it wasn't long until he was off to the coronary-care unit of the local hospital.

A big, good-looking lug of a fellow in his late 30's, Jim wouldn't admit to having been sick a day in his life. But now he had to have help. Doctors and nurses quickly hooked up the necessary monitors, started the IV's, and eased the pain with medication.

Jim's distraught wife arrived at the hospital soon after he did and waited in the small lounge outside the coronary-care unit. The thoughtful physician had asked the nurse to call the hospital chaplain to see Jim's wife. As he talks to her it is evident that she needs help. A series of unforeseen realities must be faced, accepted, and coped with. There will be financial adjustments to make, decisions to be reached, and gaps in the family role assignments to be filled during this period of her husband's treatment and convalescence.

The telephone call from his office to her job telling of his seeming sudden illness was a shock, but really hardly a surprise. She knew her husband. She had been fearing, almost expecting, something like this would happen. She knew he had not been feeling well for months, but would never admit it. His eating habits and his smoking were surely no help, but he resented her attempts to reform him. He had not had a physical

A hospital chaplain talks about men and their illnesses.

check-up for well over two years and her pleadings to see a doctor were considered expressions of needless worry and nagging. He was "all right."

But now, glance into the coronary care unit—the oxygen, the IV tubes, the hourly blood-pressure checks, the continuous electrocardiograms. The long, hard road back to near-normal activity is just beginning.

Why do men fear an honest admission of illness? Why do they hesitate in seeking early medical attention? What makes them suffer in silence, hoping the telltale pains will simply go away? What makes them deny symptoms that would send their wives to the specialist or cause them to hurry their child to the pediatrician?

Men present special problems as patients and potential patients. Many consider it a personal failure to be sick. It just is not supposed to happen to them. Passivity and inability to stand pain are often equated with femininity. Illness becomes an emasculating process, and thereby produces anxiety. So, the pains get sharper, the breath weaker, and the days seem longer and harder, but the game of cover-up goes on.

And why shouldn't it? Our culture raises its boys to feign insensitivity to pain and suffering. When little girls are hurt they are expected and permitted to react normally. Expressions of hurt bring sympathy, kisses and cuddling. For them tenderness is a rewarded trait. But to little boys we say, "Now, what's all the crying about? Big boys don't cry," or "Come on, now, that didn't hurt, don't be a crybaby." Boys are trained to mask their true feelings when hurt, to grin (or groan) and bear it. Plainly, to admit hurt is a sign of weakness or sissiness.

Consider the little 5-year-old boy whose finger was smashed in an automobile door. His mother reports he rode a full city block, with his finger caught, in stoic silence and screamed out only when she turned to the back seat and saw his streaming tears. He was trying desperately to be a *big boy*.

Our school sports programs emphasize the rough-and-tumble contact games for boys. Players must learn to hurt and be hurt in uncomplaining silence.

As boys and girls grow together in our society each sex eventually develops from a nonsex identity to a well-defined, sex-role identification. That is to say, boys learn from society what boys are supposed to be and do, and, of course, growing girls learn how a "little lady" is supposed to act. However, we allow our girls much more latitude in behavior. She is free to cross sex-role lines. The tomboyish little girl is considered cute and is usually admired. It's all right for her to wear a T-shirt and jeans. No eyebrows are raised if she joins in the boys' activities. But just let little brother play with dolls and he is immediately labeled a sissy. In any language "them's fightin' words." All of this tends to make our growing males more touchy about their maleness.

However, in spite of the dangers involved in this "manly" approach to sickness, there perhaps can be benefits, as well. Many men simply refuse to be sick. Oddly enough, a stubborn refusal to submit to sickness does seem to produce a power that keeps some hardy souls going. They literally *will* themselves to stay well.

The power of the will is not understood or valued as it should be. The relation that exists between mind and body is very intimate, and positive states of mind can promote health and prolong life. Most doctors, nurses, and many hospital employees know of cases where people have literally willed themselves to live or willed themselves to die. World War II prison camps produced stories of inmates who, after a trying, hopeless experience would turn their faces to the wall and, seemingly by an act of volition, die with no apparent pathological cause.

Then there was the case of the divorced mother who was diagnosed as having Hodgkin's disease, cancer of the lymph system, and advised of the terminal nature of her illness. She bravely announced that she would not die, she simply could not die until she had seen her son through college. To be sure, she was in and out of the hospital for the eight years that it took, but two weeks after the son graduated from college she was admitted to the hospital for the last time. In a matter of days she was gone.

So proper use of will power, rightly directed, can impart an energy to the body and be an aid in maintaining health. Will power can control the imagination and be a powerful means of overcoming disease.

On the other hand, there are benefits in admitting to discomfort and pain. It may become a matter of life (early diagnosis and treatment) or death. Time may be of the essence. Then, simply

saying, "I don't feel well," can do much to ease tension.

There are three basic ways in which problems are expressed and tensions relieved. The first method is to act out our feelings. This is a primitive method we probably all have used at one time or another. It is common in the very young. When babies are upset they don't merely cry. They throw their whole bodies into the act. Arms and legs thrash about, skin flushes, and every system responds to the stress. A little later children will hit when angry or run away when frightened. Any emotion from the violent to the affectionate may be handled in this way.

As we mature most of us take another approach. We limit our action-centered responses and begin to react verbally instead. We learn to talk about our feelings, or try to use common sense in understanding and solving the problems that confront us.

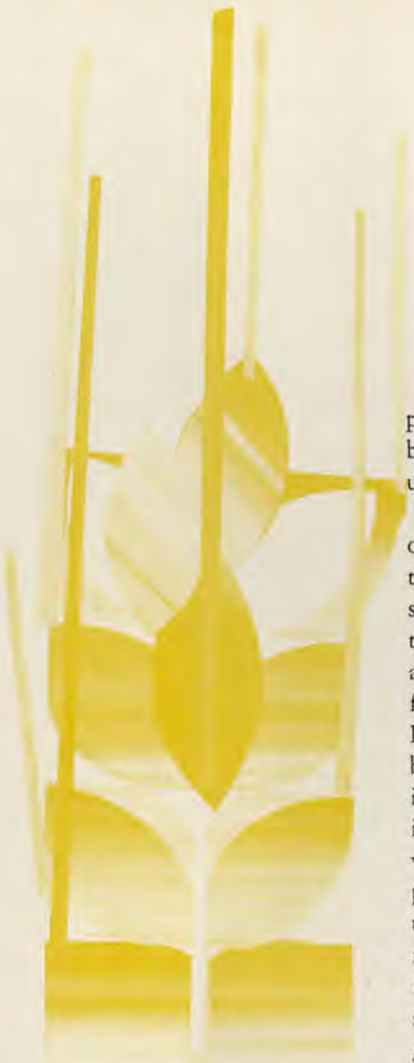
Some of us turn to the third possible method of expressing our problems and relieving tension. We use our bodies to tell our story. We take our tensions inside and release them through headaches, upset stomach, muscle cramps, and other physical reactions. These complaints are often useful in helping us avoid the source of stress (i.e., a day off from the office on sick leave). They have other apparent benefits, as well. People become concerned about us. (A chance to do some big-boy crying.) Every wife knows what a big sympathy-seeking, TLC absorbing baby, a 210-pound husband with a head cold can be. He is completely helpless. She stays close by his side holding his hand, stroking his fevered brow, and repeating "You poor dear" over and over. Many wives confide that when hubby does admit to being ill, he is much more of a problem than a sick child.

Symptoms or sicknesses such as those mentioned are particularly helpful to the man who has difficulty admitting a need to be dependent, to crave affection once in a while. The symptoms are treated, and the big fellow need not feel any less independent (or less manly), because concern for physical ills is acceptable everywhere.

Wives whose husbands put off their physical check-ups year after year have a right to be concerned. Nagging usually has a negative effect. Many employers are now requiring and subsidizing annual physicals for their employees. This is an encouraging trend.

It may be we can do little to change Dad's stubborn view of illness and masculinity. But perhaps we can help the little fellows coming up to know that if they're really hurt we understand, and that it's perfectly all right to admit to honest pain. Parents need to understand that tenderness and compassion are not merely feminine traits. They are human virtues for both sexes and should be taught by parental example.

One reason there are so many hard-hearted people in the world today is that affection has been regarded as weakness. The better nature is often stifled during the early years. Actually, what is the need of hurrying your child out of his childhood? Why the great rush to be a *"big boy"?* After all, there is a beauty appropriate to each age and developmental period. He will in ample time unfold into a *big boy.* By wisdom, tact, and love, bind your little man to your heart. Let him know you understand his little hurts and that sometimes even *big boys* do cry. &



Is it, or isn't it?

Is it harmful or isn't it?

What?

Wheat!

Although it has been considered the staff of life by many cultures throughout many millenniums, wheat today is being condemned by some health-seeking individuals as if it were a poisonous substance, unfit for food.

It is true that there are some persons who have a specific intolerance, or allergy, to wheat, and break out with eczema or manifest this intolerance in some other way. In fact, allergies to wheat, corn, oranges, dairy products, are quite common, especially among children. The problem here is not with the food, but rather with the allergic individual.

A rather complex and often serious form of wheat intolerance is gluten-sensitive enteropathy, GSE for short, or celiac disease. Its manifestations include: weight loss, diarrhea, anemia, inability to handle dietary fat, abdominal pain, and vomiting. For years its cause remained obscure, but some Dutch scientists discovered in the 1950's that there is a specific inability in the intestines of people with this disease to handle a factor present in wheat, rye, and oats. When the protein of wheat, called gluten, or its alcohol extract, called gliadin, is withheld from these people their symptoms clear up. Returning the gluten or gliadin to their diets causes recurrence of symptoms. Wheat starch gives no trouble.

There are currently two theories as to the way the wheat protein causes the symptoms. One is that gluten contains some toxic factor that normal people can detoxify in their intestines, but that GSE people lack the intestinal enzyme that does this. The second theory is that people with GSE develop a localized immune reaction to the gluten in their diet.

Several recent research studies affirm that the cause is a localized immune response. In one study GSE babies were given a gluten-free diet for a period of time and became symptom-free. Then they were given gliadin by stomach tube. They became acutely ill, and some even developed a shocklike state. This is typical of an immunity problem. Other evidences are that antibodies to gluten build up in the blood of patients with GSE, and that the symptoms can be successfully treated with cortisonelike chemicals.

Is wheat harmful? No. It is excellent food. But there are a few people whose intestines react to it. These people should not eat wheat, rye, or oats. The rest of us can have our shredded wheat and whole-wheat toast every morning if we wish. &

On the Pathogenesis of Gluten Sensitive Enteropathy. Nutr. Rev. 32:267-270, 1974.

Getting enough iron?

By Lydia Sonnenberg, M.A.

A swallow of this magic elixir is guaranteed to make you feel really alive in just three days!" Can't you almost see a huckster standing on the tailgate of a garishly decorated wagon, hawking "Dr. Boone's Miracle Blood Builder. . . . Step right up and try this fantastic . . ."?

The American public continues to be made well aware of the importance of iron, a major ingredient in those old-time patent medicines. But in spite of the old-time tonics—and modern ones, too—iron deficiency is still very much a part of our contemporary life.

What about iron? Can't we get enough in our foods?

Even though we need only a small amount, iron is the nutrient receiving the most consideration in food-enrichment programs today. There is a lively debate going on in medical, scientific, and Governmental circles not only in regard to increasing the level of iron added to flour and cereals but about introducing it into many other foods, as well.

One small nail Iron is considered a "trace mineral" because it is found in the body in such minute amounts, only about 4.5 grams in the average healthy adult. This is about one sixth of an ounce, or barely enough to make a small nail! And yet this small amount is absolutely essential to life.

Iron is an important part of the hemoglobin molecule found in red blood cells. In fact, the bone marrow can't make this vital oxygen-carrying substance without iron. When iron stores are low fewer red cells are produced and the person becomes anemic. Incidentally, to make red blood cells the marrow requires not only iron but also protein, copper, vitamin C, vitamin B_6 (pyridoxine), and vitamin B_{12}.

Most of the iron in the body is in the red blood cells, or is in storage ready for use in making hemoglobin. The remainder (about 5 per cent) is distributed throughout all the body cells as part of an enzyme system (cytochrome oxidases) needed for the production of energy.

Like a bulldog Because of its great importance, the body holds on to iron as tenaciously as a bulldog holds on to a pants leg. The red blood cells go through a four-month renewal cycle in which the older cells are destroyed and replaced by new ones at the rate of about 100 million per minute. As this process goes on, iron is used over and over again. In fact, very little iron is lost from the body under normal conditions, about 1 to 2 milligrams per day. The only significant normal loss is in women of childbearing age through menstruation. Abnormal losses may occur, for example, from wounds, from stomach ulcers, or from cancer of the bowel.

More iron is needed during periods of growth, such as in infancy (age 6 months to 3 years) and in the teen-age growth period (age 11 to 18 years). Women, of course, need extra amounts during this teen-age period and onward until the menopause, and especially during pregnancy and while breast feeding (see table 1).

Nutrition experts have found, in a recent survey, that iron deficiency is the most prevalent nutritional deficiency in this country. This is true also for many other countries.

If the body uses iron so economically, why then do we find iron deficiencies so common? Primarily

DON SATTERLEE

Table I

Recommended Daily Iron Allowances

Food and Nutrition Board
Revised, 1973

	Age in years	Iron in milligrams
Infants	0.0 - 0.5	10
	0.5 - 1.0	15
Children	1 - 3	15
	4 - 10	10
Males	11 - 18	18
	19 on	10
Females	11 - 50	18
	51 on	10
	Pregnant	18+
	Lactating	18

Table II

Typical Foods as Sources of Iron*

FOOD	SIZE OF SERVING	IRON mg.
Bread		
White, enriched	1 slice	.6
Whole wheat	1 slice	.5
Cereals		
Dry		
Bran flakes	3/4 cup	1.3
Cornflakes	1 cup	.5
Shredded wheat	1 biscuit	.8
Wheat germ	2 tbsp.	.9
Cooked		
Oatmeal	1 cup	1.7
Rice, brown	3/4 cup	.6
Rice, white	3/4 cup	.2
Wheat, cracked	2/3 cup	.9
Cereal products, cooked		
Macaroni, enriched	1 cup	1.2
" unenriched	1 cup	.6
Noodles, enriched	1 cup	1.4
" unenriched	1 cup	1.0
Spaghetti, enriched	1 cup	1.4
" unenriched	1 cup	.6
Dairy Products		
Cheese, cheddar	1 piece (1 oz.)	.3
cottage	6 level tbsp. (3 1/2 ozs.)	.3
Milk, whole or nonfat	1 cup (8 ozs.)	trace
Eggs		
Whole	1 med.	1.1
Yolk	1	.9
Fruit		
Fresh		
Apple	1 med.	.5
Apricots	2-3 med.	.5
Avocado	1/2 (3 1/4" by 4")	.6
Banana	1 small	.7
Blueberries	5/8 cup	1.0
Cantaloupe	1/4 med.	.4
Grapefruit	1/2 med.	.4
Orange	1 med.	.6
Peach	1 med.	.5
Plums	2 med.	.5
Strawberries	10 large	1.0
Dried		
Apricots	4 large halves	1.3
Dates	5 med.	1.5
Figs	5 med.	3.0
Raisins	1 tbsp.	.4
Prunes	4 large	2.2
Juices		
Grape	3/4 cup	.5
Orange	1 cup	.5
Prune	3/4 cup	7.4
Legumes, cooked		
Beans, red	Approx. 1/2 cup	2.4
Beans, white	" "	2.7
Garbanzos	" "	2.8
Lentils	" "	2.1
Peas, split	" "	1.7
Soybeans	" "	2.7
Miscellaneous		
Yeast, Brewer's	1 tbsp.	1.6
Nuts		
Almonds	12-15	.7
Cashews	6-8	.6
Coconut, dried, shredded	2 tbsp.	.5
Mixed nuts	1 oz.	1.0
Peanuts	1 oz.	1.0
Peanut butter	2 tbsp.	.6
Sugar and sirups		
Sugar, white	1 tbsp.	0
" brown	1 tbsp.	.4
Honey	1 tbsp.	.2
Molasses, light, first extraction	1 tbsp.	.9
Molasses, medium, second extraction	1 tbsp.	1.2
Vegetables, cooked		
Asparagus	2/3 cup cut pc.	.6
Beets	1/2 cup diced	.4
Beet greens	1/2 cup	1.9
Broccoli	1 lg. stalk	.8
Carrots	2/3 cup	.6
Cauliflower	7/8 cup	.7
Kale	3/4 cup	1.6
Lima beans, green	5/8 cup	2.5
Peas, green	2/3 cup	1.8
Potatoes, white, baked	1 med.	.7
" sweet "	1 small	.9
Spinach	1/2 cup	2.0
String beans	1/2 cup	.8
Tomatoes, raw	1 med.	.8
Tomato juice	1/2 cup	.9

* Based on figures taken from *Food Values of Portions Commonly Used*, 11th edition, by Bowes and Church, 1970.

because of our careless, haphazard food selection, and the refining and processing of our food supply.

Iron deficiency is most prone to occur in babies not fed a proper diet, in teen-agers who are making poor food choices, in dieters, especially those choosing one of the fad diets, and in elderly people, who tend to limit the variety of foods in their diets. Persons with iron deficiency lack energy, and they fatigue easily. They become pale and, when anemia is marked, become short of breath. A simple blood test (measurement of hemoglobin) will tell whether or not anemia is present. Other tests are needed to determine whether it is due to iron deficiency or some other cause, such as sickle-cell disease or leukemia.

A variety of factors affect the absorption of iron from the gastrointestinal tract. Some, like hydrochloric acid from the stomach and vitamin C, promote absorption, others, like phytic acid, which forms an insoluble iron compound, prevent absorption. Phytic acid is found in the bran of whole wheat. If there is enough iron in the diet this will not exert a detrimental effect. Since the body hangs on to iron so well, it must prevent excessive absorption. Only about 10 per cent of the iron in the diet is absorbed, unless there is a need. Then it may absorb up to 20 or 30 per cent. The mechanism for control of iron uptake is not known, but current research suggests that dietary iron is picked up by intestinal mucosal cells and held there unless it is needed. If it is not needed those cells with their iron stores are sloughed off into the gut tract and eliminated.

Good iron sources Planning is required to ensure an adequate intake of iron. It doesn't just happen automatically. The amount of iron in a normal American diet averages about 6 milligrams per 1,000 calories. This means that women who restrict themselves to 1,500-2,000 calories per day are likely to get too little iron unless they make *good* choices.

What are some of our good-food sources? Legumes, green leafy vegetables, whole-grain or enriched cereals, dried fruits, and some nuts make substantial contributions toward meeting iron needs. Some other vegetables and fruits (see table) make good contributions. Fruits with their organic acids and fructose (fruit sugar), and particularly those rich in ascorbic acid, enhance iron absorption.

Milk, which is a good source of many other nutrients, is very low in iron. Children who drink too much milk at the expense of other foods, especially iron-containing ones, become anemic. Table 2 gives the iron content of a number of common foods.

Unenriched, highly milled cereals or breads are very low in iron. Sugar and fats are completely devoid of this nutrient. About one third of the calories in the typical American diet come from "empty calorie" foods high in table sugar and fat. Another substantial number come from other highly processed and refined foods, some of which are enriched with iron but are still missing other important nutrients ordinarily present in the foods in their unrefined state. Really, it is not difficult to see why anemia is our number-one deficiency problem.

It is important that you select your meals so as to have a good balance of the major food groups—plenty of vegetables and fruits, whole-grain or *lightly* milled enriched breads and cereals, protein-rich foods including a variety of legumes, and some milk and milk products (or milk alternate, such as fortified soy milk). By planning wisely you can help yourself and your family get out of that "second gear," below-par feeling.

Getting enough iron? It's worth checking it out!

recipes

Golden Fruit Soup

- 1 cup dried apricots
- 2/3 cup dried figs
- 3 1/2 cups water
- 3 tablespoons minute tapioca
- 1/3 cup honey
- 1 cup crushed pineapple
- 1 1/2 cups apricot nectar
- 2/3 cup frozen orange juice concentrate
- 2 medium bananas
- Dash of salt
- Whipped cream, optional

1. Cut apricots and figs into bite-sized pieces.
2. Soak in water for one hour or longer; cook until almost tender.
3. Add more water, if needed.
4. Bring to a boil and sprinkle in tapioca; cook until clear.
5. Remove from heat. Add honey, pineapple, apricot nectar, and orange juice concentrate. Chill.
6. Just before serving slice in bananas.
7. Top with a dob of whipped cream, if desired

Yield: 6 servings

Iron per serving: 2.0 mgs.

CHARLES COOK

Fruit Crisp

2/3 cup rolled oats
1/4 cup whole-wheat pastry flour
1/3 cup dark brown sugar
1/3 cup coarsely chopped nuts
1/4 cup toasted wheat germ
1/4 teaspoon salt
4 tablespoons margarine
4-5 large apples, sliced (use cooking or baking kind)
1 cup fresh or frozen blueberries
1/2 cup honey, varies depending on sweetness of apples

1. Combine dry ingredients.
2. Cut in the margarine until pea size.
3. Place fruit into baking dish; dribble honey over fruit.
4. Sprinkle on crumble mix, pressing down gently.
5. Bake at 350° F. until fruit is done and the top of crust is lightly brown.

Can be served warm in dessert dishes with light cream, with slightly sweetened vanilla sauce, or just plain.

Yield: 8 servings.

Iron per serving: 1.9 mgs.

Triple-Bean Salad

1 cup cooked red kidney beans
1 cup cooked garbanzos
1 cup cooked green beans

Dressing

4 tablespoons lemon juice
4 tablespoons oil
1/2 teaspoon salt, or to taste
1/2 cup chopped celery
3 tablespoons minced pimiento
2 tablespoons chopped parsley
1/4 teaspoon sweet basil

1. Mix dressing ingredients.
2. Pour dressing over beans and toss gently.
3. Marinate for several hours or overnight.
4. Serve in glass bowl with rings of red or white onions, or green pepper.

Yield: 6 servings.

Iron per serving: 2.3 mgs.

Savory Spinach

1 pound fresh spinach
1 tablespoon chopped green onions or chives
1/2 tablespoon margarine
1/2 teaspoon salt or to taste
1/4 cup sour cream
Lemon wedges

1. Cut spinach leaves coarsely.
2. Cook spinach in its own moisture, just until tender-crisp, about 3-5 minutes.
3. Toss lightly with remaining ingredients.
4. Serve with lemon wedges.

Yield: 4 servings.

Iron per serving: 3.5 mgs.

Herb Dumplings

1/2 cup water
2 tablespoons oil
1/2 teaspoon salt
1/2 teaspoon Ac'cent
2/3 cup flour (1/2 whole wheat, 1/2 enriched white)
1 teaspoon parsley flakes
1/4 teaspoon savory
1/8 teaspoon thyme
2 eggs

1. Combine water, oil, salt, and Ac'cent in a small saucepan; bring to a boil.
2. Add flour and herbs all at once.
3. Stir until the flour is completely absorbed and the paste gathers into a ball, leaving the pan clean.
4. Cool slightly.
5. Add the eggs, one at a time, stirring after each addition until the egg is well blended in.
6. Beat vigorously a minute longer.
7. Drop into the simmering garbanzos.

Note: Other legumes may be substituted for the garbanzos; in place of the tomato soup, a chicken-like (or other) seasoning may be used and the liquid adjusted with additional water.

Yield: 6 servings.

Iron per serving: 3.5 mgs.

Garbanzos With Herb Dumplings

1 cup dry garbanzos
4 cups water
1 teaspoon salt
1 #10 3/4 oz. can tomato soup

1. Add washed garbanzos to boiling water; as soon as garbanzos boil again, turn off heat and let stand at least one hour. Simmer until nearly done; add salt, and continue cooking until garbanzos are soft.
2. Add tomato soup; if necessary add water to total about 3 1/2 cups liquid. Bring to a boil.
3. Drop in herb dumplings with a teaspoon.
4. Cover, and boil gently for 20 minutes. *Do not remove the lid until after the 20 minutes.* &

your health questions answered

Q I have HIGH CHOLESTEROL. What should I do?

A There appears to be a statistical correlation between high serum levels of cholesterol and coronary heart disease and other vascular diseases (stroke and peripheral vascular disease). Since 1,500 mg. to 2,000 mg. of cholesterol is synthesized in the body each day, it is best not to add extra amounts from the diet. Cholesterol is found only in *animal source foods*—eggs, meats (especially liver, kidney, et cetera), sea foods, and smaller amounts in dairy products. Recently the suggestion has been made that a diet high in *fiber* (from vegetable and cereal sources) tends to transport cholesterol excreted in the bile and thereby prevents reabsorption of the excreted cholesterol from the digestive tract. There is reason to believe that excess saturated fat and excess refined sugar contribute to an elevated cholesterol level.

Q Our son is 10 and has a problem with BED-WETTING. What can we do about it? Our other two children, ages 13 and 17, didn't have this trouble.

A Although most children gain night-time bladder control by age 3 or 4, some still have occasional "accidents" at age 7, 9, or even 11. If this is a *constant* occurrence, the child should be evaluated by a urologist to see whether some structural abnormality exists. Most often, however, bed-wetting is a result of emotional unrest. But, bear in mind, the child doesn't wet his bed deliberately. An effort should be made to discover the cause or causes of the child's emotional tension. Children vary in their ability to handle tensions, and parents can best help them by surrounding them with an atmosphere of love and security, and by maintaining a sympathetic attitude. Scolding does more harm than good.

Q I read recently that unflavored GELATIN is 100 per cent protein and now I see in *Life and Health* that gelatin is an incomplete protein. What am I to believe?

A There is no conflict in the two statements. Gelatin is a protein obtained from the skin, bones, and connective tissue of food animals and lacks three essential amino acids. The missing amino acids are tryptophan, valine, and isoleucine. This makes it an incomplete protein. A purified, incomplete protein, if it contains no other food substances, can still be 100 per cent protein. (A kosher gelatin, made from beef sources, is available. Also, a vegetarian gelatin can be obtained from Loma Linda Foods, Riverside, California.)

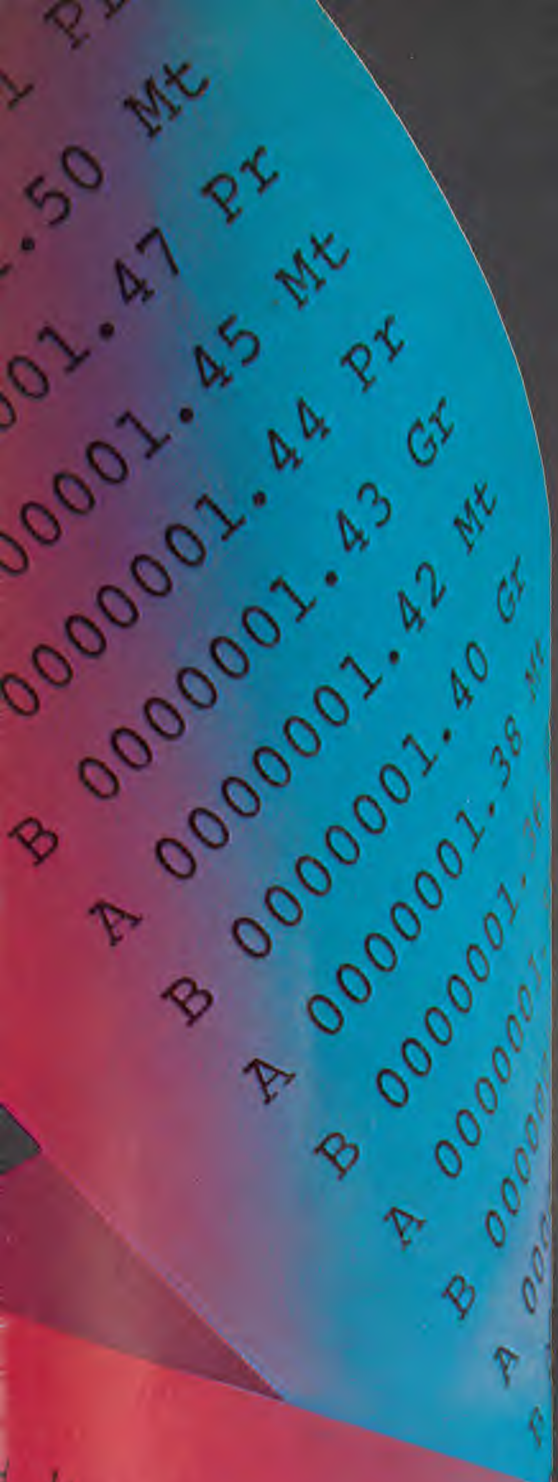
Q *Life and Health* ran an article about the value of BRAN in the diet. It would appear that wheat germ furnishes a certain amount of roughage necessary to keep food moving in the bowel. Can it be considered the equivalent of bran?

A No, wheat germ would not be the equivalent of bran. Bran is taken for its high content of fiber. Wheat germ, on the other hand, has very little fiber, although it is an excellent food, with excellent natural oils containing vitamin E. The best plan is to eat whole wheat, thus getting both bran and germ.

Q My aunt recently suffered a BROKEN HIP. The doctor repaired it with a "pin." Can you explain?

A Fractures of the hip are possibly the most common of all fractures, at least in older people. The *location and amount of fragmenting* usually determines the type of repair. If the fracture occurs close to the joint (neck of the femur) the surgeon will likely choose to remove the upper part of the bone and replace it with a metalic substitute (Austin-Moore or Thompson prosthesis). If it is at the angle of the femur (trochanter) and not too badly fragmented he will insert a pin (Jewett nail) and a plate with screws into the upper shaft. Many different kinds of pins have been invented. The choice of which one to use will depend on the appearance of the fracture on X-ray and the preference of the surgeon. Fractures heal more slowly in older people (three to six months) than in children and young people (six weeks to three months). But your aunt should not be inactive. Exercises in the sitting position and ambulation with a walker with limited weight bearing will usually be prescribed by the surgeon.

Readers are invited to submit questions to Health Questions, Life and Health, 6856 Eastern Avenue NW., Washington, D.C. 20012.



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