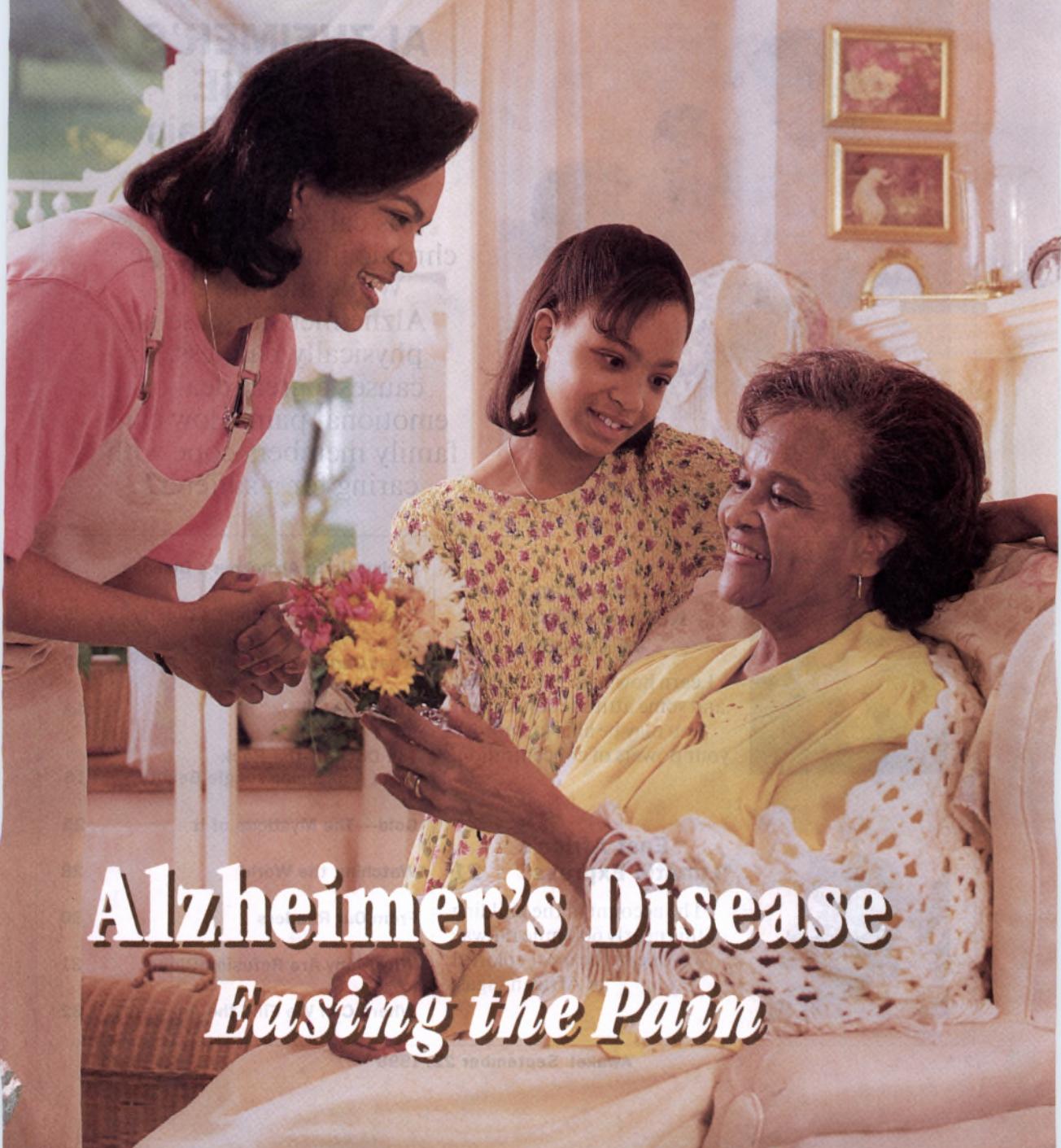


Awake!

September 22, 1998



Alzheimer's Disease *Easing the Pain*



ALZHEIMER'S DISEASE Easing the Pain **3-13**

It is called "the major chronic illness of old age."

While the onset of Alzheimer's disease is physically painless, it causes a great deal of emotional pain. How can family members cope with caring for a sufferer?



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The account of the building of this nearly 600-mile railway is one of the most colorful of African sagas.

Kenya Railways

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Facing Up to ALZHEIMER'S Disease

“**M**Y HUSBAND, Alfie, was a foreman of one of South Africa’s gold mines,” explains Sally. “I was astounded when he told me that he wanted to retire. He was only 56 years old and such a clever, hardworking man. Later, I found out from his fellow workers that Alfie had started to make strange errors in judgment. They often covered up for him.

“After he retired, we bought a hotel. Since Alfie was handy, we thought he would keep busy fixing the place. But, instead, he always called in a handyman.

“That same year we took our three-year-old granddaughter for a holiday at the beach in Durban. She loved to play on the trampoline just across the road from the apartment we stayed in. One afternoon, about

4:30 p.m., Alfie took her to jump on the trampoline and said they would be back in half an hour. By 7:00 p.m., they had not returned. I phoned the police, but they said that they don’t look for missing persons until 24 hours after their disappearance. That night I thought I was going mad, as I kept imagining that they had been killed. About noon the next day, there was a knock on the door, and there stood Alfie with our granddaughter on his arm.

“‘Where were you?’ I said.

“‘Don’t be cross with me,’ he replied. ‘I don’t know.’

“‘Grandma,’ explained our granddaughter, ‘us got lost.’

“Imagine getting lost from across the road! I still do not know where they slept that night. Anyway, a friend of mine found them and directed them to the right apartment.”

After this incident, Sally took Alfie to a neurologist, who certified that he was suffering from dementia (loss of intellectual function). As it turned out, Alfie had Alzheimer’s disease (AD), for which there is as yet no effective treatment or cure.* The British journal *New Scientist* says that AD is “the fourth biggest killer in the developed world after heart disease, cancer and stroke.” It has been called “the major chronic illness of old age.” But AD can strike relatively early in life, as it did with Alfie.

With more and more people in affluent countries living longer, predictions of the number who will suffer from dementia are alarming. According to one study, between 1980 and 2000, there may be a 14-percent

* AD is named after Alois Alzheimer, a German physician who first described the disease in 1906 after doing an autopsy on a patient who had suffered from severe dementia. AD is thought to account for more than 60 percent of dementia cases, affecting up to 1 in 10 people over 65 years of age. Another dementia, multi-infarct dementia, is caused by mini-strokes, which damage the brain.

An estimated 100 million people worldwide will suffer from Alzheimer's disease by the year 2000

increase in Britain, a 33-percent increase in the United States, and a 64-percent increase in Canada. In 1990 an Australian TV documentary stated: "There are estimated to be 100,000 people with Alzheimer's in Australia now. But by the end of the century, there will be 200,000." An estimated 100 million people worldwide will suffer from AD by the year 2000.

What Is Alzheimer's Disease?

Although research into a number of possible causes is being done, the actual cause of AD remains unknown. However, it is known that AD involves the gradual destruction of brain cells, so that parts of the brain may literally shrink. The parts worst affected are those involved in memory and thinking ability. Cells in the brain system involved in the emotions are affected early in the disease, resulting in personality changes. Other parts of the brain may be spared till later—parts having to do with sight and touch as well as the motor cortex, which di-

rects muscular activity. These changes, explains *Scientific American*, "give rise to the classical, tragic picture of a person who can walk, talk and eat but cannot make sense of the world."

Typically, the disease lasts from 5 to 10 years—but sometimes more than 20 years. As it progresses, victims are able to do less and less. Eventually, they may even fail to recognize their loved ones. In the final stages, sufferers often become bedridden and cannot speak or feed themselves. However, many victims die from other causes before reaching these final stages.

While the onset of AD is physically painless, it causes a great deal of emotional pain. Understandably, at first some fail to face up to it, hoping that the problem will go away.* However, much is to be gained from facing up to this disease and learning how to ease the emotional pain it causes. "I wish I had known earlier about how the deterioration of memory might affect the patient," said Bert, whose 63-year-old wife has AD. Yes, it is helpful for families to learn about the nature of AD as well as about coping strategies. Please join *Awake!* in examining these and other factors in the next two articles.

* Caution: A thorough medical checkup is imperative before it is concluded that a person has AD. About 10 to 20 percent of dementia cases result from ailments that are treatable. As for diagnosing AD, the book *How to Care for Aging Parents* explains: "Alzheimer's can be diagnosed with certainty only by studying the brain during an autopsy, but doctors can rule out other possibilities and then make a diagnosis by the process of elimination."

Awake!®

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Preserving the PATIENT'S DIGNITY

TWO days before Sally took her husband to see a neurologist, a new prime minister was elected in South Africa. When the neurologist asked Alfie about the outcome of the elections, he stared blankly and could not answer. Then, after taking a brain scan, the neurologist exclaimed rather insensitively: "This man can hardly add

two and two together. His brain has gone!" He then advised Sally: "You must get your finances fixed up. This man can turn on you and get violent."

"Never!" responded Sally, "not my husband!" Sally's objection proved to be correct; Alfie never did become violent with her, even though some who have Alzheimer's disease (AD) do get aggressive. (Often this is because of feelings of frustration, which can sometimes be eased by the way an AD sufferer is handled.) Although the neurologist succeeded in diagnosing Alfie's problem, he was apparently unaware of the need to preserve a sufferer's dignity. Otherwise, he would have kindly explained Alfie's condition to Sally privately.

"The clearest need for those who suffer from one of the dementias is to be able to maintain their dignity, respect and self-esteem," says the book *When I Grow Too Old to Dream*. An important way to preserve the patient's dignity is explained in the advice sheet *Communication*, published by the Alzheimer's Disease Society of London: "Never discuss [AD sufferers] in front of other people as if they were not present. Even if they do not comprehend, they may sense that they are excluded in some way and feel humiliated."

The fact is that some AD sufferers do comprehend what others say about them. For example, a patient from Australia went with his wife to an Alzheimer's society

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Should You Tell the Patient?

MANY caregivers wonder if they should tell their loved one that he or she has Alzheimer's disease (AD). If you decide to do so, how and when should it be done? A newsletter of the South African Alzheimer's and Related Disorders Association contained these interesting comments from a reader:

"My husband has had Alzheimer's for about seven years. He is now 81, and his deterioration is thankfully very slow . . . For a long time it seemed to me that it would be cruel to tell him he had Alzheimer's and so we went along with his own 'cover-up' expression: 'What do you expect of an 80-year-old!'"

The reader then referred to a book that recommended that a patient be told in a kind and simple way about the disease he has. But she held back out of fear that following this advice would devastate her husband.

"Then one day," she continued, "my husband expressed a fear of making a fool of himself when in the midst of a group of friends. This was my opportunity! So (coming out in a cold sweat) I knelt down beside him and told him he had Alzheimer's. He, of course, could not grasp what that was, but I explained it is a disease that was making things difficult for him to do [what] he had always found easy, and was also making him forget things. I showed him just two sentences in your brochure *Alzheimer's: We Can't Ignore It Anymore*: 'Alzheimer's disease is a disorder of the brain causing loss of memory and serious mental deterioration . . . It is a disease and NOT A NORMAL PART OF AGEING.' I also assured him that his friends knew he had the disease and therefore understood. He thought this over for a bit, and then exclaimed: 'What a revelation! It sure helps!' You can imagine how I felt at seeing what a tremendous relief this knowledge brought him!"

"And so, now, whenever he seems to be getting agitated about something, I can put my arms around him and say 'Remember, it's not you. It's that awful Alzheimer's that's making things difficult for you,' and he calms down immediately."

Of course, each case of AD is different. Also, relationships between caregivers and patients differ. So whether or not you decide to tell your loved one that he or she has AD is a personal matter.

meeting. Later he made this comment: "They were instructing carers on what to do and how to do it. I couldn't get over the fact that I was there and nobody was talking about the patient. . . . It is so frustrating. Because I have Alzheimer's, what I say is irrelevant: nobody will listen."

Be Positive

There are many positive ways of helping to preserve sufferers' dignity. They may need help to continue with daily tasks that they once found simple. For example, if they were formerly good correspondents, then perhaps you can sit down and help them reply to letters from concerned friends. In her book *Alzheimer's—Caring for Your Loved One, Caring for Yourself*, Sharon Fish gives other practical ways of assisting AD sufferers: "Find easy things to do together that are meaningful and productive: washing up and drying dishes, sweeping the floor, folding laundry, cooking dinner." Then she explains: "An Alzheimer's sufferer may not be able to clean the whole house or cook an entire meal, but the loss of these abilities is usually gradual. You can capitalize on the abilities that are still intact and help preserve them for as long as possible. When you do that, you also help preserve your loved one's self-esteem."

Some of the jobs performed by an AD sufferer will not be

in hospitals, especially those with Alzheimer's patients. "It's important to keep the patient involved in his or her care," says Dr. Michael S. Gazzola, director of the Alzheimer's Disease Research Center at the University of California, San Francisco. "This can help him feel useful and less dependent."

Assisting Alzheimer's patients with daily tasks helps to preserve their dignity



up to standard, so you may have to sweep the floor again or rewash the dishes. Nevertheless, by allowing the sufferer to continue feeling useful, you allow him to get satisfaction out of life. Commend him even if a job is below standard. Remember, he has done his best within his failing capa-

bilities. AD sufferers need constant reassurance and commendation—even more so as they become less and less successful with various activities. "At any moment—quite unpredictably," says Kathy, whose 84-year-old husband has AD, "they can be overcome by feelings of uselessness. The caregiver

Is It Really Alzheimer's Disease?

IF AN elderly person experiences acute confusion, do not jump to the conclusion that it is due to Alzheimer's disease (AD). Many things, such as a bereavement, a sudden move to a new home, or an infection, can cause an elderly person to become disoriented. In many cases acute confusion in older people is reversible.

Even with AD patients, a sudden decline in the person's condition, such as the onset of incontinence, is not necessarily caused by AD dementia. AD progresses slowly. "A sudden deterioration," explains the book *Alzheimer's Disease and Other Confusional States*, "usually means that an acute condition (such as a chest or urine infection) has occurred. A small group of [AD] sufferers do seem to have a more rapid downwards course . . . For most, however, the decline is quite slow, especially if the person is well cared for and any other medical problems are tackled early and effectively." Incontinence in an AD patient may be due to some other treatable health problem. "The first step is always to consult the [doctor]," explains the advice sheet *Incontinence*, produced by the Alzheimer's Disease Society of London.

needs to provide immediate relief by giving warm reassurance that the patient is 'doing all right.' The book *Failure-Free Activities for the Alzheimer's Patient* agrees: "We all need to hear that we are doing a good job, and for people with dementia, this need is especially strong."

How to Handle Embarrassing Behavior

Caregivers have to learn how to handle embarrassing behavior on the part of their loved one. One of the worst fears is that a patient will become incontinent in public.

"These acts," explains Dr. Gerry Bennett in his book *Alzheimer's Disease and Other Confusional States*, "do not occur often and can usually be prevented or minimised. A sense of proportion also has to be taken into account, as it is not the act itself or the audience that should cause concern but the loss of dignity for the person."

If such an embarrassing incident occurs, do not berate the sufferer. Instead, try to follow this advice: "Remain calm and matter of fact and remember that the person is not being deliberately aggravating. Moreover, they are more likely to cooperate if you are gentle and firm than if you are irritated and impatient. Do everything you can not to let the problem get in the way of your relationship."—The advice sheet *Incontinence*, from the Alzheimer's Disease Society of London.

Do They Really Need Correction?

AD sufferers often say things that are incorrect. For example, they may say that they are expecting a visit from a relative who has long been dead. Or they may hallucinate, seeing things that are only in their mind. Is it always necessary to correct an AD sufferer for expressing an inaccurate viewpoint?

"There are parents," explains Robert T. Woods in his book *Alzheimer's Disease—Coping With a Living Death*, "who cannot stop themselves correcting their children every time they mispronounce a word or make a grammatical error. . . . The result is often a resentful or withdrawn child who finds that efforts at self-expression are stifled, not rewarded. The same may happen to an AD sufferer who is constantly corrected." Interestingly, the Bible advises with regard to the treatment of children: "You fathers, do not be exasperating your children, so that they do not become downhearted." (Colossians 3:21) If children become exasperated through constant correction, how much

more will an adult! "Remember that the patient is an adult who has known independence and achievement," cautions the *ARDA Newsletter* of South Africa. Constant correction may not only exasperate an AD victim but also cause him to become depressed or even aggressive.

A lesson can also be learned from Jesus Christ that will help those dealing with the limitations of AD sufferers. He did not immediately correct every mistaken viewpoint of his disciples. In fact, he sometimes withheld information from them because they were not yet in a position to grasp it. (John 16:12, 13) If Jesus showed consideration for the limitations of healthy humans, how much more should we be willing to adapt to strange, yet harmless, viewpoints of a severely sick adult! Trying to make a sufferer see the truth of a particular matter may be expecting—or demanding—more than he is capable of. Instead of having an argument, why not keep quiet or tactfully change the subject?—*Philippians 4:5*.

At times, the most loving thing may be to seem to go along with a sufferer's hallucinations instead of trying to convince him that they are not real. For example, an AD sufferer may become disturbed because of "seeing" a wild animal or an imaginary intruder behind the curtain. This is not the time to try to reason logically. Remember that what he "sees" in his mind is *real to him*, and his genuinely felt fears need to be quelled. You may need to check behind the curtain and then say, "If you 'see' him again, please tell me so that I can help." By acting according to the patient's view, explain Doctors Oliver and Bock in their book *Coping With Alzheimer's: A Caregiver's Emotional Survival Guide*, you give him "a sense of mastery over the frightful, and frightening, apparitions that his mind conjures up.... He knows that he can depend on you."

Patients thrive on constant reassurance and commendation

"We All Stumble Many Times"

Applying all the aforementioned suggestions may be difficult, especially for those who have a heavy work load and other family responsibilities to care for. A frustrated carer may occasionally lose self-control and fail to treat an AD sufferer with dignity. When this happens, it is important not to allow yourself to become overburdened with guilt. Remember, because of the nature of the disease, the sufferer will probably forget the incident very quickly.

Also, the Bible writer James states: "We all stumble many times. If anyone does not stumble in word, this one is a perfect man." (James 3:2) Since no human caregiver is perfect, mistakes can be expected in the difficult task of caring for an AD sufferer. In the next article, we will consider other things that have helped caregivers to cope with—and even enjoy—caring for an AD sufferer.

'The patient may be able to understand what is being said. So never discuss his condition or make any morbid remarks while at his bedside'

What CAREGIVERS Can Do

"I HAVE always been amazed at how different [people] are in their ability to cope," says Margaret, a medical professional from Australia who has dealt with Alzheimer's patients and their carers for many years. "Some families are able to manage with the most incredible demands placed on them," she continues, "while oth-

ers are rendered almost incapable of dealing with the situation as soon as the person exhibits the slightest change in their personality."—Quoted in the book *When I Grow Too Old to Dream*.

What is it that makes the difference? One factor can be the quality of the relationship that existed before the onset of the disease. Families with a close, loving relationship may find it easier to cope. And when a person with Alzheimer's disease (AD) is well cared for, the disease may be easier to manage.

In spite of declining intellectual abilities, sufferers usually respond to love and tenderness right up to the final stages of the disease. "Words," points out the advice sheet *Communication*, produced by the Alzheimer's Disease Society of London, "are not the only means of communicating." Nonverbal communication essential

to caregivers includes a warm, friendly facial expression and a mild tone of voice. Also important is eye contact as well as clear, steady speech and frequent use of the patient's name.

"Not only is maintaining communication with your loved one possible," says Kathy, mentioned in the preceding



**Help the patient
keep oriented
and in touch**

Alzheimer's Disease and Medication

ALTHOUGH about 200 possible treatments for Alzheimer's disease (AD) are currently being tested, there is not yet a cure for AD. Some drugs reportedly alleviate memory loss for a while in the early stages of AD or slow down the progression of the disease in some patients. Caution is in order, however, because these drugs are not effective in all patients, and some can cause damage. Other medications, however, are sometimes used in treating conditions that often accompany AD, such as depression, anxiety, and sleeplessness. In consultation with the patient's doctor, each family can weigh the benefits and risks of a treatment before making a decision.

article, "but it is also important. Warm and affectionate physical contact, a mild tone of voice and, actually, your physical presence all provide security and reassurance for your loved one." The Alzheimer's Disease Society of London sums up by saying: "Affection can help you to keep close, particularly when conversation becomes more difficult. Holding the person's hand, sitting with an arm round them, talking in a soothing voice or giving them a hug are all ways of showing that you still care."

Where a warm relationship exists, caregiver and patient can often have a good laugh together even when mistakes are made. For example, one husband recalls how his mentally confused wife made the bed but mistakenly put the blanket between the sheets. They discovered the mistake when they went to bed that night. "Oh dear!" she said, "I've been silly." And they both had a good laugh.

Keep Life Simple

AD sufferers function best in familiar surroundings. They also need a regular daily routine. To this end, a large calendar with daily appointments clearly marked on it is very helpful. "Moving someone from their usual environment," explains Dr. Gerry Bennett, "can have dreadful consequences. Sameness and continuity are very important for the confused person."

As the disease develops, AD sufferers find it more difficult to respond to instructions. Directions have to be given in a simple, clear way. For example, telling a patient to get dressed may be too complex. The items of clothing may have to be put out in order and the patient helped one step at a time with each item of clothing.

The Need to Keep Active

Some AD sufferers pace about or wander away from their home and get lost. Pacing is a good form of exercise for the

How Visitors Can Help

BECAUSE of failing intellectual abilities, those who have Alzheimer's disease (AD) are usually not able to discuss current events in depth. However, talking about the past may be different. Long-term memory may stay relatively intact, especially in the early stages of the illness. Many AD sufferers enjoy reminiscing about their past. So invite them to relate some of their favorite stories, even if you have heard them many times before. You thereby contribute to the patient's happiness. At the same time, you may be giving the regular caregiver a much needed break. In fact, offering to care for the patient for a period of time, perhaps a whole day, can do much to refresh the regular caregiver.

Coping With Incontinence

ALTHOUGH incontinence may "seem like the last straw," says the advice sheet *Incontinence*, "there are things that can be done either to alleviate the problem itself or to make it less stressful." Keep in mind that the patient may not be permanently incontinent; he may have simply got confused or been too slow in getting to the toilet. Moreover, the patient may be suffering from a treatable condition that is causing temporary incontinence, so you may need to consult a doctor.

Whatever the cause, incontinence can be much easier to handle if the patient wears outer clothes that are easy to put on and take off as well as specially adapted pants. It will also help if you put protective pads on beds and chairs. Avoid skin irritation and soreness by not having plastic in contact with the patient's skin. Also, wash the patient well with warm, soapy water, and dry him thoroughly before dressing him. Remove obstacles that might hinder the sufferer from getting quickly and safely to the toilet. It may be helpful to leave a night-light on so that he can find his way. Because the patient may be unsteady at this stage, a conveniently placed grab bar will make a visit to the toilet less daunting for him.

"If you can introduce some humour too," suggests the Alzheimer's Disease Society of London, "it may relieve the tension." How can a caregiver meet these challenges? One experienced caregiver replies: "Patience, gentleness, kindness, and the sort of quiet courtesy which will enable the patient to maintain his dignity at all times, without fear of embarrassment or shame."

patient and may help to reduce tension and improve sleep. However, wandering away from home can be dangerous. The book *Alzheimer's—Caring for Your Loved One, Caring for Yourself* explains: "If your loved one wanders away, you are faced with an emergency situation that could easily turn to tragedy. The phrase to remember is *don't panic*. . . . Search parties need a description of the person they're looking for. Have some recent colour photographs at home."^{*}

On the other hand, some sufferers become lethargic and may just want to sit down all day. Try to get them to do something that you can both enjoy. Get them to sing, whistle, or play a musical instrument. Some enjoy clapping, moving, or dancing to favorite music. Dr. Carmel Sheridan explains: "The most successful activity for people with A.D. is usually one which incorporates music. Families often comment that long after the meaning of other [things] have been forgotten, their relative still enjoys old familiar songs and melodies."

I Wanted to Do It

A South African wife whose husband was in the final stages of AD enjoyed spending every day with him in the nursing home. However, well-meaning family members criticized her for doing this. Perhaps it seemed to them that she was wasting her time, since her husband didn't seem to recognize her and never said a word. "Nevertheless," she explained after his death, "I wanted to sit with him. The nurses were very busy, so when he dirtied himself, I could wash and change him. I enjoyed it—I wanted to do it. Once, he hurt his foot while I was pushing him in a wheelchair. I said, 'Does it hurt?' and he answered, 'Of course!' Then I

* Some caregivers have thus found it helpful to provide the patient with some identification, perhaps in the form of a bracelet or necklace that can be worn.

realized that he could still feel and talk."

Even in cases where a good family relationship did not exist before the onset of AD, caregivers have still been able to cope.* Just knowing that they are doing what is right and what is pleasing to God can give them a deep feeling of satisfaction. The Bible says, 'Show consideration for an old man' and, "Do not despise your mother just because she has grown old." (Leviticus 19:32; Proverbs 23:22) Furthermore, Christians are commanded: "If any widow has children or grandchildren, let these learn first to practice godly devotion in their own household and to keep paying a due compensation to their parents and grandparents, for this is acceptable in God's sight. Certainly if anyone does not provide for those who are his own, and especially for those who are members of his household, he has disowned the faith and is worse than a person without faith."—1 Timothy 5:4, 8.

With God's help, many caregivers have been able to do a commendable job in caring for sick relatives, including those who suffer from Alzheimer's disease.

* For additional information on caregiving and how others can help, please see the series "Caregiving—Meeting the Challenge," on pages 3-13 of the February 8, 1997, *Awake!*

Should the Patient Be Moved?

SADLY, the deteriorating condition of people with Alzheimer's disease (AD) may require that they be moved from their own home into a relative's home or into a nursing home. However, before the decision is made to move a patient from familiar surroundings, some important factors should be considered.

Serious disorientation can result from a move. Dr. Gerry Bennett gives an example of a patient who used to wander about and sometimes get lost. Still, she managed to live on her own. Her family, however, decided that she should move to an apartment closer to them so that they could give better supervision.

"Unfortunately," explains Dr. Bennett, "she never accepted the new place as home. . . . Sadly she never settled, and indeed was made far more dependent because she no longer could function in her new environment. The kitchen was strange, and she could not remember the new way to the toilet and became incontinent. From the best motives came a personal disaster and the eventual outcome was institutional care."—*Alzheimer's Disease and Other Confusional States*.

However, what if there seems to be no alternative but to move the patient into a health-care facility? This certainly is not an easy decision. In fact, it is described as "one of the most guilt-producing" decisions facing caregivers, often making them feel that they have failed and have abandoned their loved one.

"This is a normal reaction," says one nurse with extensive experience in treating AD patients, "but an unnecessary sense of guilt." Why? "Because," she replies, "[the patient's] care and safety would be the most important consideration." Doctors Oliver and Bock agree: "The decision that one's own emotional resources have been exhausted and that the disease has progressed beyond the point of home care is probably the hardest one to make." Nevertheless, after weighing all the factors in their particular situation, some caregivers may well conclude that "nursing-home placement is . . . in the best interest of the patient."—*Coping With Alzheimer's: A Caregiver's Emotional Survival Guide*.

Stutter Free!

FOR close to eight decades, *Awake!* has helped its readers to cope with everyday problems. At times, it alerts them to new developments and attitudes in the medical field, which can profoundly affect their lives, as the following story reveals.

Matthew was born in 1989 in the north of England. Up to the age of two, he was a normal little boy. Then, quite suddenly, while on vacation, he developed a severe stutter.

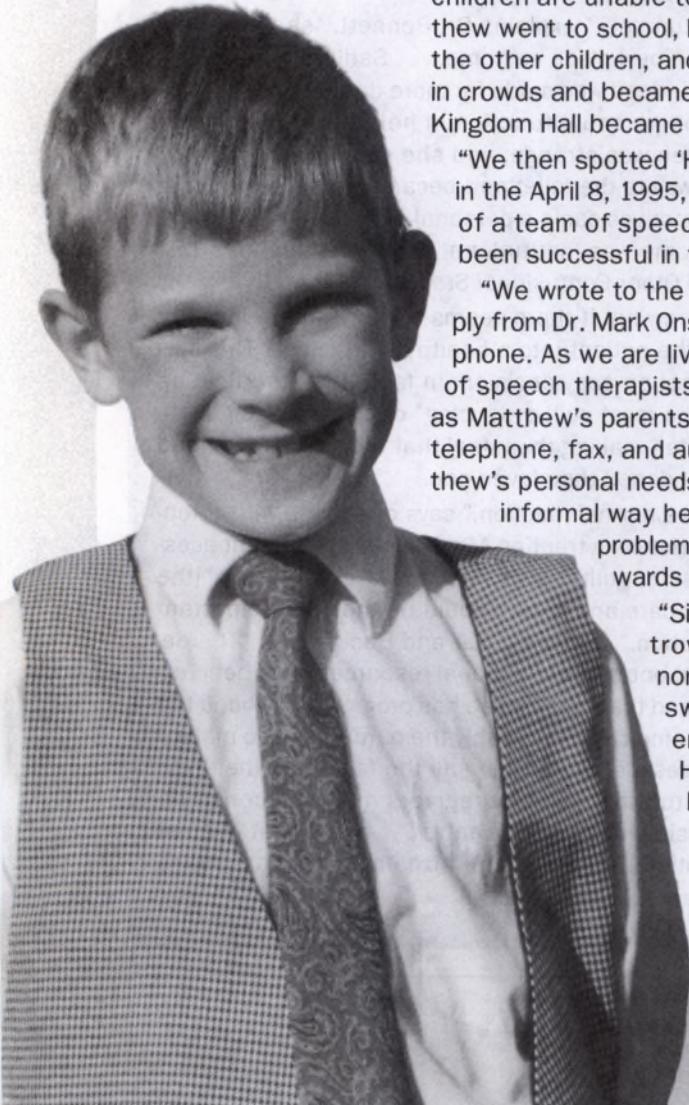
"My husband and I consulted our local speech therapy unit," explains Margaret, his mother, "and were told that nothing could be done for him until he was seven years old because until that age, children are unable to control their vocal cords. But when Matthew went to school, he had difficulty coping with the teasing from the other children, and his stuttering grew worse. He hated being in crowds and became withdrawn. Even attending meetings at the Kingdom Hall became a challenge."

"We then spotted 'Hope for Stutterers,' in 'Watching the World,' in the April 8, 1995, issue of *Awake!* It briefly explained the work of a team of speech therapists in Sydney, Australia, who had been successful in treating stuttering in young children.

"We wrote to the University of Sydney and received a kind reply from Dr. Mark Onslow, suggesting that we contact him by telephone. As we are living on the other side of the world, his team of speech therapists decided to try 'distance intervention.' We, as Matthew's parents, were instructed in the team's technique by telephone, fax, and audiotape. The therapy was tailored to Matthew's personal needs. I would sit down with him and in a relaxed, informal way help him by direct intervention to correct his problem words. I gave generous praise and small rewards for 'smooth' speech."

"Six months later Matthew was no longer an introvert, living in his own small world, but a normal, happy, outgoing youngster. He now answers at congregation meetings and greatly enjoys giving Bible readings at the Kingdom Hall. He also has a meaningful share in the house-to-house ministry. His speech is normal!"

"How grateful we are for that snippet of news in *Awake!*, which has transformed the life of our son!"—Contributed.



The Cock-of-the-Rock

An Amazonian Jungle Beauty

By Awake! correspondent in Brazil

EVEN matter-of-fact naturalists end up waxing poetic when describing the Guianan cock-of-the-rock, a dazzling, little-known bird of the Amazon rain forest.* "A mass of brilliant flame," wrote one. "A fiery comet," said another. "Difficult to surpass in . . . sheer glamour," concluded a third. The sight of it, they all agree, is unforgettable. What, though, makes this pigeon-size bird so memorable? For one thing, its colorful looks.

The male cock-of-the-rock sports an orange-colored crest that looks like a fan and hides his entire bill. A chestnut stripe, running along the margin, accents the crest's flawless semicircular shape. From crest to claws, the bird is wrapped in mostly orange plumage. His wings, black with a patch of white, are covered by a fluffy layer of golden-orange feathers, which make him look as though he were wrapped in a shawl. "Their form and appearance," sums up the book *Birds of the Caribbean*, "are striking beyond words." Yet, there is more to this bird than meets the eye. His plumage also reflects his character. In what way?

Well, you will agree that in a dark-green rain forest, a bright-orange outfit is hardly the color to wear if you want to blend in. This jungle dandy, however, wants to be seen. He uses his splashy looks to expel rivals and allure admirers.

Border Disputes and Inheritance Squabbles

Early in the year, during the mating season, male cocks-of-the-rock descend to well-defined forest areas called leks, which are staging grounds for the birds' annual courtship dances. This word "leka" probably stems from the Swedish verb *att leka*, meaning "to play." Indeed, for years naturalists understood the birds' courtship capers to be nothing more than play—a pleasant matinee on the forest floor. More recent-

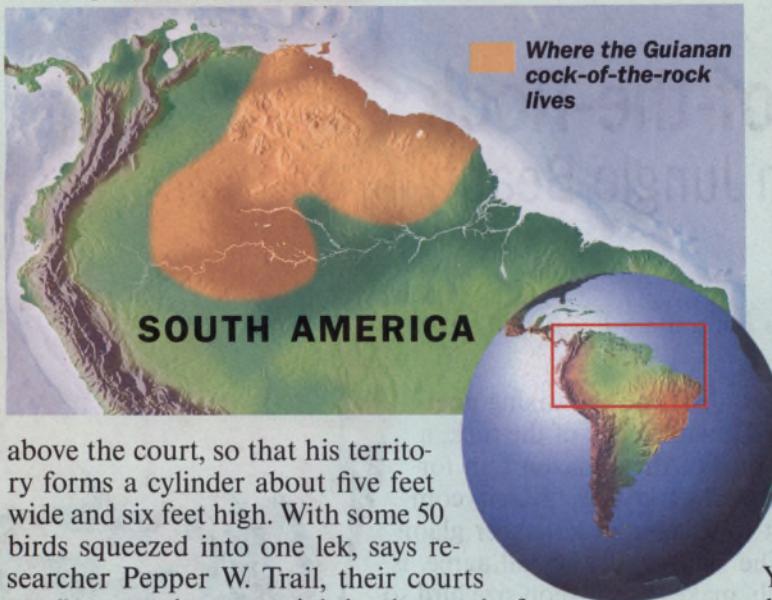
* This species differs from the Peruvian cock-of-the-rock, which lives on the slopes of the Andes Mountains in Bolivia, Colombia, Ecuador, and Peru.



Kenneth W. Fink/Bruce Coleman Inc.

ly, though, they learned that a lek is not only a dance floor but a wrestling arena and a showroom as well. Why?

After a group of male cocks-of-the-rock invade a lek, each bird marks a patch of forest floor as his private court by clearing it of fallen leaves. He also claims the perches in the vines



above the court, so that his territory forms a cylinder about five feet wide and six feet high. With some 50 birds squeezed into one lek, says researcher Pepper W. Trail, their courts are "among the most tightly clustered of any lek bird." The result? Border disputes and inheritance squabbles.

Their border disputes resemble excited but harmless war dances—a burst of head bobbing, bill snapping, wing flicking, and feather whirring, punctuated by crowing squawks and high leaps into the air. After a minute or two, when each bird feels that he has impressed the other, they both retreat within their borders. However, when two birds have an eye on the same piece of premium lek property left vacant by the death of another bird, the dispute turns into a classic inheritance battle.

"The birds lock their powerful talons together, flail at each other with their wings, and occasionally lock beaks. Such matches," writes Trail in *National Geographic* magazine, "can last as long as three hours and leave the combatants panting." If the score is even after this first round, the birds take a break, but after that, the cockfight resumes and goes on until the sole heir has been established. No wonder that this bird is called *cock-of-the-rock*!

Yet, even before the forest dust has settled, the feisty wrestler changes into a living statue, and the lek becomes a showroom. Why this new act? The last part of the bird's name, *cock-of-the-rock*, points to the answer.

And the Winner Is . . .

While the males are quarreling on the forest floor, a few inconspicuously colored birds are quietly mending their nests in sheltered niches of nearby rocks.

Yes, they are the female cocks-of-the-rock. Unlike the male, the female will not make the final round of an avian beauty contest. She is, researcher David Snow writes delicately, "a very different bird." Her head holds a small crown, "a stunted version of the male's magnificent crest, which merely gives the head a faintly ludicrous appearance." Her short legs with large feet support a drab-brown-colored body of "rather heavy, ungainly form."

Nevertheless, for our jungle dandies, she is a winner. When she glides into the branches above the lek, with a high-pitched *kiuou* call, she causes every orange-feathered head to turn and triggers a show that ranks "among the most interesting and impressive courtship displays in the avian world." (*The Life and Mysteries of the Jungle*) What happens? Researcher Trail says that at the first sight of a female, "the lek explodes with color, movement, and sound," as each male tries to outshine the others and capture the attention of the visitor. Next, the males bound from their perches and land with a thump and a squawk on their courts. Their

beating wings hold the attention of the female and clean the courts of fallen leaves as well. Then, suddenly, the pandemonium stops. The decisive moment has arrived.

Each male bends stiffly, with his display plumage fully spread, and freezes as if in a trance. His fanned-out crest hides his bill while his fluffy feathers obscure the form of his body, making him look like an orange flower fallen on the forest floor. "A displaying cock-of-the-rock is so bizarre," says one source, "that at first sight it is hard to believe that it is a bird."

The female, though, knows a flower from a suitor and descends toward three or four silent males, who keep their bodies flattened and their backs turned toward the female. Their heads, however, are tilted so that one eye is looking upward, trained on the prize. Minutes pass as the female makes up her mind, but finally, she picks the winner. She lands behind her favorite, hops toward him, leans forward, and picks at the flossy fringes of his wing feathers. Then the male comes alive. They mate on his court or on a nearby perch. After that, the female flies off. She often returns to the same male when the next mating season comes around.

Until the following courtship season, the jungle dandy forgets about his mate and does not bother with looking after offspring either. Carefree, he gets ready for the next show, while the female raises the family on her own. You're right, that sounds like an unfair division of the work load, but it is just as well for the female and her chicks that the male keeps his distance. After all, having an orange bird parading around your nest is as sensible as having a neon sign pointing to your hideout.

Cock-of-the-Rock ID Card

Scientific name: *Rupicola rupicola*, or "dweller among rocks"

Family: Cotingidae

Home range: Northern South America, in and around the Amazon basin

Length: About one foot

Nest: Made from mud and plant materials held together by saliva, weighing eight and a half pounds

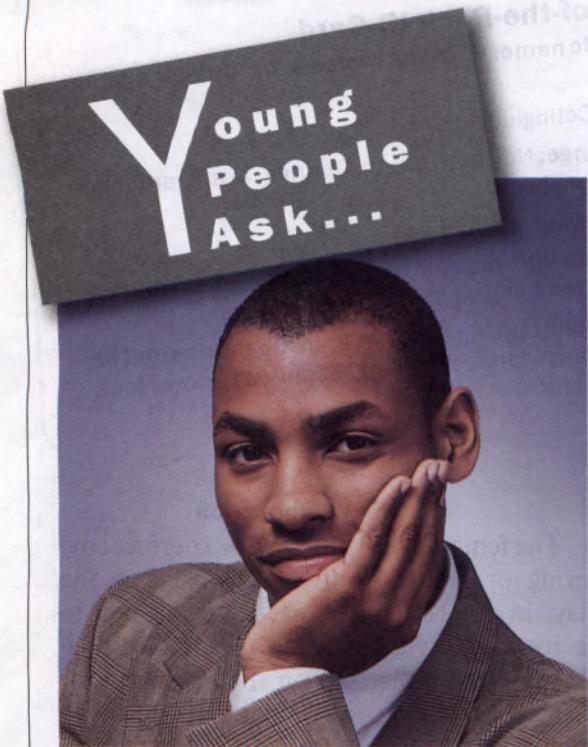
Young: Usually two eggs per year; incubation period of 27 to 28 days—"one of the longest periods known for a passerine bird"

The Next Generation

The female's dull plumage is a perfect covering for the two spotted, brownish eggs she lays in a massive mud nest that is glued to a rock wall with the help of the bird's saliva. After mother sits on the eggs for four weeks, the chicks hatch. Though no beauties at birth, they are well equipped to cope with their days in the nest. Shortly after leaving their eggshells, explains researcher Trail, they hook their sharp talons into the nest lining and, with their strong legs, hang on firmly whenever the mother bird scrambles for footing.

The mother bird diligently feeds the chicks with fruits and an occasional insect or lizard. After a year the plumage of a young male is still brown, but his head already sports a small crest. At two years of age, his brown feathers give way to golden-orange plumage that transforms him, as one naturalist wrote, into "one of the most beautiful birds in the world."

Despite the destruction of the forest home of the cock-of-the-rock, nature lovers hope that man will not rob this colorful Amazonian performer of the chance to continue its fascinating dance of life.



How Can I Keep My Mind on Things?

"I spent years sitting at the meetings and not getting much out of them. I would just zone out." —Matthew.

HAVE you ever been sitting in a school classroom or at a Christian meeting and suddenly realized that you had no idea what was being discussed? Well, if your mind tends to wander at times, you are not alone. As a previous article pointed out, short attention spans are common among youths.*

* See the article "Young People Ask . . . Why Can't I Concentrate?," appearing in our July 22, 1998, issue.

However, with a little effort and some attitude adjustment, you can learn to increase your powers of concentration.

Be Interested

Think of a trained athlete. "Every man taking part in a contest exercises self-control in all things," says the apostle Paul. If an athlete allows himself to be distracted for even a moment, it can cost him the game. To win, he must learn to *concentrate*—blocking out the sound of the roaring crowd, ignoring his pain and exhaustion, dismissing the very thought of failure. But just what motivates athletes to put forth such extraordinary effort? According to the apostle Paul, they do it so "they may get a corruptible crown"—the trophies and accolades given to victors.—1 Corinthians 9:25.

Similarly, you have to be *motivated* to pay attention! The book *Study Is Hard Work*, by William H. Armstrong, says: "It is the responsibility of the student to be interested. No one can be interested for you, and no one can increase your interest unless you so will." Knowledge is the key to understanding the world around you. The more you know, the more you can learn. "To the understanding one knowledge is an easy thing," says Proverbs 14:6. You may not remember all the things you learn in school, but at the very least, school helps you to nurture and cultivate thinking ability. (Compare Proverbs 1:4.) Having mental discipline and an ability to concentrate will benefit you throughout your life.

Bored and Boring Teachers

However, some teenagers complain that even their teachers seem to lack interest. Says a youth named Jesse: "Teachers stand up in front of you, say something, give you your assignment, and then dismiss you. I think they're slacking off. The teachers don't act like it's important, so we don't see the need to pay attention."

Should you conclude, then, that it is a waste of time to pay attention? Not necessarily. Many teachers may simply be trapped in a vicious circle. A teenager named Collin explains: "No one pays attention to teachers, so the teachers think that nobody wants to learn. Then they don't put much energy and enthusiasm into teaching."

Believe it or not, you may be able to help break this pattern. How? Simply by paying attention. Having just one interested student may be all that it will take for a bored teacher to have a renewed interest in his job. Granted, some teachers simply do not have the ability to hold the interest of a class. But before you allow yourself to lapse into daydreaming, ask yourself, 'Does he know what he is talking about?' If so, make up your mind to learn something from him. Listen carefully—*concentrate!* Get involved in classroom discussions. Ask pointed questions. The book *How to Study in High School* notes: "Many students find it helpful to jot down diagrams, words, charts, definitions, and main ideas that the teacher puts on the board or otherwise emphasizes."

Paying "More Than the Usual Attention"

The stakes are much higher, however, when it comes to listening at Christian meetings. Admits Jesse: "Sometimes young people don't pay attention to things like meetings because they don't realize how important the meetings are." At Hebrews 2:1, we are commanded to "pay more than the usual attention to the things heard by us, that we may never drift away." After attending a congregation meeting, can you recall something from each presentation? Or do you sometimes find that you cannot even remember who was on the program?

Once again, it is a matter of seeing the importance of what you are learning. Why, your very life is involved! (John 17:3) Anoth-

er point to ponder: When you are learning about the Bible, you are learning to think like God himself! (Isaiah 55:8, 9) And when you apply what you learn, you are putting on what the Bible calls "the new personality." (Colossians 3:9, 10) On the other hand, if you fail to pay attention, you may not make the needed improvements in your life; you will stunt your own spiritual growth. Jehovah knows that all of us tend to let our minds become distracted. Thus, he implores: "Listen intently to me . . . Incline your ear and come to me. Listen, and your soul will keep alive."—Isaiah 55:2, 3.

How to Get More out of Meetings

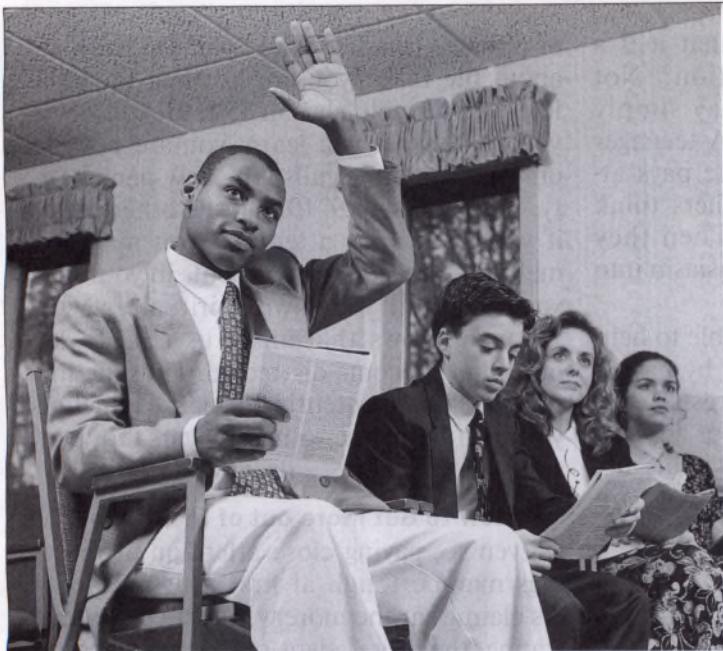
Even so, paying close attention at meetings may be tough at first. But researchers claim that the more we practice concentrating, the more adept our brains become at the task. Matthew, quoted at the outset, overcame his tendency to zone out during the meetings. He says: "I found that I have to discipline myself to pay attention. After a while it gets better, and you can pay attention for longer periods of time." Matthew also points out the single biggest factor in making meetings enjoyable for him. He says: "I study ahead of time." A youth named Charese similarly says: "When I'm prepared, I feel more a part of the meeting. The talks seem deeper and have more meaning for me."

IN OUR NEXT ISSUE

A Life of Lasting Security—How?

The Value of Solitude

Smuggling —Europe's Blight of the '90's



**Developing an interest in
what you hear is the key
to paying attention**

Blocking out distracting thoughts is also important. True, you may have a number of legitimate worries on your mind: that test coming up next week, a personality conflict that's causing you stress, some upcoming expense you have to cover. But Jesus gave this advice: "Who of you by being anxious can add one cubit to his life span? So, never be anxious about the next day, for the next day will have its own anxieties. Sufficient for each day is its own badness." (Matthew 6: 27, 34) Focusing on congregation meetings will not make your problems go away, but it will help renew you spiritually, so that you can better cope with problems.—Compare 2 Corinthians 4:16.

Listening attentively can also help you stay focused. Says Matthew: "I try to anticipate what the speaker will bring out during the talk and then see how he does it." Ask yourself, 'What are the main points under discussion? How can I use what is being taught?' Anticipating what the speaker will say next may also help you to keep your

mind on track. Try to follow his line of reasoning. Note the Scriptural arguments he uses. Reflect on and summarize his main points. Take brief, meaningful notes. When a part calls for audience participation, participate! Doing so can help keep your mind engaged and your thoughts from wandering.

Admittedly, listening can be a challenge if a particular speaker lacks enthusiasm or has a lackluster delivery. Recall what some first-century

Christians said about how they viewed the apostle Paul's speaking ability: "His presence in person is weak and his speech [is] contemptible." (2 Corinthians 10:10) But Paul responded to such criticism by saying: "Even if I am unskilled in speech, I certainly am not in knowledge." (2 Corinthians 11:6) Yes, had his listeners looked beyond Paul's speaking ability and focused on the substance of what he said, they could have learned many of "the deep things of God." (1 Corinthians 2:10) In a similar way, you can learn, even from a "dull" speaker, if you concentrate and listen. Who knows? He may even touch on some shade of meaning or apply a scripture in a way that has never occurred to you before.

Jesus' words at Luke 8:18 sum things up nicely: "Pay attention to how you listen." Granted, learning to tune in—and not zone out—will take effort and practice. But in time you will reap benefits. Learning to concentrate could mean better grades and, more important, spiritual growth!

EAST AFRICA'S “LUNATIC EXPRESS”

BY AWAKE! CORRESPONDENT IN KENYA

BRITISH plans of a little over 100 years ago to build a railway across East Africa were not eagerly supported by everyone in London's parliament. One opponent derisively wrote:

*What it will cost no words can express;
What is its object no brain can suppose;
Where it will start from no one can guess;
Where it is going to nobody knows.
What is the use of it none can conjecture;
What it will carry there's none can define;
And in spite of George Curzon's superior
lecture,*

It clearly is naught but a lunatic line.

In reality, the project was not so ill-conceived as all that. The railway was expected to extend about 600 miles, from Mombasa, Kenya's seaport on the Indian Ocean, to Lake Victoria. Once completed, supporters assured, it would promote commerce and development and also put an end to the slave trade in the region. The cost of constructing the railway was reckoned at \$5 million (U.S.), to be paid by British taxpayers. Estimated time of construction was four to five years.

Still, the details were a bit fuzzy. When George Whitehouse, chief engineer, arrived in Mombasa in December 1895, he had only a sketch of the route the railway was supposed to take. What Whitehouse learned after that was most intimidating. Directly west of Mombasa lay a torrid, waterless region that most caravans avoided. Beyond, the railway would pass through 300 miles of savanna and scrub that teemed with lions and

swarmed with tsetse flies and mosquitoes. Next came the volcanic highland region split by the 50-mile-wide Great Rift Valley, with its plunging 2,000-foot escarpments. The final 100 miles to the lake was said to be a soggy quagmire. Small wonder that the building of this railway would become one of the most colorful of African sagas.

Early Problems

Obviously, an army of workers would be needed for such a large project. Since Mombasa was a small community, workers were brought in from India. During 1896 alone, over 2,000 arrived by ship—stonemasons, smiths, carpenters, surveyors, draftsmen, clerks, and laborers.

Then there was the matter of making Mombasa a suitable reception point for the huge quantities of equipment that had to be shipped in to build a 600-mile railway. The track alone would require 200,000 rails, each 30 feet in length and weighing about 500 pounds. Also required were 1.2 million sleepers (most of them steel). Securing the rails and sleepers would require the importation of 200,000 fishplates, 400,000 fishbolts, and 4.8 million steel keys. In addition, locomotives, tenders, brake vans, goods wagons, and passenger carriages had to be brought in. But before the first rail could be laid, it was necessary to build wharves, warehouses, accommodations for the workers, repair shops, and workshops. Quickly the sleepy coastal town was transformed into a modern port.

Whitehouse immediately realized that there would be a water problem; the few

wells in Mombasa scarcely met the needs of the local population. Yet, a sea of water would be needed for drinking and bathing and for construction purposes. "From what I have seen and know of the country," Whitehouse wrote, "I can recommend no other plan than water trains for the first 100 miles." Those water trains would need to haul at least 10,000 gallons daily!

Initially, the railway engineers solved the water problem by damming a stream and building a reservoir to hold rainwater. Later, machinery was brought in that distilled seawater.

Work got under way, and by the end of 1896—a year after Whitehouse arrived in Mombasa—23 miles of track had been laid. Despite this accomplishment, critics were quick to observe that if construction did not move faster, the first train would not make the journey from the coast to Lake Victoria until sometime in the early 1920's!

Crossing the Taru Plain

Meanwhile, the construction workers were plagued with disease. In December 1896, hospital tents sheltered more than 500 workers suffering from malaria, dysentery, tropical ulcers, and pneumonia. A few weeks later, half the labor force was immobilized by sickness.

Nevertheless, the work continued, and by May the rails had been extended more than 50 miles, to the dry Taru Plain. Although at first glance the terrain seemed ideal for a normal pace of construction, the Taru was a forest of man-high, razor-sharp thornbushes. Thick clouds of red dust gagged the workers. The sun blazed, baking the earth—the region was a thorn-infested frying pan. Even at night, temperatures rarely dropped below 100 degrees Fahrenheit. Writer M. F. Hill observed in his official history of the railway: "It seemed as if the very spirit of Africa resented the intrusion of the white man's railway."

Terrorized by Lions

By late 1898 the railway approached the Tsavo River, at mile 121. Then, in addition to problems of hostile terrain, another problem emerged—two lions began attacking the workers. Most lions avoid human prey. Those that attack humans are usually too old or infirm to capture animals. The two lions at the Tsavo, a male and a female, were rare exceptions. Neither old nor feeble, they came quietly by night and carried away victims.

The frightened laborers built thorn barricades around their camps, kept fires burning, and appointed watchmen who would bang empty oil drums in the hope of keeping the animals away. By December the workers were so terrorized by the lions that some workers stopped a train returning to Mombasa by lying on the tracks, and then about 500 of them swarmed aboard. Only about four dozen workers stayed behind. Construction ceased for the next three weeks as the workers devoted themselves to strengthening their defenses.

Eventually, the lions were caught, and the work resumed.

Other Difficulties

By mid-1899 the rails reached Nairobi. From there the line continued west, maneuvering down a more than 1,500-foot drop into the Rift Valley and then up the other side through dense forests and over deep ravines until it reached Mau Summit, at an altitude of 8,700 feet.

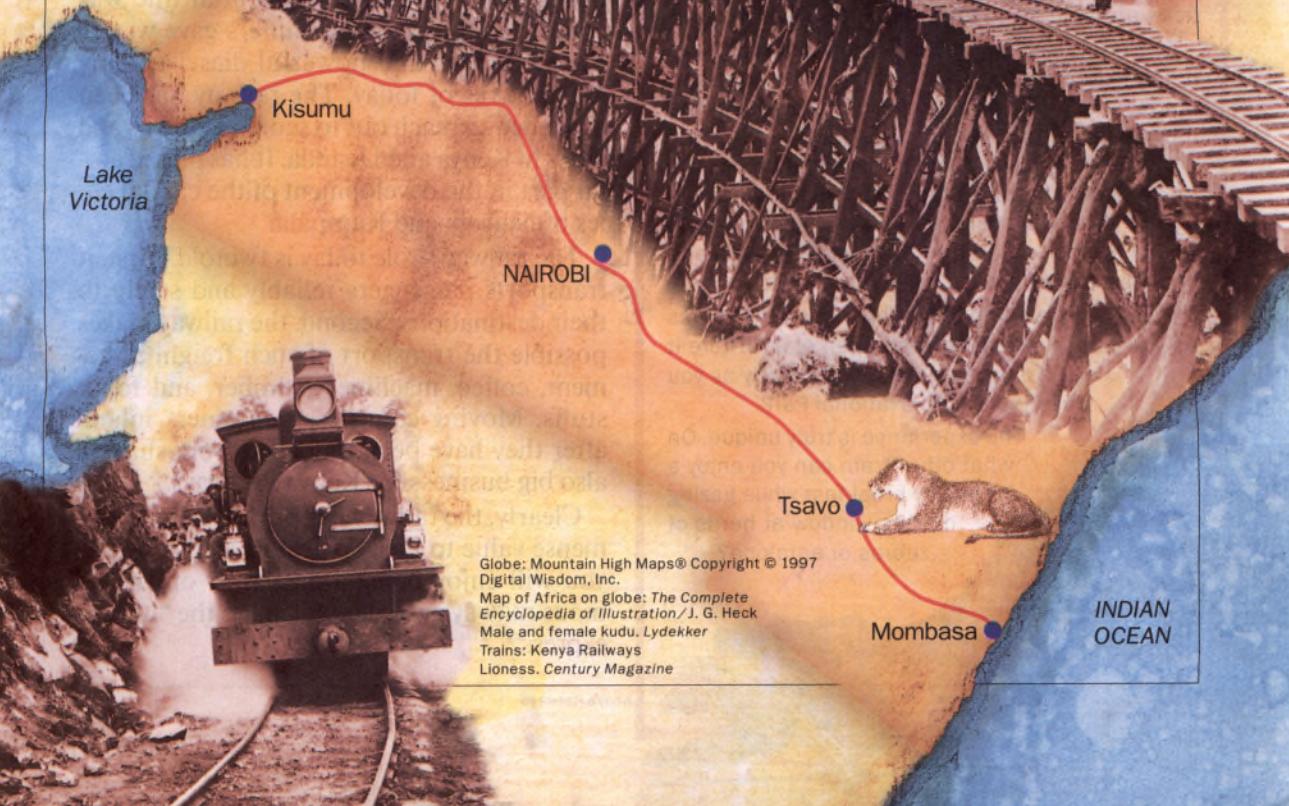
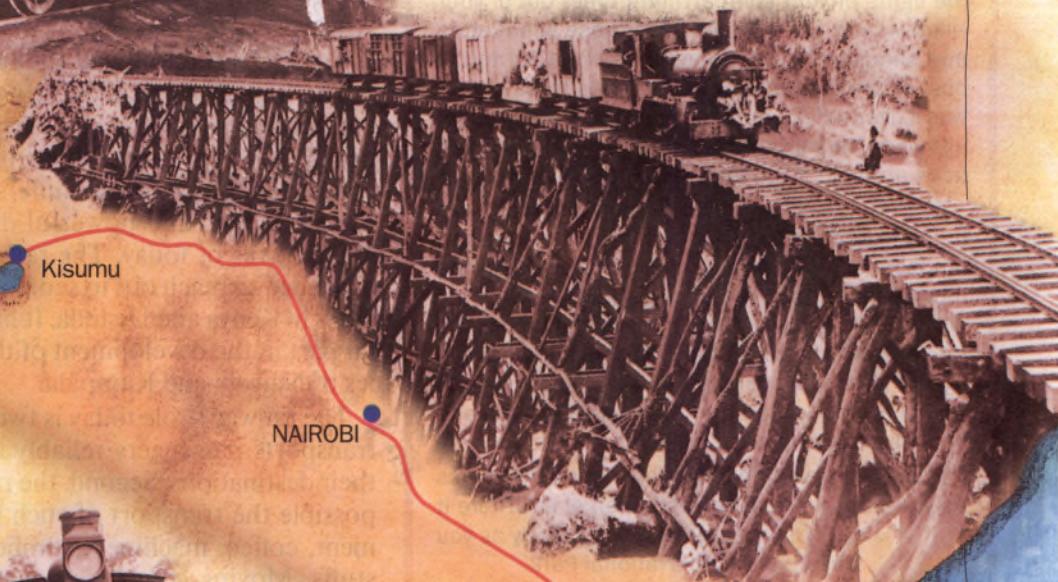
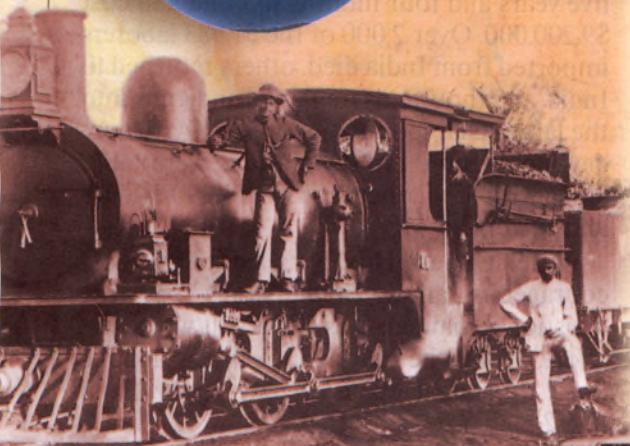
The problems of constructing a railway over such rugged terrain were challenging enough, but there were other difficulties. Local warriors, for example, strolled into camp and helped themselves to building materials—telegraph wire to make jewelry as well as bolts, rivets, and rails to make weapons. Commenting on this, Sir Charles Eliot, a former East African commissioner, wrote: "One can imagine what thefts would be committed



on a European railway if the telegraph wires were pearl necklaces and the rails first-rate sporting guns . . . It is not surprising that the [tribesmen] yielded to the temptation."

The Last Lap

As the railway workers approached the last six miles to Lake Victoria, dysentery and malaria swept through the camp. Half the work force was sick. At the same time, the rains came, turning the already spongy terrain into jelly. The railway embankments became so soft that equipment trains had to be unloaded while still moving; otherwise, they would topple over and sink into the mire. A worker described one such train as "coming slowly and cautiously along, rocking from side to side, heaving gently up and down like a ship in a choppy sea-way,



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Map of Africa on globe: *The Complete*

Encyclopedia of Illustration/J. G. Heck

Male and female kudu. Lydekker

Trains: Kenya Railways

Lioness. Century Magazine

INDIAN
OCEAN

TRAVEL BY TRAIN

FOR tourists and local people alike, the train is a popular means of travel, particularly between Mombasa and Nairobi. Passenger trains leave both Nairobi and Mombasa each day at 7:00 p.m. sharp. If you are traveling first or second class, before boarding you check the posted notices for your carriage and compartment location. A steward standing nearby asks if you wish to eat dinner at 7:15 or 8:30 p.m. You make your choice, and he hands you the appropriate coupon.

You climb aboard. The train whistle blows, and music plays as your train glides from the station.

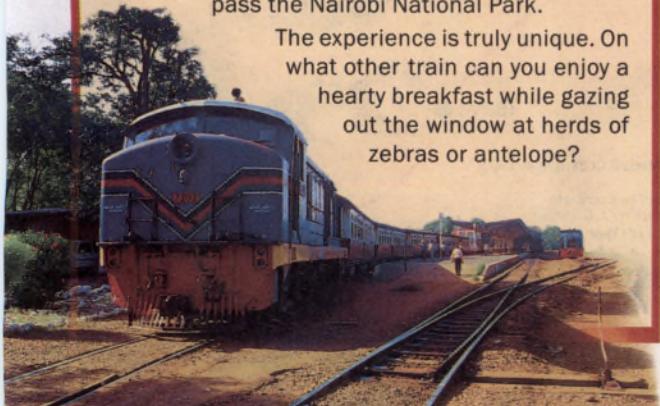
When dinnertime arrives, someone walks along the narrow corridor playing a small hand-held xylophone to let you know that the food is ready. In the dining car, you order from the menu; and while you are eating, an attendant enters your cabin to make your bed.

The first part of the trip is in darkness. Before you go to sleep, though, you may want to turn out the lights of your compartment, peer out of your window, and ask yourself, 'Are those silhouettes and shadows in the moonlight elephants and lions, or are they merely bushes and trees? What was it like to sleep out here nearly a hundred years ago when the railway was being built? Would I have been afraid to do so then? What about now?'

The trip takes just under 14 hours, so you have much to see after dawn illuminates the African landscape. If you are traveling to Mombasa, the morning sun rises red above a forest of thorns, which slowly give way to palm trees and then to the mowed lawns, trimmed hedges, and modern buildings of Mombasa. Farmers till their fields by hand while barefoot children enthusiastically wave and shout greetings to passengers on the train.

If you are traveling to Nairobi, first light comes as you clatter through a vast, open plain. There it is easy to spot animals, particularly as you pass the Nairobi National Park.

The experience is truly unique. On what other train can you enjoy a hearty breakfast while gazing out the window at herds of zebras or antelope?



and squirting liquid mud for ten feet on each side of it."

Finally, on December 21, 1901, the last key was driven in the last rail at Port Florence (now Kisumu), on the shore of Lake Victoria. In all, the 582-mile-long railway took five years and four months to build and cost \$9,200,000. Over 2,000 of the 31,983 laborers imported from India died, others returned to India, and thousands remained and grew into the large Asian population in East Africa today. Forty-three railway stations were built, along with 35 viaducts and over 1,000 bridges and culverts.

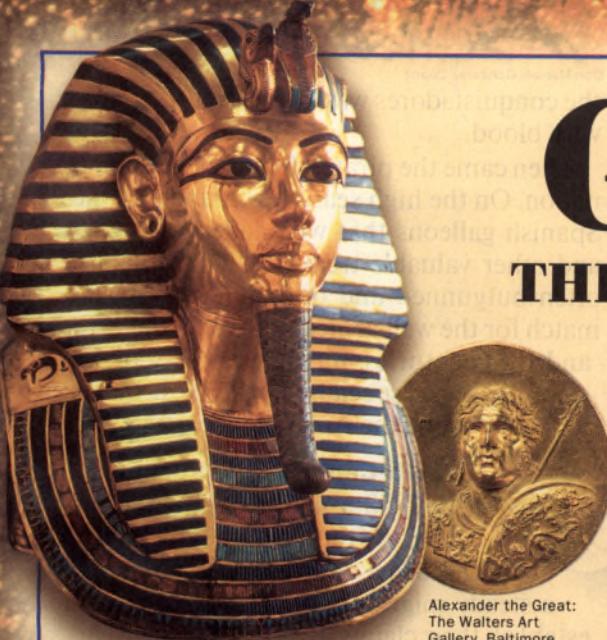
Writer Elspeth Huxley called it "the most courageous railway in the world." Yet, the question remained, Was the result worth the effort, or was the railway in reality a "lunatic line," a colossal waste of time, money, and lives?

The Railway Today

The answer to that question is found in considering what has happened during the nearly 100 years since the initial line was completed. Log-burning puffers gave way to the more than 200 powerful diesel-burning locomotives of today. The railway has been expanded to reach out to scores of towns and cities in Kenya and Uganda. It has played a vital part in the development of the capital cities of Nairobi and Kampala.

The railway's role today is twofold. First, it transports passengers reliably and safely to their destinations. Second, the railway makes possible the transport of such freight as cement, coffee, machinery, timber, and food-stuffs. Moving countless containers inland after they have been unloaded from ships is also big business for Kenya Railways.

Clearly, the railway has proved to be of immense value to East Africa. Perhaps one day you will enjoy being a passenger on the famous railway once denounced as the "lunatic express."



GOLD

THE MYSTIQUE OF IT

Gold—since ancient times this soft, bright-yellow metal has been valued for its unusual qualities. Its color, luster, malleability, and ability to withstand corrosion make it unusual among metals. Because of its value in the minds of those who have searched for it, gold has a history unlike that of any other metal.

“GOLD! It's gold, I tell you! Gold!” The discovery of gold has caused the heart to leap, the pulse to quicken, and the imagination to soar. It has been searched for on land, in rivers and streams, and even thousands of feet below the surface of the earth.

As costly jewelry, gold has adorned kings and queens. It has decorated thrones and the walls of palaces. Golden idols, representing fish, birds, animals, and other objects, have been worshiped as gods. The relentless quest for gold has been far-reaching, as has its impact upon civilization.

Gold and History

In ancient Egypt the pharaohs sent their merchants and armies to far-flung lands in quest of gold, which was viewed as the absolute property of Egypt's gods and pharaohs. The tomb of Tutankhamen, discovered in 1922, was filled with priceless treasures of gold. Even his coffin was made of solid gold.

According to some historians, Alexander the Great was “drawn initially into Asia by the fabled gold treasure of Persia.” It is re-

ported that thousands of beasts of burden were pressed into service by his army to carry the gold he seized in Persia back to Greece. As a result, Greece became a gold-rich nation.

One historian reports that Rome's “emperors freely used gold to secure the loyalty of their officials and to influence dignitaries of other lands. They impressed and often intimidated their people with the magnificence of their wealth, easily established by displays of spectacular golden ornaments.” The Romans acquired much gold from their conquest of Spain and their acquisition of Spanish gold mines, says one source.

However, the story of gold would not be complete without delving into its more sanguinary history. It is a story of conquest, brutality, enslavement, and death.

A History Dripping With Blood

As civilization progressed, larger and more powerful sailing ships set out to discover new lands, settle new colonies, and search for gold. Finding gold became the obsession of many explorers, including the



Painting depicting the arrival of Christopher Columbus in the Bahamas in 1492 in search of gold treasure



pioneer navigator Christopher Columbus (1451-1506).

The lives of the natives meant little to Columbus when he was on a quest for gold. Recounting his experiences on one island to the king and queen of Spain, who had financed his expeditions, Columbus wrote in his log: "To rule here, one need only get settled and assert authority over the natives, who will carry out whatever they are ordered to do. . . . The Indians . . . are naked and defenseless, hence ready to be given orders and put to work." Columbus believed that he had God's blessing. The gold treasures would help Spain finance its holy wars. 'May God in his mercy help me find gold,' he once said after he received a gift of a gold mask.

The Spanish conquistadores, who sailed the seas in quest of gold in Columbus' wake, were ordered by King Ferdinand of Spain: "Bring me gold! Get it humanely, if possible. But bring it to me, no matter how you come by it." The ruthless explorers slaughtered by the thousands the natives they encountered in Mexico and Central and South America. The gold shipped back to Spain by

the conquistadores was figuratively dripping with blood.

Then came the pirates, flying the flag of no nation. On the high seas, they plundered the Spanish galleons that were laden with gold and other valuable treasures. The galleons, often outgunned and outmanned, were no match for the well-armed pirates. In the 17th and 18th centuries, piracy was the scourge of the seas, especially in the West Indies and along the American coast.

19th-Century Gold Rushes

In 1848 a major gold strike occurred in the Sacramento Valley, in California. Word soon got out, and a steady migration of settlers rushed to establish their claims. By the following year, California was besieged by tens of thousands of "forty-niners"—fortune-seekers who came from all parts of the world. California's population increased from about 26,000 in 1848 to about 380,000 in 1860. Farmers abandoned their lands, sailors jumped ship, soldiers deserted the army—just to make the trek to seek their fortune in gold. Some were described as being "bloodthirsty rogues." With this melting pot of humanity came a wave of crime and violence. Those caught up in the lure of gold but not willing to work for it turned to robbery, pillaging stagecoaches and trains.

In 1851, on the heels of the California gold rush, came the news that large deposits of gold were being discovered in Australia. "The yield was truly fantastic" was the report. For a short time, Australia became the greatest producer of gold in the world. Some who had migrated to California soon packed their bags and descended on the land down under. The population of Australia skyrocketed—from 400,000 in 1850 to over 1,100,000 in 1860. Farming and other work came to a virtual standstill as many rushed to find their fortune in gold.

Toward the end of the 19th century, the mad stampede to find gold moved to the Yukon and Alaska, following the discovery of gold in those areas. Thousands of people made their way to the Far North, to the Klondike region and Alaska, fighting the bitter cold to stake their claims on land rich in gold.

Sunken Treasure

In the 20th century, with the development of deep-sea diving, gold-seekers turned their attention to the bottom of the sea. There they searched shipwrecks for sunken treasures—gold jewelry and other artifacts made centuries ago.

On September 20, 1638, the Spanish galleon *Concepción* sank in the Pacific Ocean, off the coast of Saipan, after being driven onto the rocks by severe weather. It was carrying a cargo of gold and other treasures worth tens of millions of dollars today. Most of the 400 people on board died. Divers have recovered from the wreck 32 gold chains, each measuring about five feet in length and weighing several pounds. Altogether, divers have brought up 1,300 pieces of gold jewelry—chains, crosses, buttons, brooches, rings, and buckles.

Other wrecks have also been discovered. In 1980, divers off the coast of Florida, in the United States, located the wreck of the 17th-century Spanish galleon the *Santa Margarita*. By the end of the following year, divers had recovered more than 118 pounds of gold bullion, along with other gold artifacts.

War Gold

Following the capitulation of the German government in 1945, Allied troops made a startling discovery in the Kaiseroda salt mines, in Thuringia, Germany. According to *The Atlanta Journal*, “the mines yielded a staggering \$2.1 billion in gold bullion, artworks, currency and securities.”

Some Facts About Gold

- Gold is the most malleable and ductile of all metals. It can be beaten to a thickness of four millionths of an inch. An ounce of gold can be hammered out to cover an area of about 190 square feet. One ounce of gold can be drawn to a length of 43 miles.
- Because pure gold is so soft, it is usually alloyed with other metals to increase its hardness for use in making jewelry and other gold items. The content of gold alloys is expressed in 24ths, called karats; thus, a 12-karat gold alloy is 50 percent gold, 18-karat gold is 75 percent gold, and 24-karat gold is pure.
- The leading gold-producing nations are South Africa and the United States.

Also found were bags full of gold and silver dental work, some already melted down, that had been extracted from Holocaust victims. This huge cache of gold helped the Nazi warlords finance a protracted war. An estimated \$2.5 billion worth of gold has been returned to about ten countries once occupied by Hitler, reports the *Journal*. Because of a common belief that not all the hidden Nazi gold has been found, the search continues.

Gold, to be sure, has value. The Bible, however, states that gold, like other material riches, cannot give life to those who seek it. (Psalm 49:6-8; Zephaniah 1:18) A Bible proverb says: “The getting of wisdom is O how much better than gold!” (Proverbs 16:16) True wisdom comes from the Creator, Jehovah God, and is to be found in his Word, the Bible. By studying God’s Word, the seeker of such wisdom can learn God’s laws, principles, and counsel and then apply these in his life. The wisdom thus gained is far more desirable than all the gold that has ever been discovered by man. Such wisdom can mean a better life now and eternal life in the future.—Proverbs 3:13-18.

WATCHING THE WORLD

Harmful Computer Games

Brazil's Ministry of Justice "has banned the sale of a controversial computer game in which players gain points by stealing cars and killing policemen," states a Reuters report. The game is considered "dangerous because it trivializes robbery and murder and could incite younger players to violence." In 1997 the ministry banned a computer game that "rewarded players for killing pedestrians, which included elderly women and pregnant women." A spokeswoman for Procon, a consumer rights organization, said: "These kinds of games are dangerous and harmful because they give rise to violence. Children start considering this kind of activity as normal."

Polluted Seas

"Ruthless overfishing, poisonous chemicals, and radioactive waste in the oceans endanger the basis for life on the whole earth," reports the newspaper *Nassauische Neue Presse*. According to the newspaper *Kieler Nachrichten*, a foremost victim is the Black Sea. It is considered to be one of the most endangered ecosystems in the world, with 90 percent of it totally lifeless. Unprocessed sewage has turned the waves lapping on the shores of Ukraine into a greenish-brown slop, and the beaches around Odessa were opened for only one week last summer. "The Black Sea is fatally wounded," said Romania's president Emil Constantinescu. "If we let it die, we are in for consequences worse than we can imagine." The United Nations

has declared 1998 to be the "International Year of the Ocean."

Fake Medicine

"About 8 percent of the medicines sold on the planet are fake," states *Le Figaro Magazine*. According to the World Health Organization, the percentage of fake drugs in Brazil is estimated to be 30 percent, and in Nigeria it is thought to be a staggering 60 percent. Trade in counterfeit medicines



is reportedly a 300-billion-dollar business, with organized crime taking a leading part. Despite the efforts of pharmaceutical companies to put an end to this trade, police and international organizations have not found a solution to the problem. At best, fake medicine can serve as a placebo; at worst, it can be deadly. "Fake medicine plays Russian roulette with the health of the sick," observes *Le Figaro Magazine*.

Love for Guns in the United States

"The differences between America [the United States] and other countries are stark," notes *The Economist*. "In 1996 handguns were used to murder two people in New Zealand, 15 in Japan, 30 in Britain, 106 in Canada, 211 in Germany and 9,390 in

the United States." Each year in the United States, firearms are involved in about half a million criminal incidents and some 35,000 deaths, including suicides and accidents. Yet, people in the United States who own firearms "want to keep their guns, no matter how high the price," states the magazine. "Far from choosing tighter controls, as so many other countries have done, they are rushing in the opposite direction." Now, 31 states issue permits allowing people to carry concealed handguns.

World's Longest Suspension Bridge

The Akashi Kaikyo Bridge in Japan, connecting Awaji Island with the city of Kobe, opened in April and immediately entered the record books as the world's longest suspension bridge. "In the works for a decade, the \$7.7 billion project boasts a 6,532-ft. (1.2 mile) center span—measured as the distance between the two towers," states *Time* magazine. "Each of the towers, taller than a 90-story building, is equipped with 20 vibration-control devices; if winds make the structure sway, pendulums tug the towers back." The bridge has also been designed to withstand earthquakes as high as 8.0 on the Richter scale. If strung out, its steel cable could encircle the earth seven times.

Imperiled Plants

After 20 years of work, botanists and conservationists around the world have concluded that 12.5 percent of the 270,000 known species of plants in the world—1 out of every

8—are under threat of extinction. "Nine of every 10 plants on the list are native to only one country, making them especially vulnerable to national or local economic and social conditions," says *The New York Times*. Scientists give two major reasons why plants become endangered: (1) large-scale destruction of wild countryside by development, logging, and agriculture and (2) invasions by nonnative plants that run amok and crowd out native species. The article states that plants "are more fundamental to nature's functioning" than mammals and birds. It further says regarding plants: "They undergird most of the rest of life, including human life, by converting sunlight into food. They provide the raw material for many medicines and the genetic stock from which agricultural strains of plants are developed. And they constitute the very warp and woof of the natural landscape, the framework within which everything else happens."

Hospital Infections

"Infections acquired in the hospital following a medical or surgical procedure represent a real public health problem," declares the French newspaper *Le Figaro*. In France alone, 800,000 people are infected each year, and the number of deaths is estimated at 10,000. Various steps can reduce the risk of contamination: disinfecting rooms before each new patient arrives, checking sterilization procedures, and thoroughly washing hands before treating a patient. Apparently, many of these practices are often neglected. A study carried out in a hospital in Paris revealed that only

72 percent of hospital ancillary workers said they systematically washed their hands after contact with each patient. Of these, 60 percent washed their hands for less than the optimum time. The newspaper concludes that with grim statistics like these, "a lot of work, it seems, remains to be done."

Seat Belts Save Lives in the Air

As every seasoned air traveler knows, planes may suddenly and unexpectedly encounter severe air turbulence that can injure or even kill passengers. The only effective precaution you can take, experts say, is to wear your seat belt at all times when seated in the aircraft. "Clear-air turbulence is extremely hard to predict, detect, and avoid," states *U.S. News & World Report*. While scientists are looking into developing sensors to detect such turbulence,



most planes now depend on reports from planes that are flying ahead on the same route. Nearly all the people injured during turbulence were not wearing seat belts. "But," the article concedes, "the airlines have not figured out how to force passengers to buckle up."

Save Electricity

"Eleven percent of the electricity used in German homes and offices is consumed by appliances that are not in use

but are on standby," reports the newsletter *Apotheken Umschau*. According to estimates for Germany, TV sets, stereos, computers, and other electronic appliances in standby mode use about 20.5 billion kilowatt-hours of electricity each year. This is more than the yearly electricity consumption of Berlin, the country's largest city. It may be possible to save electricity and spare your purse by switching some appliances off completely rather than leaving them in standby mode.

Dead Sea Disappearing

The Dead Sea, the lowest and saltiest spot on the earth, is fast disappearing. In 1965 the surface of the Dead Sea was 1,295 feet below sea level. It is now 1,355 feet below sea level, and a thin spit of dry land has appeared that divides it in two. Hotels that were built on the water's edge are now substantially inland. "Its water level is dropping a noticeable 2.5 feet a year, the sea denied replenishment by the demands of people and politics," states *The Dallas Morning News*. "The Dead Sea's potential demise signals the severity of the regional water shortage, while the obstacles to a solution indicate how much water and peace mix in the parched Middle East.... Today, the main source for the Dead Sea, the Jordan River, is almost completely diverted... by Israel, Syria and Jordan." Concerning the Dead Sea's history, the article says: "By far the most vivid story is the Biblical account of how the Cities of the Plain settled in a fertile region until God, despairing at their moral breaches, 'rained upon Sodom and upon Gomorrah brimstone and fire' to turn it to a wasteland."

FROM OUR READERS

Information Anxiety I am writing to thank you for the series "Information Anxiety—How Does It Affect You?" (January 8, 1998) I love reading, but only now have I realized that I was becoming anxious in my desire to know all there is to know about everything. These articles helped me to have a balanced point of view.

M. E., Italy

I would like to congratulate you on such in-depth articles. I would be very grateful to be granted permission to reproduce the introductory article in a newsletter for our educational and media technology association. The so-called information superhighway is jam-packed, and it is through such articles that one can be honestly informed and able to cope with the information age.

G. D., Ghana

Permission was granted to reproduce the article.—ED.

Fearing God? I feel compelled to express my delight over the article "The Bible's Viewpoint: How Can You Fear a God of Love?" (January 8, 1998) For some time I had been pondering that very question. I understood that fearing God meant having a healthy fear of displeasing him. Still, I felt a need to understand this subject more fully. Then I read that article. At last, a very satisfying discussion of what it means to fear God!

M. J. T., United States

Injustice Rectified Thanks for the article "A European Court Rights a Wrong." (January 8, 1998) Hearing about our brothers going to court so as not to be forced into military service reminded me of how our brothers won the right to preach from door to door on Sundays. Such accounts help me never to take this privilege for granted.

S. V., United States

Incas After reading the article "How the Incas Lost Their Golden Empire" (January 8, 1998), I must express my profound appreciation for such a beautifully illustrated, heart-rending story. The efforts of you Witnesses to bring your comforting message to descendants of the Incas will no doubt bring them much consolation. Thank you, *Awake!*, for speaking the truth.

S. B., Nigeria

I am ten years old, and I want to say thank you for the article. I was amazed at how many miles of road the Incas made. I also liked how they sent messages.

F. C., United States

Children Leaving Home I am grateful for the series "When Children Leave Home." (January 22, 1998) Letting go of my own precious children has been painful and slow. You are right, though. Living in the empty nest does get better with time and understanding. We parents can renew the marital bonds with our spouses.

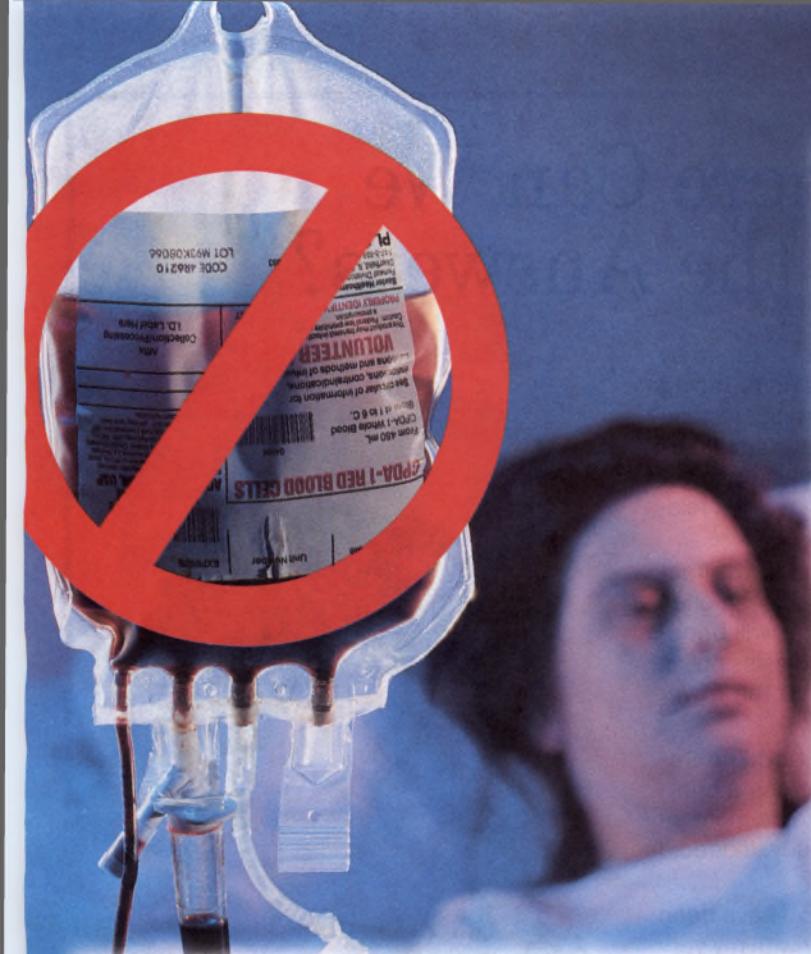
A. E., Canada

The articles were an answer to my prayers. Children leaving home can be a source of bitterness and conflict. But with the good advice in this article, peace and love can triumph.

P. N., France

I felt the articles were written especially for me. I recently left home to serve in an area where there is a need for full-time evangelizers. These articles helped me to understand how my parents feel and to overcome my own guilt feelings for leaving them. Furthermore, I will follow the advice in the section "A Word to Grown Children—Help Parents to Let Go." Even though I am far away, I will be able to feel close to my parents. Thank you for articles like these that always arrive at the right time.

G. U., Italy



Why Many Are Refusing Blood

IN WHAT was called a landmark decision, an Ontario court held the Canadian Red Cross liable for the HIV infection of two blood transfusion recipients—both of whom received tainted blood from the same donor. "When something as catastrophic as contaminated blood threatened the lives of recipients," said Justice Ste-

phen Borins, "an urgent response is required."

During the 1980's, some 1,200 Canadians were infected with HIV, and an additional 12,000 contracted hepatitis C—all from tainted blood and blood products. To help reduce the number of infections, donors are being screened much more carefully. But not all donors are honest

about their sexual history. A survey in the United States, for example, revealed that 1 in 50 donors failed to report risk factors, such as homosexual activity or sex with a prostitute.

Adding to the dilemma is the fact that blood screening is not foolproof. According to *New Scientist* magazine, "if a person gives blood less than three weeks after becoming infected with HIV, current tests fail to detect the viruses. For hepatitis C, this 'window period' can last over two months."

In recent years, there has been a significant decrease in the number of Canadians willing to give—or receive—blood. Columnist Paul Schratz writes: "With the drop in interest in donating, and the rise in numbers who can't donate, thank God the Jehovah's Witnesses are pioneering research in blood substitutes."

Interestingly, *The Toronto Star* reports that during one recent year, some 40 people "checked into Canadian hospitals falsely claiming to be Jehovah's Witnesses because they did not want blood transfusions." Surveys indicate that about 90 percent of Canadians would prefer some alternative to donor blood. The use of blood, therefore, is no longer simply a religious issue.

Where Can We Find the Answers?

More and more people are overwhelmed by the problems and complex questions facing them today. How should we view lying? Is gambling proper? What about dabbling in spiritism? How should we view abortion? Is it wrong to get drunk or for unmarried people to have sex relations?

The questions go on and on. And they affect not only our life but the lives of our loved ones as well. People want answers that will benefit them. One such person, from Mississippi, in the United States, wrote to the Watch Tower Society:

"In the back of your book entitled *The Secret of Family Happiness*, I ran across a printed question asking if I would welcome more information or a free home Bible study. Indeed, I would!

"Ever since the summer of 1995, I have been reading and studying my Bible. I try with my very best effort to take the Bible's understanding to a level that I myself can use for my spiritual purposes and, better yet, for teaching others. If you are saying that you are sending free information, I'm all for it!"

