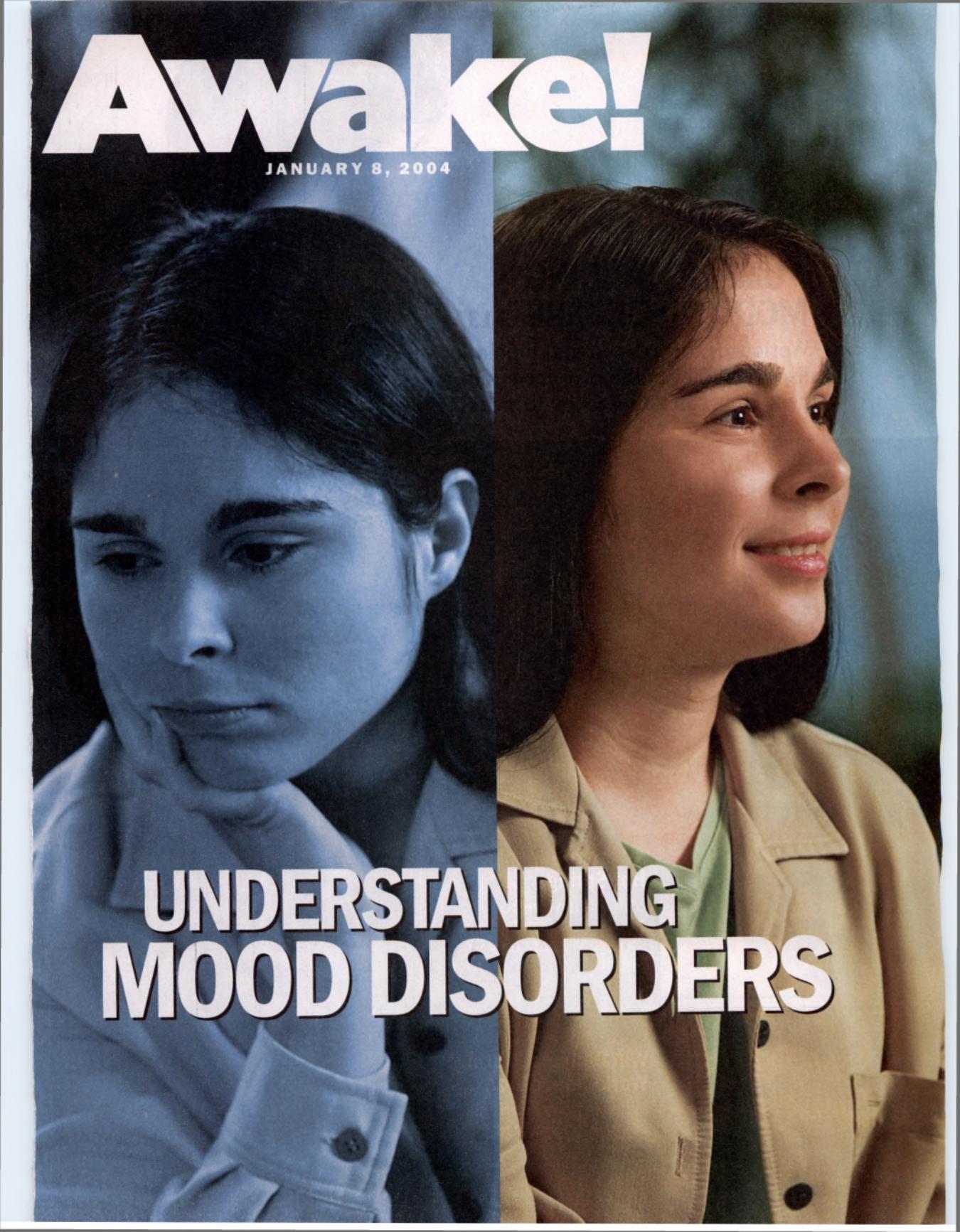


Awake!

JANUARY 8, 2004



**UNDERSTANDING
MOOD DISORDERS**

Awake!

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UNDERSTANDING MOOD DISORDERS 3-13

Worldwide, depression and bipolar disorder afflict millions of men and women. How can sufferers be helped?

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NICOLE has had bouts of dark moods since she was 14 years old. At age 16, however, she began to experience something new—a curious state of euphoria and unusually high energy. Racing thoughts, fragmented speech, and a lack of sleep were accompanied by an unfounded suspicion that her friends were taking advantage of her. Next, Nicole claimed that she could change the color of objects at will. At this point Nicole's mother realized that medical help was needed, so she took Nicole to the hospital. After closely monitoring Nicole's shifting moods, doctors finally reached a diagnosis:

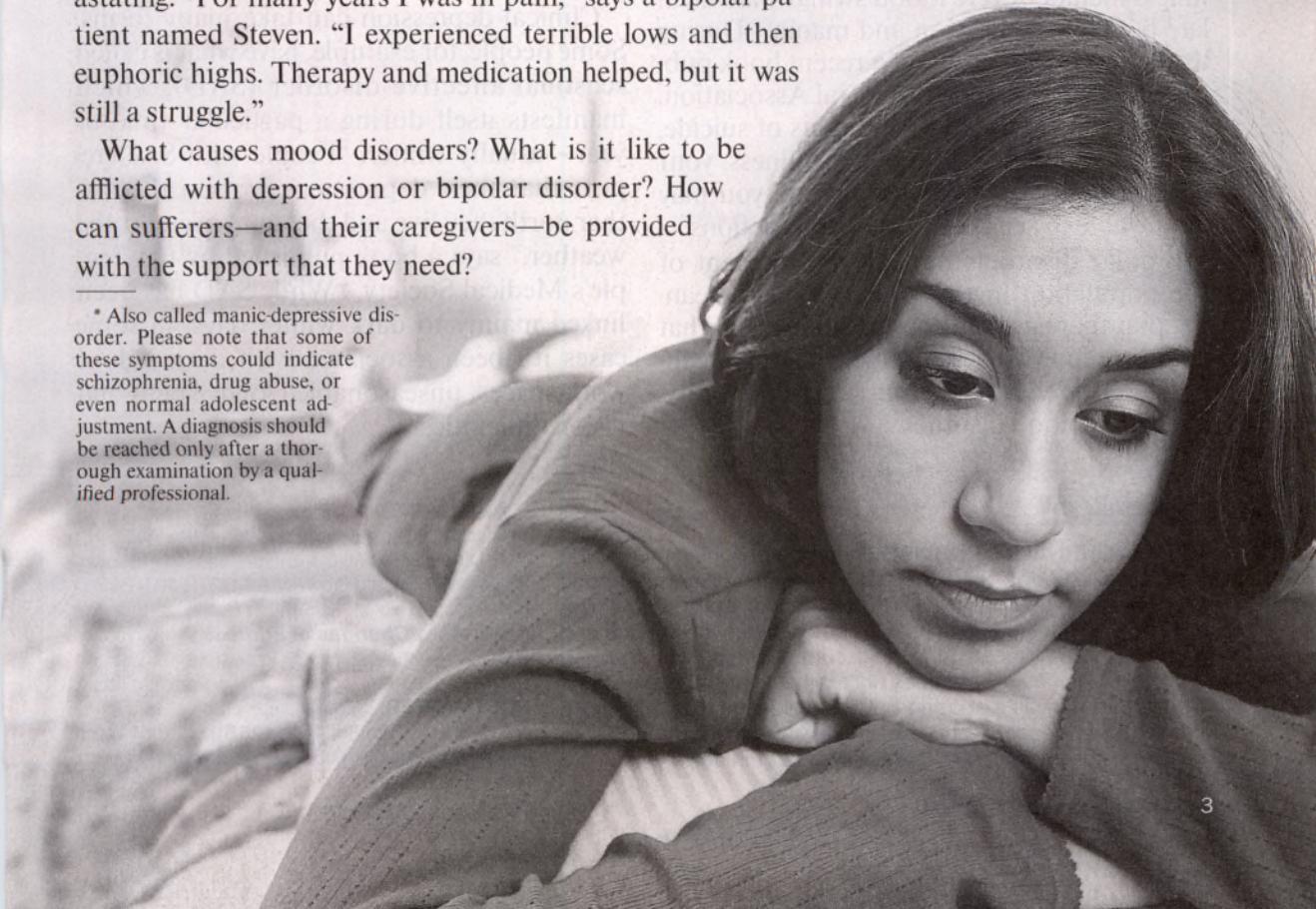
Nicole was suffering from bipolar disorder.*

Like Nicole, millions of people worldwide are afflicted with a mood disorder—either bipolar disorder or some form of clinical depression. The effects of these ailments can be devastating. "For many years I was in pain," says a bipolar patient named Steven. "I experienced terrible lows and then euphoric highs. Therapy and medication helped, but it was still a struggle."

What causes mood disorders? What is it like to be afflicted with depression or bipolar disorder? How can sufferers—and their caregivers—be provided with the support that they need?

* Also called manic-depressive disorder. Please note that some of these symptoms could indicate schizophrenia, drug abuse, or even normal adolescent adjustment. A diagnosis should be reached only after a thorough examination by a qualified professional.

TORMENTED MINDS



LIVING WITH A MOOD DISORDER

MOOD disorders are alarmingly common. It is estimated, for example, that more than 330 million people worldwide suffer from serious depression, a condition characterized by overwhelming sadness and a loss of pleasure in everyday activities. It has been estimated that in 20 years, depression will be outranked only by cardiovascular disease. Little wonder that it has been called "the common cold of mental illness."

In recent years bipolar disorder has received greater public attention. Traits of this illness include severe mood swings that vacillate between depression and mania. "During the depressed phase," says a recent book published by the American Medical Association, "you may be haunted by thoughts of suicide. During the manic phase of your illness, your good judgment may evaporate and you may not be able to see the harm of your actions."

Bipolar disorder may affect 2 percent of the population in the United States, meaning that there are millions of sufferers in that country alone. Sheer numbers, though, cannot describe the tormenting experience of living with a mood disorder.

Depression—Overwhelming Sadness

Most of us know what it is like to experience a wave of sadness. In time—perhaps in just a matter of hours or days—the feeling subsides. Clinical depression, however, is far more serious. In what way? "Those of us who are not depressed know that the rides our emotions take us on eventually end," explains Dr. Mitch Golant, "but the depressed individual experiences the ups and downs, twists and turns of his feelings as if on a runaway train without a clear sense of how or when—or even if—he can ever get off."

Clinical depression can take many forms. Some people, for example, have what is called seasonal affective disorder (SAD), which manifests itself during a particular time of year—usually winter. "People with SAD report that their depressions worsen the farther north they live and the more overcast the weather," says a book published by the People's Medical Society. "While SAD has been linked mainly to dark winter days, in some cases it's been associated with dark indoor work spaces, unseasonable cloudy spells and vision difficulties."

Awake!®

THIS JOURNAL IS PUBLISHED for the enlightenment of the entire family. It shows how to cope with today's problems. It reports the news, tells about people in many lands, examines religion and science. But it does more. It probes beneath the surface and points to the real meaning behind current events, yet it always stays politically neutral and does not exalt one race above another. Most important, this magazine builds confidence in the Creator's promise of a peaceful and secure new world that is about to replace the present wicked, lawless system of things.

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Symptoms of Major Depression*



- A depressed mood, most of the day, nearly every day, for at least two weeks
- Loss of interest in once pleasurable activities
- Significant weight loss or gain
- Excessive sleep or the opposite, insomnia
- An abnormal speeding or slowing of motor skills
- Excessive fatigue, with no discernible cause
- Feelings of worthlessness and/or inappropriate guilt
- Diminished ability to concentrate
- Recurring thoughts of ending it all

Some of these symptoms may also indicate dysthymia—a mild but more chronic form of depression

* This list is presented to serve as an overview and not to provide a basis for making a self-diagnosis. Also, some of the symptoms by themselves may be symptoms of other problems besides depression.

What causes clinical depression? The answer is not clear. While in some cases there seems to be a genetic link, in most instances life experiences appear to play an important role. It has also been noted that it is diagnosed in twice as many women as men.* But this does not mean that men are unaffected. On the contrary, it is estimated that between 5 and 12 percent of men will become clinically depressed at some point in life.

When this type of depression strikes, it is all-pervasive and affects virtually every aspect of one's life. It "shakes you to the core," says a sufferer named Sheila, "corroding your confidence, self-esteem, your ability to think straight and make

* In part, this may be due to their susceptibility to postpartum depression as well as hormonal changes at menopause. Then, too, women are usually more inclined to seek medical attention and, hence, receive a diagnosis.

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[#]Audiocassettes also available.

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Would you welcome more information? Write Jehovah's Witnesses at the appropriate address: **America, United States of:** Wallkill, NY 12589. **Australia:** Box 280, Ingleburn, NSW 1890. **Britain:** The Ridgeway, London NW7 1RN. **Canada:** Box 4100, Halton Hills (Georgetown), Ontario L7G 4Y4. **Ghana:** P. O. Box GP 760, Accra. **Jamaica:** P. O. Box 103, Old Harbour, St. Catherine. **New Zealand:** P. O. Box 75-142, Manurewa. **Nigeria:** P.M.B. 1090, Benin City 300001, Edo State. **South Africa:** Private Bag X2067, Krugersdorp, 1740. **Zambia:** Box 33459, Lusaka 10101. **Zimbabwe:** Private Bag WG-5001, Westgate.

**"Stability is a place that bipolar people visit.
None of us actually live there."—GLORIA**

decisions, and then when it reaches deep enough, it gives a few hard squeezes just to see if you can hold on."

There are times when a sufferer can gain much relief by talking out his or her feelings with an empathetic listener. (Job 10:1) Even so, it must be acknowledged that when biochemical factors are involved, depression cannot simply be willed away with a positive outlook. Really, in such a case, the dark moods of this illness are beyond the sufferer's control. Furthermore, the sufferer may be as baffled by the condition as family members and friends are.

Consider Paula,* a Christian who endured crippling episodes of intense sadness before her depression was diagnosed. "Sometimes after Christian meetings," she says, "I would rush out to my car and weep, for no reason at all. I just had this overwhelming sense of loneliness and pain. Although all the evidence showed that I had many friends who cared for me, I was blind to it."

Something similar happened to Ellen, whose depression required that she be hospitalized. "I have two sons, two lovely daughters-in-law, and a husband—all of whom I know love me very much," she says. Logic, it seems, would tell Ellen that life is good and that she is precious to her family. But on the battlefield of depression, dark thoughts—no matter how irrational—can overwhelm the sufferer.

Not to be overlooked is the significant impact that one person's depression can have on the rest of the family. "When someone you love is depressed," writes Dr. Golant, "you may live with a chronic sense of uncertainty, never really knowing when your loved one will recover from a depressive episode or fall

into a new one. You can feel profound loss—even grief and anger—that life has deviated, maybe permanently, from the norm."

Often, children can detect a parent's depression. "A depressed mother's child becomes highly attuned to his mother's emotional states, carefully observing every nuance and change," writes Dr. Golant. Dr. Carol Watkins notes that children of a depressed parent are "more likely to have behavioral problems, learning difficulties, and peer problems. They are more likely to become depressed themselves."

Bipolar Disorder—Consistently Inconsistent

Clinical depression is indeed challenging. But when mania is added to the equation, the result is called bipolar disorder.* "The only consistent thing about bipolar disorder is that it is inconsistent," says a sufferer named Lucia. During mania, notes *The Harvard Mental Health Letter*, bipolar patients "can be unbearably intrusive and domineering, and their reckless and restless euphoria may suddenly change into irritability or rage."

Lenore recalls her experience with the exhilaration of mania. "I was absolutely brimming over with energy," she says. "Many called me a superwoman. People would say, 'I wish I could be more like you.' I often felt a great sense of power, as though I could accomplish anything. I exercised furiously. I functioned on very little sleep—two or three hours a night. Yet, I woke up with that same high energy level."

In time, however, a dark cloud began to hover over Lenore. "At the height of my euphoria," she says, "I would feel an agitation

* Doctors report that often, each mood persists for many months. However, they note, some "rapid cyclers" vacillate between depression and mania several times per year. In rare cases, sufferers switch from one extreme to the other within a 24-hour period.

* Some names appearing in this series have been changed.



from somewhere deep inside, a motor running that could not be shut off. In a flash, my agreeable mood would become aggressive and destructive. I would verbally pounce on a family member for no apparent reason. I was furious, hateful, and completely out of control. After this frightening display, I would suddenly become exhausted, tearful, and extremely depressed. I felt worthless and wicked. On the other hand, I might switch back to my amazingly cheerful self, as if nothing had ever happened."

The erratic behavior of bipolar disorder is a source of confusion to family members. Mary, whose husband suffers from bipolar disorder, states: "It can be confusing to see my husband happy and talkative and then suddenly become despondent and withdrawn. It's a real struggle for us to accept the fact that he has little control over this."

Ironically, bipolar disorder is often just as distressful—if not more so—to the sufferer. "I envy people who have balance and stability in their lives," says a bipolar patient named Gloria. "Stability is a place that bipolar people visit. None of us actually live there."

What causes bipolar disorder? There is a genetic component—one that is stronger than that of depression. "According to some scientific studies," says the American Medi-

cal Association, "immediate family members—parents, siblings, or children—of people with bipolar depression are 8 to 18 times more likely than the close relatives of healthy people to develop the illness. In addition, having a close family member with bipolar depression may make you more vulnerable to major depression."

In contrast with depression, bipolar disorder seems to afflict men and women equally. Most often, it begins in young adulthood, but cases of bipolar disorder have been diagnosed in teenagers and even children. Nevertheless, analyzing the symptoms and arriving at the proper conclusion can be highly challenging even for a medical expert. "Bipolar disorder is the chameleon of psychiatric disorders, changing its symptom presentation from one patient to the next, and from one episode to the next even in the same patient," writes Dr. Francis Mark Mondimore of the Johns Hopkins University School of Medicine. "It is a phantom that can sneak up on its victim cloaked in the darkness of melancholy but then disappear for years at a time—only to return in the resplendent but fiery robes of mania."

Clearly, mood disorders are difficult to diagnose and can be even more difficult to live with. But there is hope for sufferers.

HOPE FOR SUFFERERS



IN THE past, people tended to avoid those who suffered from mood disorders. As a result, many who were afflicted became social outcasts. Some encountered job discrimination. Others were shunned by members of their own family. Often, this only aggravated the problem and prevented those who were ailing from getting help.

In recent decades, however, great strides have been made in understanding clinical depression and bipolar disorder. Now it is well-known that these conditions are treatable. But getting help is not always easy. Why?

Reading the Signs

A mood disorder is not diagnosed with a simple blood test or X ray. Instead, a person's behavior, thinking, and judgment are monitored over a period of time. A number of symptoms must be present for a diagnosis to be reached. The problem is that sometimes family members and friends do not realize that what they are observing constitutes evidence of a mood disorder. "Even when people agree on how a person's behavior deviates from normal," writes Dr. David J. Miklowitz, "they can have very different beliefs about what causes the person to be this way."

Furthermore, even when family members feel that the situation is serious, it may be difficult to convince the sufferer that he or she needs medical attention. Or if you are the one who is ailing, you may not be inclined to get help.

Dr. Mark S. Gold writes: "Maybe you believe what you think when you're depressed—that you're no good, so what's the use of going for help when there's no hope for somebody like you anyway."

Maybe you'd like to see someone about it but you think that being depressed is something to be ashamed of, that it's all your fault.... Maybe you don't know

that what you're feeling is depression." Nevertheless, for those who suffer from major depression, medical attention is crucial.

Of course, everyone feels despondent on occasion, and this does not necessarily indicate a mood disorder. But what if these feelings seem more intense than a mere bout with the blues? And what if they persist for an unusual length of time—perhaps two weeks or more? Furthermore, suppose the depressive moods are preventing you from functioning normally, either at work, at school, or in social situations. In such a case, it might be wise to consult a professional who is qualified to diagnose and treat depressive disorders.

When a biochemical imbalance is involved, medication may be prescribed. In other cases, a program of counseling might be recommended to help the sufferer learn how to cope with his or her condition. At times, both approaches combined have produced beneficial results.* The important thing is to reach out and get help. "Many times sufferers are frightened and ashamed of their condition," says Lenore, a bipolar patient mentioned in the preceding article. "The real shame, though, is suspecting you have a problem and not seeking the help that you so desperately need."

Lenore is speaking from experience. "I had been virtually bedridden for a year," she says. "Then, one day when I was feeling a little stronger, I decided to call and make an appoint-

* *Awake!* does not endorse any particular approach. Christians should make sure that any treatment they pursue does not conflict with Bible principles.

A Spouse's Observations

"Before the onset of Lucia's illness, she touched the lives of many with her keen insight. Even now when people visit my wife when she is calm, they seem drawn by her warmth. What most do not realize is that Lucia alternates between extremes of depression and mania. Such is the legacy of bipolar disorder, the illness she has endured for the past four years.

"During the manic phase, it is not unusual for Lucia to be up until one, two, or even three o'clock in the morning, with creative ideas reeling through her mind. Energy just pours out of her. She will overreact to the minutest things and spend money impulsively. She will walk into the most dangerous situations, feeling that she is invincible, that there is no danger—morally, physically, or otherwise. Related to this impulsiveness is the risk of suicide. Always on the heels of mania is depression, the intensity of which is usually proportionate to that of the preceding mania.

"Life for me has changed dramatically. Even with Lucia's treatment, what we can accomplish today may be different from what we could accomplish yesterday or will tomorrow. It changes as our circumstances do. I found myself forced to become more flexible than I ever thought possible for me."
—*Mario*.

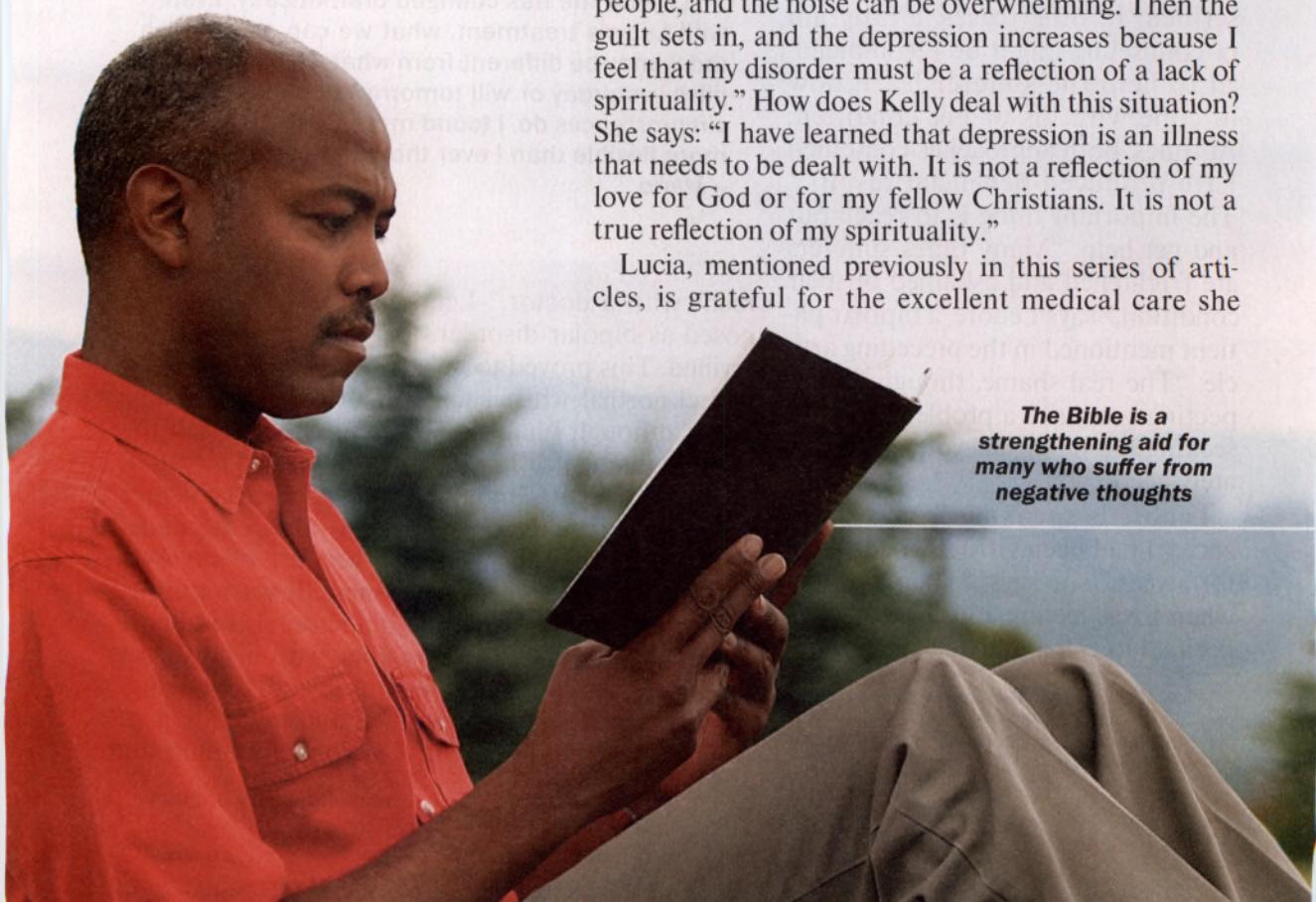
ment with a doctor." Lenore's condition was diagnosed as bipolar disorder, and medication was prescribed. This proved to be a turning point in her life. "I feel normal when I take my medication," Lenore says, "although I have to keep reminding myself that if I stop taking it, all the old symptoms will return."

It is similar with Brandon, who suffers from depression. "As a teenager," he says, "I often entertained the idea of committing suicide because of my overwhelming feelings of worthlessness. It wasn't until I was in my 30's that I went to a doctor." Like Lenore, Brandon takes medication to cope with his disorder, but more is involved. "To help my overall well-being," he says, "I take care of my mind and my body. I get rest and watch what I eat. I also fill my mind and

"Once I started getting help, the black cloud over me began to lift. I felt so much better!"—BRANDON

heart with positive thoughts from the Bible."

Brandon points out, however, that clinical depression is a medical problem—not a spiritual one. Realizing this is crucial to recovery. Brandon relates: "Once I was told by a well-meaning fellow Christian that since Galatians 5:22, 23 says that joy is a fruit of God's holy spirit, I must be depressed because I've been doing something to block that spirit. That made me feel even more guilty and depressed. But once I started getting help, the black cloud over me began to lift. I felt so much better! I wished I had got help sooner."



Winning the Battle

Even after a diagnosis has been made and treatment has begun, it is likely that a mood disorder will present continual challenges to the sufferer. Kelly, who battles major depression, is grateful for the professional help that has addressed the medical aspects of her condition. In addition, though, she has found that the support of others is crucial. At first, Kelly was reluctant to reach out to others because she did not want to be perceived as a burden. "I had to learn not only to seek help but also to accept it," she says. "It wasn't until I opened up that I was able to stop the downward spiral."

As one of Jehovah's Witnesses, Kelly attends meetings with fellow believers at the Kingdom Hall. At times, though, even these happy occasions present challenges. "Often the lights, the milling around of people, and the noise can be overwhelming. Then the guilt sets in, and the depression increases because I feel that my disorder must be a reflection of a lack of spirituality." How does Kelly deal with this situation? She says: "I have learned that depression is an illness that needs to be dealt with. It is not a reflection of my love for God or for my fellow Christians. It is not a true reflection of my spirituality."

Lucia, mentioned previously in this series of articles, is grateful for the excellent medical care she

The Bible is a strengthening aid for many who suffer from negative thoughts

has received. "Seeing a mental-health professional has been absolutely vital for my learning to deal with and ride out the mood swings that accompany this disease," she says. Lucia also emphasizes the value of rest. "Sleep is an important key to dealing with mania," she says. "The less sleep I get, the higher I climb. Even when sleep won't come, instead of getting up I have trained myself to lie there and rest."

Sheila, also mentioned earlier, has found it helpful to keep a daily journal in which she can pour out her feelings. She sees a marked improvement in her outlook. Still, there are challenges. "Fatigue, for some reason, lets negative thoughts percolate in my brain," Sheila says. "But I've learned to silence them or at least lower their volume."

Comfort From God's Word

The Bible is a strengthening aid for many who suffer from "disquieting thoughts." (Psalm 94:17-19, 22) Cherie, for example, found Psalm 72: 12, 13 to be particularly encouraging. There, the psalmist states about God's appointed King, Jesus Christ: "He will deliver the poor one crying for help, also the afflicted one and whoever has no helper. He will feel sorry for the lowly one and the poor one, and the souls of the poor ones he will save." Cherie was also encouraged by the words of the apostle Paul recorded at Romans 8:38, 39: "I am convinced that neither death nor life nor angels nor governments nor things now here nor things to come nor powers nor height nor depth nor any other creation will be able to separate us from God's love."

Elaine, a bipolar patient, finds her relationship with God to be an an-

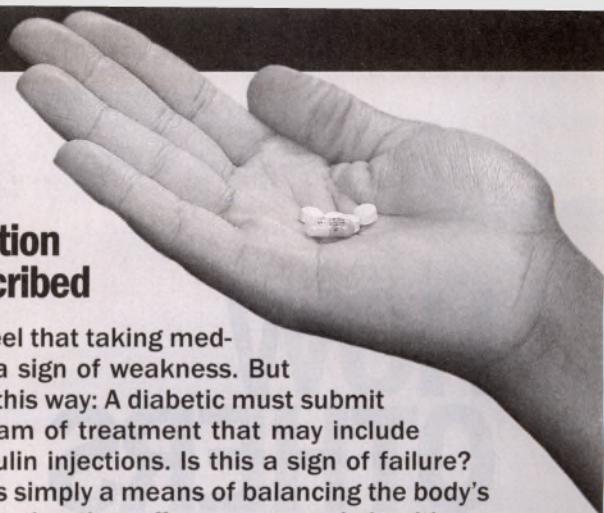
When Medication Is Prescribed

Some feel that taking medication is a sign of weakness. But think of it this way: A diabetic must submit to a program of treatment that may include taking insulin injections. Is this a sign of failure? Hardly! It is simply a means of balancing the body's nutrients so that the sufferer can remain healthy.

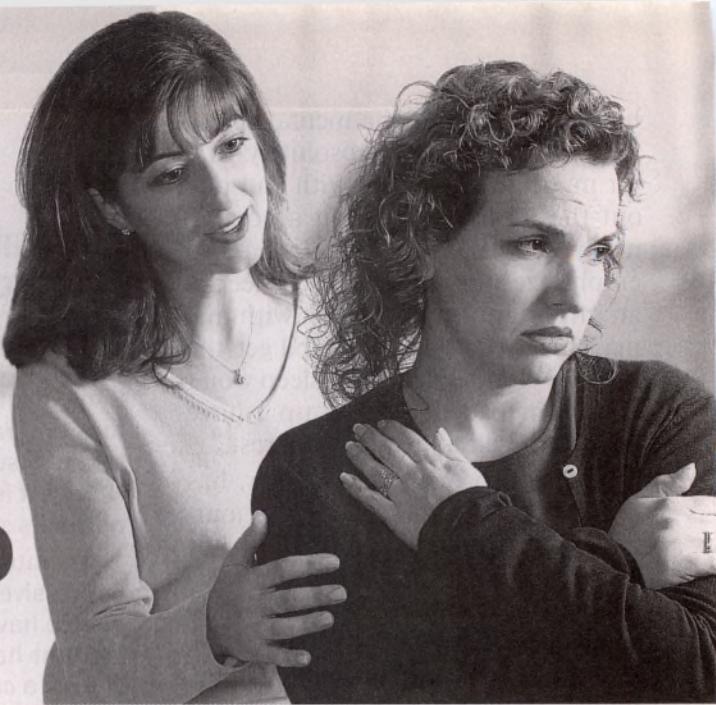
It is much the same with taking medication for depressive and bipolar disorders. Although many people have been helped by a program of counseling that has enabled them to understand their illness, a caution is in order. When a chemical imbalance is involved, the illness cannot be simply reasoned away with logic. Steven, a bipolar patient, relates: "The medical professional who treated me illustrated it this way: You can give a person all the driving lessons in the world, but if you give that person a car with no steering wheel or brakes, then those lessons won't do much good. In the same way, giving only cognitive counseling to a depressed person may not attain the desired results. Balancing the brain's chemistry is a valuable first step."

Elaine, a bipolar patient, finds her relationship with God to be an anchor. She is greatly comforted by the words of the psalmist: "A heart broken and crushed, O God, you will not despise." (Psalm 51:17) "It has truly been a comfort to know that our loving heavenly Father, Jehovah, understands," she says. "It has been strengthening to draw close to him in prayer, especially in times of great anxiety and distress."

As can be seen, living with a mood disorder presents unique challenges. However, Cherie and Elaine found that prayerful reliance on God along with appropriate treatment enabled them to improve their lot in life. How, though, can family members and friends help those who suffer from bipolar disorder or depression?



HOW OTHERS CAN HELP



PERHAPS you know someone who suffers from depression or bipolar disorder. If so, how can you be supportive? D. J. Jaffe of the National Alliance for the Mentally Ill offers this sound advice: "Don't confuse the illness with the individual; instead, hate the disease but love the person."

A woman named Susanna had the patience and love to do just that. She had a friend who was a bipolar patient. "There were times when she just couldn't bear to be around me," Susanna says. Instead of giving up on her friend, Susanna did research to learn about bipolar disorder. "Now," she says, "I realize how much my friend's demeanor was affected by her illness." Susanna feels that making efforts to understand the sufferer can bring a wonderful reward. "It can help you grow to love and treasure the beautiful person behind the illness," she says.

When the ailing one is a family member, wholehearted support is crucial. Mario, mentioned previously in this series, learned this

lesson early on. His wife, Lucia, also mentioned earlier, is a bipolar patient. "Initially," Mario says, "I was helped by going with my wife to her doctor and by studying up on this strange malady so that I would be thoroughly familiar with what we were up against. Lucia and I also talked a lot with each other and kept working with whatever situation developed as time went on."

Support From the Christian Congregation

The Bible admonishes all Christians to "speak consolingly to the depressed souls" and to "be long-suffering toward all." (1 Thessalonians 5:14) How can you do this? First, it is important to understand the distinction between mental and spiritual illness. For example, the Bible writer James indicated that prayer can make the *spiritually* indisposed one well. (James 5:14, 15) Nevertheless, Jesus acknowledged that those who are *physically* ailing need a physician. (Matthew 9:12) Of course, it is always right and helpful to pray to Jehovah about any concern, including our

**Jesus acknowledged that those who are ailing
need a physician.—MATTHEW 9:12**

The Bible promises that in God's new world, "no resident will say: 'I am sick.'" —ISAIAH 33:24

health. (Psalm 55:22; Philippians 4:6, 7) But the Bible does not state that increased spiritual activity in itself will cure present medical problems.

Discerning Christians, therefore, avoid implying that depressed people are responsible for their own suffering. Such remarks would be no more helpful than those offered by Job's false comforters. (Job 8:1-6) The fact is that in many cases depression will not improve unless it is treated medically. This is especially so when a person is severely depressed, perhaps even suicidal. In such cases, professional attention is essential.

Still, there is much that fellow Christians can do to be supportive. Of course, patience is required. For example, certain aspects of Christian activity may be especially daunting to those with a mood disorder. A bipolar sufferer named Diane says: "I am finding it a struggle to take part in the ministry. It is challenging to bring the good and happy news from the Bible to others when I don't feel good and happy inside."

To be of assistance to sufferers, strive to be empathetic. (1 Corinthians 10:24; Philippians 2:4) Try to view matters through the eyes of the sufferer rather than through your own. Do not burden the individual with unreasonable expectations. "When I am accepted for the person I am now," says Carl, who struggles with depression, "I feel that my sense of belonging is gradually being restored. With the patient help of a few older friends, I have been able to build a closer relationship with God and have found a great measure of joy in helping others to do the same."

With support, those who are ailing can find great relief from their distress. Consider a Christian woman named Brenda, who

is also a bipolar patient. "My friends from the congregation have been wonderfully supportive and understanding during my low periods, never judging me as spiritually weak," she says. "There have been times when they have let me accompany them in the ministry and let me just listen or when they have saved a seat for me at the Kingdom Hall so that I could come in after everyone is seated."

The assistance of loving and empathetic congregation elders has been a great aid to Cherie, mentioned in the preceding article, who suffers from depression. She says: "When the elders reassure me of Jehovah's love, read me passages from God's Word, the Bible, and speak of Jehovah's purpose for a paradise of peace and well-being and when they pray with me—even on the telephone—I feel the burden lifting. I know I am not abandoned by Jehovah or by my brothers, and that is a source of strength for me."

There is no doubt that by providing meaningful support, family members and friends can play a significant role in a sufferer's well-being. "I think I have a pretty good handle on my life now," says Lucia. "My husband and I have worked hard to get through this together, and things are better than ever for us."

Many who now struggle with various types of mental illness realize that the battle with these dreadful afflictions is a long-term one. Yet, the Bible promises that in God's new world, "no resident will say: 'I am sick.'" (Isaiah 33:24) Gone will be the distressing ailments and maladies that plague so many today. It is indeed heartwarming to contemplate God's promise of a new world in which all illnesses—including mood disorders—will be gone forever. At that time, says the Bible, no longer will there be mourning or outcry or pain.—Revelation 21:4.



BY AWAKE!
WRITER
IN JAPAN

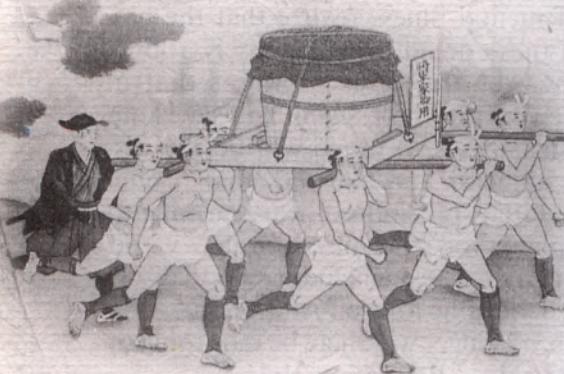
A VISIT TO JAPAN'S HOT SPRINGS

WHAT comes to your mind when you think of Japan? Majestic Mount Fuji? The speeding bullet train? The megalopolis Tokyo? There is more to the land of the rising sun than those famous tourist attractions. Whether for medicinal purposes or for relaxation, millions annually visit *onsens*—the hot springs of Japan. During one recent year, an estimated 140 million people checked in at a hot-spring inn or hotel in Japan. But what makes these spas so popular?

Onsen History

The Japanese have enjoyed bathing in geothermal waters for many centuries. Writings dating back to the eighth century C.E. mention the use of hot springs. Evidently, the 16th-century feudal lord Takeda Shingen championed the medicinal value of mineral springs. After battles, he and his samurai warriors bathed in hot springs to help heal sword wounds, broken bones, cuts, and bruises. The waters were also useful for relieving

HOT SPRINGS AND SHOGUNS



Mineral water was highly esteemed during the Edo period (1603-1867). Military dictators, called shoguns, actually had the waters transported in wooden barrels supported by poles from Atami to Edo (Tokyo)—a distance of 70 miles—on the shoulders of human carriers. At several points along the route, the prized waters were handed over to a different team of carriers, and they, in turn, bore the load over their leg of the journey. In this way the mineral waters were transported at a brisk pace. The thermal waters collected at the source were nearly at the boiling point. On this arduous trip of some 15 hours, the water from the springs would cool down to just the right temperature for the shogun to enjoy a rejuvenating bath in his castle at Edo!

A Chronological Table of the History of Atami

stress and for preparing the men for the next battle.

Of course, bathing would place the samurai in a vulnerable position—that of being unarmed in the event of a surprise attack. To overcome this problem, Takeda Shingen made use of a group of remote and secluded springs, which later came to be known as Shingen's hidden baths. Interestingly, these same springs are now used by professional athletes, including sumo wrestlers and baseball players, in the belief that the waters can reinvigorate their bodies for future sporting endeavors.

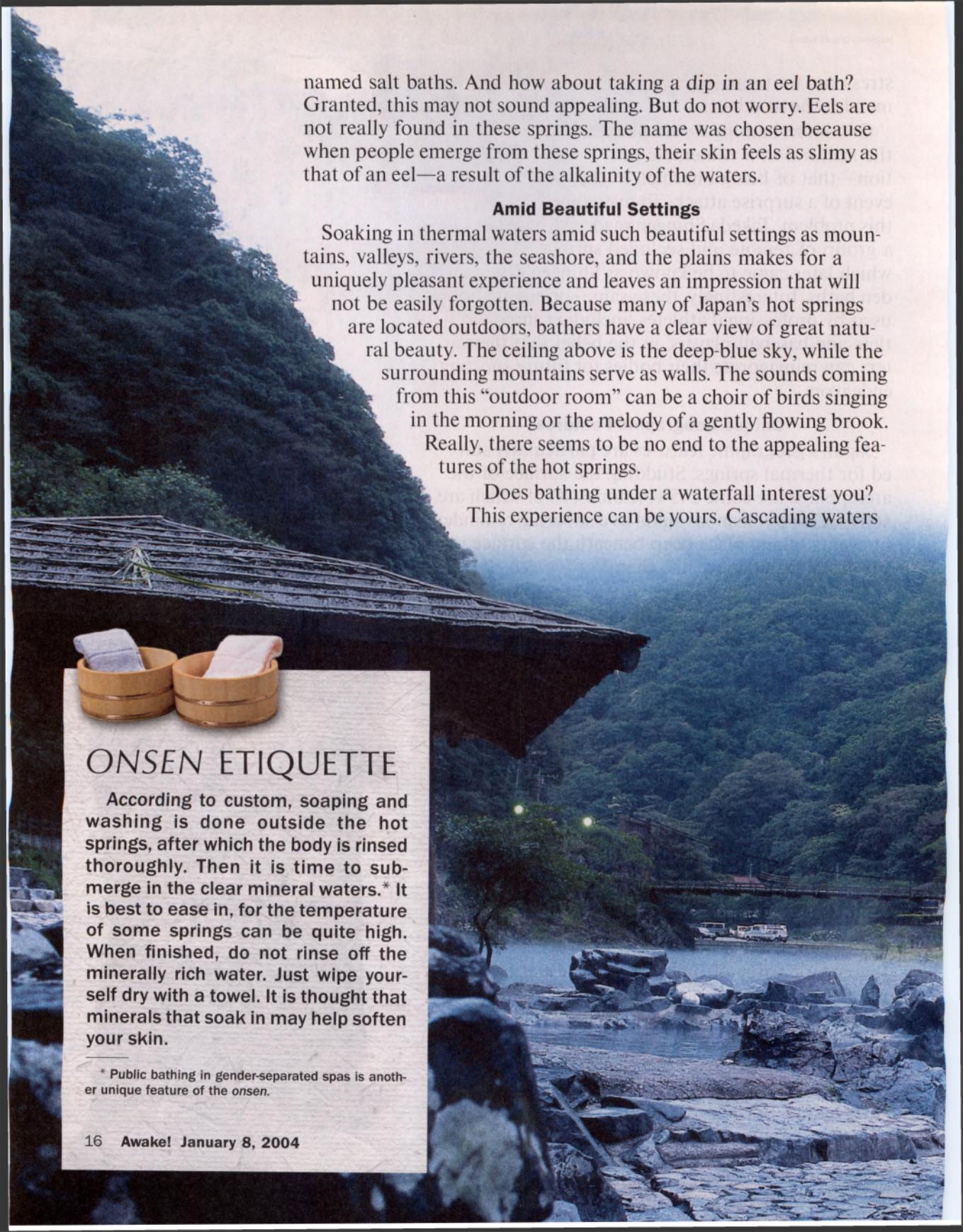
Unique Geographic Features

Japan's geographic features are particularly suited for thermal springs. Studding the surface of the archipelago are some 245 volcanoes, 86 of which are active. These volcanoes stand as a sobering reminder of events taking place deep beneath the surface of the earth. What do we find there?

The Japanese islands are situated on top of converging lithospheric plates, or slabs of crust. Magma, molten rock, is believed to be generated along the point of convergence of these gigantic plates. Located directly above—and functioning as visible outlets—are the volcanoes. This geothermal zone also serves as the fountainhead of heat to the underground springs. Interacting with magma or hot rocks, the groundwater is warmed and absorbs minerals, resulting in ideal conditions for *onsens* to be born. It is for good reason that the book *The Hot Springs of Japan* notes: "No country in the world is so blessed with natural hot springs as Japan." Indeed, a 1998 study lists 2,839 hot springs in the land.

Japan's hot springs come in a variety of styles, sizes, shapes, and colors. In an effort to classify the therapeutic value of the springs, the Japanese Environment Agency has organized them into nine chemical categories. The names given to hot springs often refer to their characteristics. For instance, springs rich in iron may make your towel turn reddish-orange. Hence, the word "red" is incorporated into their names. Springs with a high saline content are





named salt baths. And how about taking a dip in an eel bath? Granted, this may not sound appealing. But do not worry. Eels are not really found in these springs. The name was chosen because when people emerge from these springs, their skin feels as slimy as that of an eel—a result of the alkalinity of the waters.

Amid Beautiful Settings

Soaking in thermal waters amid such beautiful settings as mountains, valleys, rivers, the seashore, and the plains makes for a uniquely pleasant experience and leaves an impression that will not be easily forgotten. Because many of Japan's hot springs are located outdoors, bathers have a clear view of great natural beauty. The ceiling above is the deep-blue sky, while the surrounding mountains serve as walls. The sounds coming from this "outdoor room" can be a choir of birds singing in the morning or the melody of a gently flowing brook. Really, there seems to be no end to the appealing features of the hot springs.

Does bathing under a waterfall interest you? This experience can be yours. Cascading waters

ONSEN ETIQUETTE

According to custom, soaping and washing is done outside the hot springs, after which the body is rinsed thoroughly. Then it is time to submerge in the clear mineral waters.* It is best to ease in, for the temperature of some springs can be quite high. When finished, do not rinse off the minerally rich water. Just wipe yourself dry with a towel. It is thought that minerals that soak in may help soften your skin.

* Public bathing in gender-separated spas is another unique feature of the onsen.

give you a massage and add another dimension to bathing Japanese-style. It is also possible to bathe in a cave, where hot mineral waters bubble forth from the deep recesses of rock formations. Some springs are located on the beach, with a perfect view of the sunset, whereas others are nestled alongside rivers.

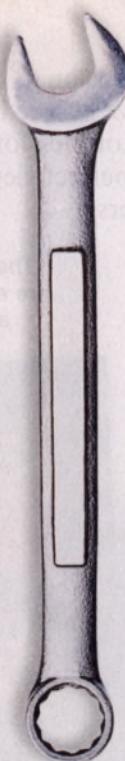
No matter what the location or type of hot spring chosen, one thing is certain: If you bathe in volcanically heated springs, you will experience, if for but a moment, relief from the stress of daily living. You will emerge truly refreshed and perhaps a little closer to the Japanese life-style. So if you have an opportunity to visit this part of the world, by all means enjoy the *onsens*—the hot springs of Japan!

Fall: Yubara, Okayama Prefecture;
winter: The Mainichi Newspapers

**Thermal waters
are enjoyed during
all seasons**



REPAIR YOUR CAR SAFELY



Kevin knew from experience how to change the oil in his car. He knew how to remove the drain plug on the oil pan, empty the crankcase, replace the plug, and tighten it. But one time as Kevin pushed firmly on his wrench, it slipped off the bolt head. Kevin's hand smashed into a sharp piece of metal, slashing his palm badly enough to require several stitches.



LIKE Kevin, many people routinely work on their own car—some simply because it cuts costs. But learning the basics of maintenance and repair can have other benefits as well. “Once, during a long road trip, my car developed a problem,” says a woman named Kathy. “Because I had learned to work on my car, I was able to fix it myself and continue the journey.”

Perhaps you too would like to be able to maintain and repair your car. But how can you do so safely?

Think Ahead!

Your first priority should be safety.* As Kevin’s injury illustrates, it is easy to hurt yourself when working in tight spaces or when exerting force with a tool. How can you avoid injury? When fastening a bolt with a wrench, make sure that the tool is properly seated over it. Ask yourself, ‘If the tool slips, where will my hand go?’ Wearing gloves or wrapping a rag around your hand can provide a measure of protection. To help control the force you are exerting, if possible, pull the tool toward you instead of pushing it away. Likewise, when freeing a stuck bolt, your goal should be to move it just a quarter of a turn at a time. These principles of foresight and control always apply. Never let haste cause you to neglect them!

Accidents often occur when a person tries to use a tool for something other than its intended purpose. Tom, for instance, was having a

* If you are performing a task for the first time, try to obtain a copy of a repair manual for your car or ask an experienced friend for help. If your car has computerized or other high-tech components, it might be better to take your vehicle to a mechanic who has the necessary equipment and experience to make repairs.

Items to Keep in Your Car

- Spare tire and jack**
- Jumper cables**
- Flares or reflectors**
- Tools and goggles**
- Flashlight**
- Extra containers of fluids**
(oil, water, antifreeze, brake fluid)
- Duct tape**
- Spare fuses**
- Tow rope**
(Note: In some places it may be legal only for a licensed wrecker to tow your car)
- Box to keep tools neat and containers upright**

You may wish to carry additional repair items. However, some automobile clubs that provide emergency roadside service are reluctant to work on a broken-down car if the owner has begun making certain repairs himself. If you belong to an automobile club, find out what type of repairs are permitted.

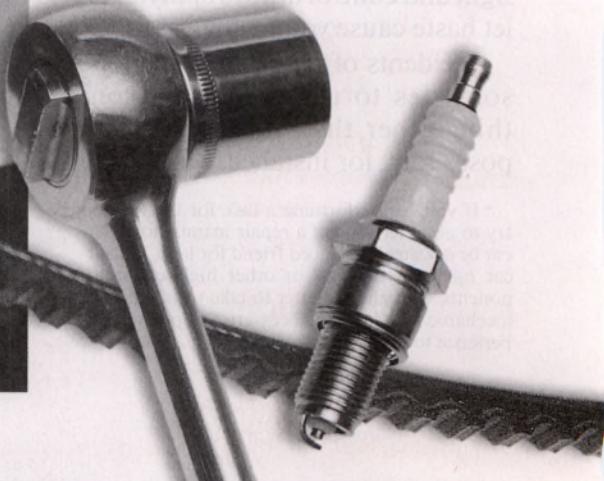




difficult time changing the spark plugs in his car. Why? His socket was too short, and it kept slipping off the first plug. Finally, Tom attached an extension between the socket and the ratchet. He then changed the five remaining plugs in the same time that it took him to change the first one—and he did it safely! The lesson? Having the right tool is essential.

Foreign matter can get into your eyes while you are working under the car or looking up under the dashboard. How can this be prevented? "Wear some kind of eye protection, such as goggles," says Sean, who has worked as a mechanic for over ten years. "In the shop where I work," he adds, "using such safety equipment is mandatory." You should also wear eye protection when working near hazardous liquids, such as battery acid.

When working under your car, always use a properly designed jack stand, a professional lift, or a reinforced repair dugout. Never get under a vehicle that is supported only by a jack. The owner's manual of some cars indicates where jacks and jack stands should be placed to give the car adequate support. Be aware, however, that a sudden force—such



as the kind that is exerted when breaking a stubborn bolt loose—could cause the car to shift and slip off its supports.

Preventing Hazardous Surprises

Some parts of your car can get quite hot and burn you if you touch them. For example, the water inside the radiator remains hot for some time after the engine has been turned off. So do not remove the radiator cap until it is cool enough to touch with your bare hand. On some cars, the radiator fan is electrically driven and comes on automatically—even after the engine has been turned off. To avoid injury, disconnect the ground wire from the battery before starting your work.

When working on your car, remove rings and jewelry, especially if the engine is running. Besides catching on protruding parts,

into the radiator. Then, he drove to an auto parts store to buy a new hose. Tom's experience illustrates the need to be prepared by keeping repair items in your car.

While driving, be alert to any strange noises or smells. Yvonne noticed a strange smell coming from the engine of the car. Her husband opened the hood and saw a miniature geyser of antifreeze squirting up from a tiny hole in the upper part of the radiator hose. Because the problem was detected before the car overheated, Yvonne and her husband were able to drive to a repair shop.

What should you do if your car breaks down on the highway? First, try to get the car as far off the road as possible. Passengers, especially children, should stay inside the car with seat belts fastened. If you must

Accidents often occur when a person tries to use a tool for something other than its intended purpose



metal jewelry can cause an electrical short circuit and turn red-hot! Loose sleeves as well as ties, scarves, and even long hair can become entangled in moving parts.

Even when you think that your work is completed, there is one last rule to follow. "Always double-check your work," says Dirk, a service adviser for a busy repair shop. "Once," he continues, "a mechanic forgot to do this after working on brakes. The brakes failed, and the car ran right into my desk!"

Handling Emergencies

One day Tom noticed that his car was overheating. A hose had burst, and radiator water had escaped. Using a roll of duct tape that he kept in the car, Tom was able to perform a temporary repair by taping the hose and pouring a mixture of antifreeze and water

be outside the car, stand as far away from traffic as possible. Turn on the emergency lights. Leave the hood up to signal that you are having car trouble. Carefully set out flares or other warning signs.

If your car's battery is dead, you may choose to jump the battery with the help of another vehicle. But be aware that car batteries produce highly flammable gas. A spark can ignite this gas, producing an explosion that could shower you with corrosive acid. Therefore, if you or the person who is helping you is in doubt about how to jump the battery, wait for assistance.

As we have seen, maintaining a car is a serious responsibility. Whether you work on your car to care for an emergency or simply to perform routine maintenance, always remember: Being safety conscious is a must!

Facing the Challenges of a Unique Territory

FOR several decades Jehovah's Witnesses have been preaching on the Navajo reservation, located in parts of Arizona, New Mexico, and Utah, U.S.A. In the Navajo language, it is known as Diné Bikéyah (Navajo country). The more than 220,000 Native Americans of that nation, called Diné (the people) in their tongue, make it one of the most populous of the North American Indian tribes.

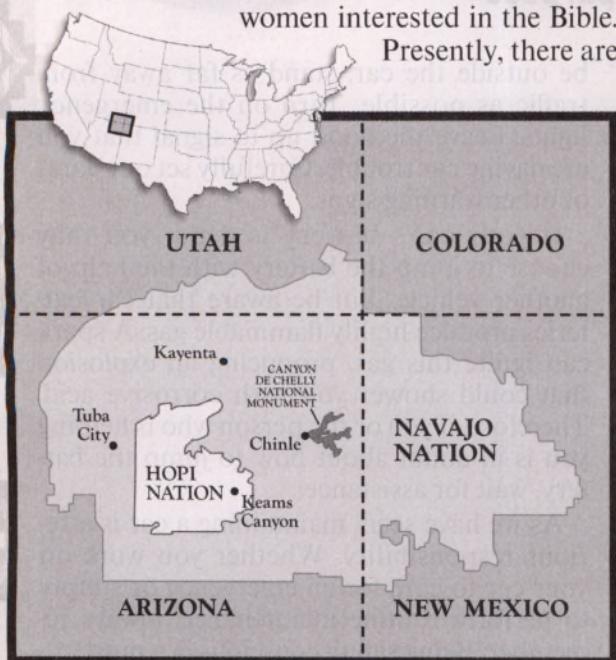
During those years various congregations of Jehovah's Witnesses have been formed around a nucleus of Navajo men and women interested in the Bible. Presently, there are

four congregations on the reservation—at Tuba City, Kayenta, Keams Canyon, and Chinle. (See map below.) Until recently each had its own Kingdom Hall except the congregation at Chinle, which had to meet in rented schoolrooms. Now things have changed.

A Kingdom Hall for a Unique Territory

Saturday, June 7, 2003, saw the dedication of the Chinle Kingdom Hall. The dedication talk was presented by Gerrit Lösch, a member of the Governing Body of Jehovah's Witnesses. In his discourse he described the great expansion that has been taking place worldwide in the number of Kingdom Halls, and yet, he explained, thousands of additional halls are still needed to serve the more than 94,600 congregations. He also took the audience of 165 through 15 reasons why they should appreciate their new Kingdom Hall and the benefits of regular attendance at Christian meetings. He concluded with a prayer of dedication, asking for Jehovah's blessing on the use of this excellent meeting place.

This congregation was formerly a group associated with the Keams Canyon Congregation, some 70 miles to the southwest. Now the Chinle Congregation has the assignment of preaching the good news of God's Kingdom in a territory that is scattered over 4,400 square miles! Many of the Navajo live in mobile homes or in hogans,





Kingdom Hall of
Jehovah's Witnesses

Jiöhövah Yádahalne'i
bi Kingdom Hall

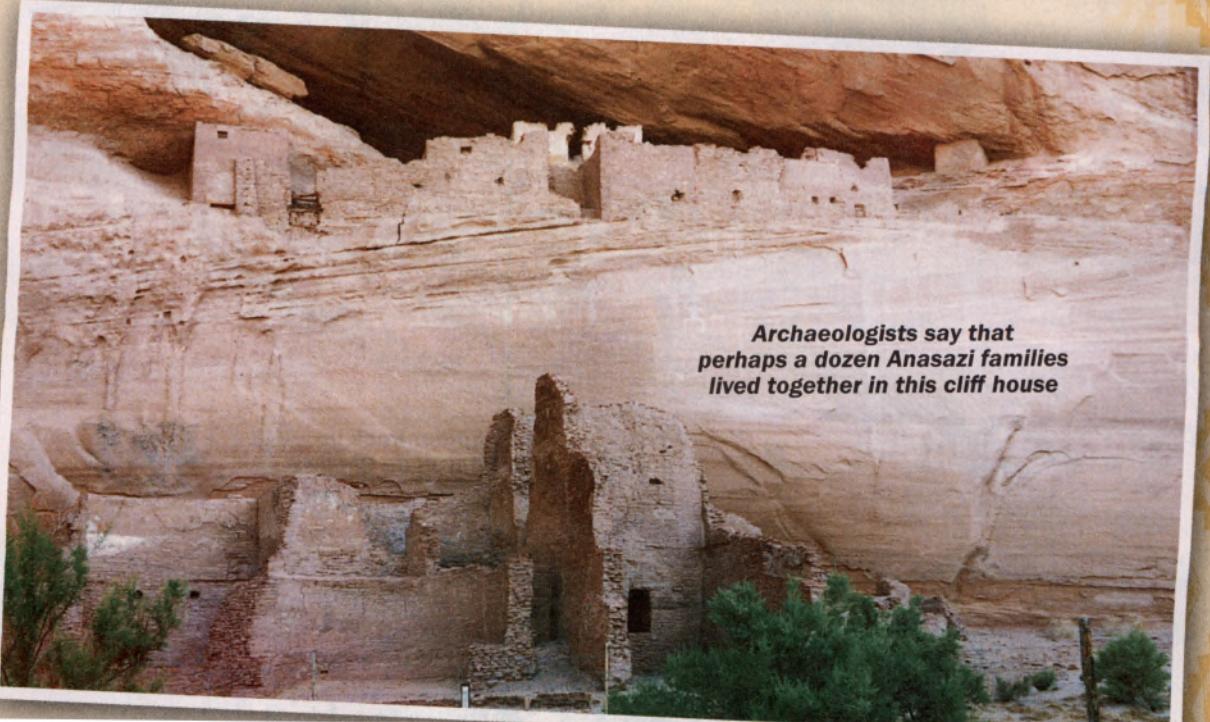
which are hexagonal or octagonal dwellings. To reach isolated places, a four-wheel-drive vehicle is essential. This is very true of the scattered dwellings found in the Canyon de Chelly (pronounced d'Shay), a fascinating part of the congregation's territory.

Canyon de Chelly—Sacred to the Navajo

The high plateaus of Arizona are known for their endless vistas, with highways that seem to disappear into infinity. The Canyon de Chelly is just a couple of miles down the highway from the Kingdom Hall. The canyon twists and turns through 26 miles of red-stone cliffs that start at

30 feet in height and gradually reach a height of 1,000 feet. The area, listed as a national monument, is visited by thousands of tourists every year. This canyon, along with Canyon del Muerto, is considered sacred ground by the Navajo. Some families live here, secluded in their hogans made of logs and earth. Yet, all are reached by Jehovah's Witnesses, who bring them Bible literature in their own language.

To enter the canyon, one must be accompanied by an authorized Navajo guide. Some visitors hike through, and others go on horseback; but most travel by four-wheel-drive vehicle. This type of vehicle is necessary because the track often crosses the Chinle



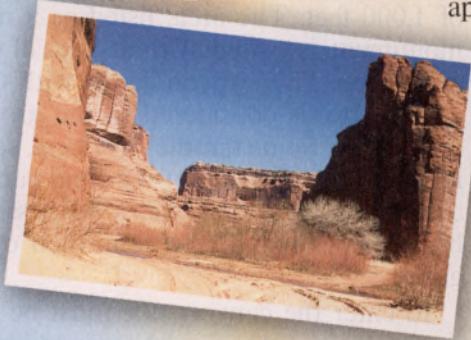
Wash. The guides also know how to avoid quicksand that can occasionally swallow a horse or a pickup truck. But what makes the Canyon de Chelly so intriguing?

The history of the canyon is written on the sheer cliff walls in petroglyphs and rock paintings. Archaeologists believe that the famous cliff dwellings, inset in large open caves on the cliff face, were built between 350 C.E. and 1300 C.E. Perhaps the most famous is the White House Ruin, so called because of the white wall of one of the buildings. It was abandoned by the Anasazi (Navajo name for "ancient enemy") about 1300 C.E. It is believed that the Navajo did not appear in this region until the 18th century.

If you happen to visit Canyon de Chelly, you will travel on Navajo Route 7. There, at a bend in the road just short of the National Monument, keep your eyes open for the sign that says "Jiihōvah Yādahalne'i bi Kingdom Hall" and "Kingdom Hall of Jehovah's Witnesses." You are welcome to stop by and visit.

Hogan

Canyon del Muerto



**Spider Rock in
Canyon de Chelly**





THRIVING in the Midst of ADVERSITY

As foretold in the Bible, we are living in "critical times hard to deal with." (2 Timothy 3:1) Family turmoil, health problems, and financial stresses are just some of the obstacles that may afflict you. At times, you may feel that you cannot endure. Nevertheless, you can thrive in the midst of adversity. Consider the following illustration.

The Teide violet grows at an altitude of nearly 12,000 feet on the island of Tenerife off the coast of North Africa. Pico de Teide, the volcanic peak from which the violet gets its name, dominates the subtropical island. Its upper slopes seem devoid of vegetation. But in the spring, melting winter snows provide just enough water to allow these tenacious violets to revive and deck the throat of the volcano with a purple garland. Yes, this flower may appear frail and delicate, but it manages to survive and even thrive in this barren, hostile environment.

Like the Teide violet, you too can endure in the midst of adverse circumstances. The Bible has helped many of Jehovah's Witnesses to do so even in the worst of times. For example, those who were imprisoned in concentration camps in Nazi Germany managed to thrive. "They were treated worse than any other group," says Swedish journalist Björn Hallström, "but they managed, through their belief in God, to survive better than any others."

In whatever situation you find yourself, the Bible can help you to thrive amid adversity. Contact Jehovah's Witnesses in your community, or write to the address on page 5 of this magazine for a free home Bible study.

The Bible's Viewpoint

WILL DIPLOMACY BRING WORLD PEACE?

WOULD you like to see an end to all wars? Surely there must be some diplomatic solution to national and international conflicts. Many feel that if world leaders simply worked together, war could be done away with. Likely, however, you are disappointed with the results of diplomacy. For centuries diplomats have ratified treaties, formulated resolutions, and held summit meetings, but few issues have been permanently resolved.

The Bible has much to say about diplomacy and peace. It answers the following questions: What factors presently prevent diplomacy from producing peace? Should Christians involve themselves in diplomacy? How will true peace finally be attained?

What Is Preventing Peace?

Several Bible accounts illustrate how person-to-person contact can lead to peace. For example, Abigail skillfully convinced

Bottom: Photo by Stephen Chernin/Getty Images



Regardless of their motives, world diplomats have neither the ability nor the power to devise permanent solutions

David and his army not to avenge themselves on her household. (1 Samuel 25:18-35) Jesus gave an illustration of a king who had no reasonable recourse but to send out ambassadors to sue for peace. (Luke 14:31, 32) Yes, the Bible acknowledges that some forms of diplomacy can resolve conflicts. Why, then, do peace talks often meet with limited success?

The Bible accurately predicted that our times would be troublesome. Because of the wicked influence of Satan the Devil, men would not be “open to any agreement” but would be “fierce, without love of goodness, betrayers, headstrong, puffed up with pride.” (2 Timothy 3:3, 4; Revelation 12:12) In addition, Jesus prophesied that the conclusion of the present system of things would be marked by “wars and reports of wars.” (Mark 13:7, 8) Who can deny that these have become increasingly prevalent? That being the case, is it any wonder that attempts at peace between nations often prove futile?

Also, consider this fact: While diplomats may try hard to avoid clashes, each one’s main objective is to advance his own nation’s interests. That is the bottom line of political diplomacy. Should Christians involve themselves in such matters?

Christians and Diplomacy

The Bible advises: “Do not put your trust in nobles, nor in the son of earthling man, to whom no salvation belongs.” (Psalm 146:3) This implies that regardless of their motives, world diplomats have neither the ability nor the power to devise permanent solutions.

When Jesus was on trial before Pontius Pilate, he stated: “My kingdom is no part of this world. If my kingdom were part of this world, my attendants would have fought that

I should not be delivered up to the Jews. But, as it is, my kingdom is not from this source.” (John 18:36) Peace initiatives are often tainted with nationalistic hatred and political selfishness. Hence, true Christians avoid involvement in this world’s conflicts and its attempts at diplomacy.

Does that mean that Christians are apathetic and uninterested in world affairs? Are they insensitive to human suffering? No. On the contrary, the Bible describes God’s true worshipers as individuals who are “sighing and groaning” over the bad things that happen around them. (Ezekiel 9:4) Christians are simply relying on God to bring peace as he has promised. Is the end of war your idea of peace? God’s Kingdom will most certainly accomplish that. (Psalm 46:8, 9) But in addition, it will ensure the complete security and well-being of all earth’s inhabitants. (Micah 4:3, 4; Revelation 21:3, 4) Such a superior peace can never be attained by diplomacy or the efforts of human “peacekeeping” organizations.

Bible prophecy and past experience clearly indicate that trusting in human diplomacy to bring peace can only lead to disappointment. Those who rest their hope for peace on Jesus Christ and support God’s Kingdom will see their desire for true peace realized. What is more, they will enjoy it forever!—Psalm 37: 11, 29.

In Our Next Issue

- **Do You Know God by Name?**
- **Why I Believe the Bible**
—A Nuclear Scientist Tells His Story
- **Visit the World’s Largest Fish Market**

Watching the World

Butterfly Flight

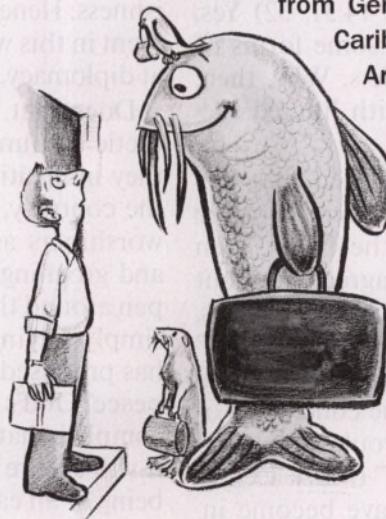
"For years scientists have been attempting to understand what makes butterflies the masters of manoeuvrability at low speed—able to hover and fly backwards or sideways with apparently little effort," says *The Independent* of London. Now researchers at Oxford University believe they have finally found the insect's secret. Using a specially designed wind tunnel and wisps of smoke to reveal airflow, they observed red admiral butterflies in flight. As the insects flew to and from artificial flowers in the wind tunnel, they were monitored by high-speed digital cameras that recorded the airflow around their wings. The researchers discovered that "the fluttering of butterflies is not a random, erratic wandering, but results from the mastery of a wide array of aerodynamic mechanisms." Scientists hope to use this knowledge to build remote-controlled aircraft with a wingspan of just a few inches. Fitted with a camera, these could be flown into confined spaces as winged observers.

Insomnia in Italy

During 2002 over 600 doctors and more than 11,000 patients participated in the widest-ranging study of insomnia ever made in Italy.

Exotic Animals Invade Spain

"More than forty species of exotic animals from different parts of the planet have invaded Spain by land, sea, and air, wreaking havoc on native flora and fauna," reports the Spanish newspaper *El País*. The list of invaders includes giant catfish from Germany, green algae from the Caribbean, monk parakeets from Argentina, and mink from North America. Many were taken to Spain for sale as exotic pets or for some other commercial reason. Some escaped, others were released when they became a burden or proved unprofitable. "Apart from the loss of habitat, invading species are now the main cause of the decline in native species," says biologist Daniel Sol.



The findings revealed that over 12 million Italians suffer from insomnia, says the newspaper *La Stampa*. Of those studied, 65 percent suffered from morning drowsiness and 80 percent from drowsiness sometime during the day, and 46 percent had difficulty concentrating at work. "Those who drive are at high risk, given that 22 percent of road accidents are caused by drowsiness," says the paper. The study also showed that 67 percent of sufferers had never spoken to their doctor about the problem. Study coordinator, Mario Giovanni Terzano, said that "a good

20 percent of insomniacs suffer from primary insomnia, for which there is no apparent cause." Yet, a medical examination may reveal a related physical problem. Other causes of insomnia, said Terzano, include anxiety (24 percent), stressful events (23 percent), and depression (6 percent).

Saiga Antelope Face Extinction

"In 1993, over a million saiga antelopes roamed the steppes of Russia and Kazakhstan. Today, fewer than 30,000 remain," says *New Scientist*. The animal has fall-

en victim to "an epidemic of poaching," says the report. "Biologists say it is the most sudden and dramatic population crash of a large mammal ever seen." Why the poaching? In the early 1990's, conservationists concerned about the endangered rhino promoted saiga horn as a substitute for rhino horn in traditional Chinese medicine. Because the saiga had disappeared from China, the herds in central Asia were targeted. In five years (1993-98), the number of animals almost halved, and by 2002 the population had plummeted by 97 percent. Central Kazakhstan has seen a 99-percent loss. Just 4,000 animals remain there. Abigail Entwistle

a zoologist from Flora and Fauna International, says: "We think we have probably got just two years to save the species."

Mind, Emotions, and Health

What goes on in our mind may have a much greater effect on the body than previously believed, notes a report contained in the Polish magazine *Wprost*. It adds: "Thoughts and emotions affect all vital organs and systems of the human body: nervous, immune, hormonal, circulatory, and reproductive." Hence, says Professor Marek Kowalczyk of the Military Institute of Hygiene and Epidemiology in Warsaw, "people who live stressful lives suffer from colds and flu twice as often as others."

"And depressed women, he adds, halve their chances of becoming pregnant. *Wprost* also reports that while stress may not cause cancer, it "can accelerate the development of dormant cancer." Anger too may harm health, for it is believed that aggressive, hostile people have a greater incidence of coronary disease, making them more vulnerable to a heart attack.

Legal Sale of Ivory

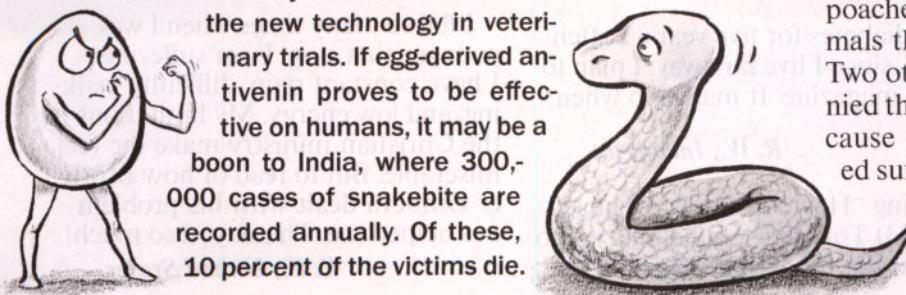
In just ten years, from 1979 to 1989, Africa's elephant population dropped by more than half. One reason for this was the rising demand for products made from their tusks. Another reason was the proliferation of automatic weapons among poachers. As a result, in 1989 the Convention on International Trade in Endangered Species (CITES) placed a complete ban on ivory trading. Recently, however, CITES agreed to allow South Africa, Botswana, and Namibia to have a one-time sale amounting to 60 tons of ivory, reports *African Wildlife* magazine. The ivory had been confiscated from poachers or taken from animals that had died naturally. Two other countries were denied the sale of their ivory because "they had not provided sufficient guarantees that they could prevent illegal ivory trafficking," the article said.

Snake Antivenin From Eggs

"Indian scientists have discovered that chicken eggs can become a source of molecules to treat snake bites," says *The Times of India*. Birds about 12 weeks old are injected with a "sub-lethal dose of venom intramuscularly" and a booster dose two to three weeks later. After 21 weeks, they start laying eggs that contain antivenin antibodies. Researchers are hopeful that the egg-derived antivenin may replace that obtained from horses, "which undergo painful tests for collection of snake anti-venom," says *The Times*. Scientists in Australia

have already claimed success with

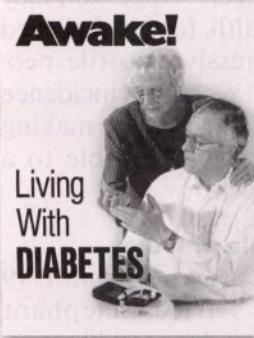
the new technology in veterinary trials. If egg-derived antivenin proves to be effective on humans, it may be a boon to India, where 300,000 cases of snakebite are recorded annually. Of these, 10 percent of the victims die.



From Our Readers

Diabetes Thank you with all my heart for the series "Living With Diabetes." (May 8, 2003) I have struggled with diabetes since I was four years old. I always thought that things like marriage and the full-time ministry were out of the question for me, but these articles gave me hope. Now, at 17, I am making the full-time ministry my goal, and I will do my best to attain it.

T. A., Japan



I consider extremely useful the suggestion made to family and friends not to encourage those with diabetes to eat inappropriate foods. It is a struggle to cook for my family and then not be able to eat the things that I have prepared. For any who do not have diabetes, this might seem like a matter of little importance, but I can assure you that it is not!

V. N., Italy

I am a nurse and a teacher. At the beginning of the next term, I will be teaching my students about diabetes. The illustration on pages 8 and 9 is easy to understand, and I will use it in my teaching. Thank you for publishing simplified articles on medical subjects.

C. B., France

Thank you for the articles on diabetes. I do not have this illness, but my 14-year-old sister does. Now I understand what my sister experiences. It is true that I have to make sacrifices for her, but that is not as challenging as living with diabetes!

E.D.M., Italy

My mother has had diabetes for five years. I often worry about her health, since I live far away. I plan to send her a copy of this magazine. It may help when I am not present.

R. W., Indonesia

Injury I enjoyed reading "How An Injury Changed My Life." (April 22, 2003) This article is helping me to cope with my back injury of more than 30 years. I ex-

perienced many of the same things that Brother Stanley Ombeva did. It comforted me to know that God's Word helps one to rely on Jehovah.

G. G., United States

I was so touched by Brother Ombeva's candid portrayal of his reaction to his physical disabilities. I was humbled into realizing how insignificant my problems are compared with what he has to face. This article has helped me to count my blessings.

S. C., Canada

Phenomenal! That's the word I have to use to describe this article. I couldn't put it down. It was thought provoking to see how the Scriptures took on a whole new meaning for Brother Ombeva when he needed them the most. That will help me to have more fellow feeling when offering assistance to others.

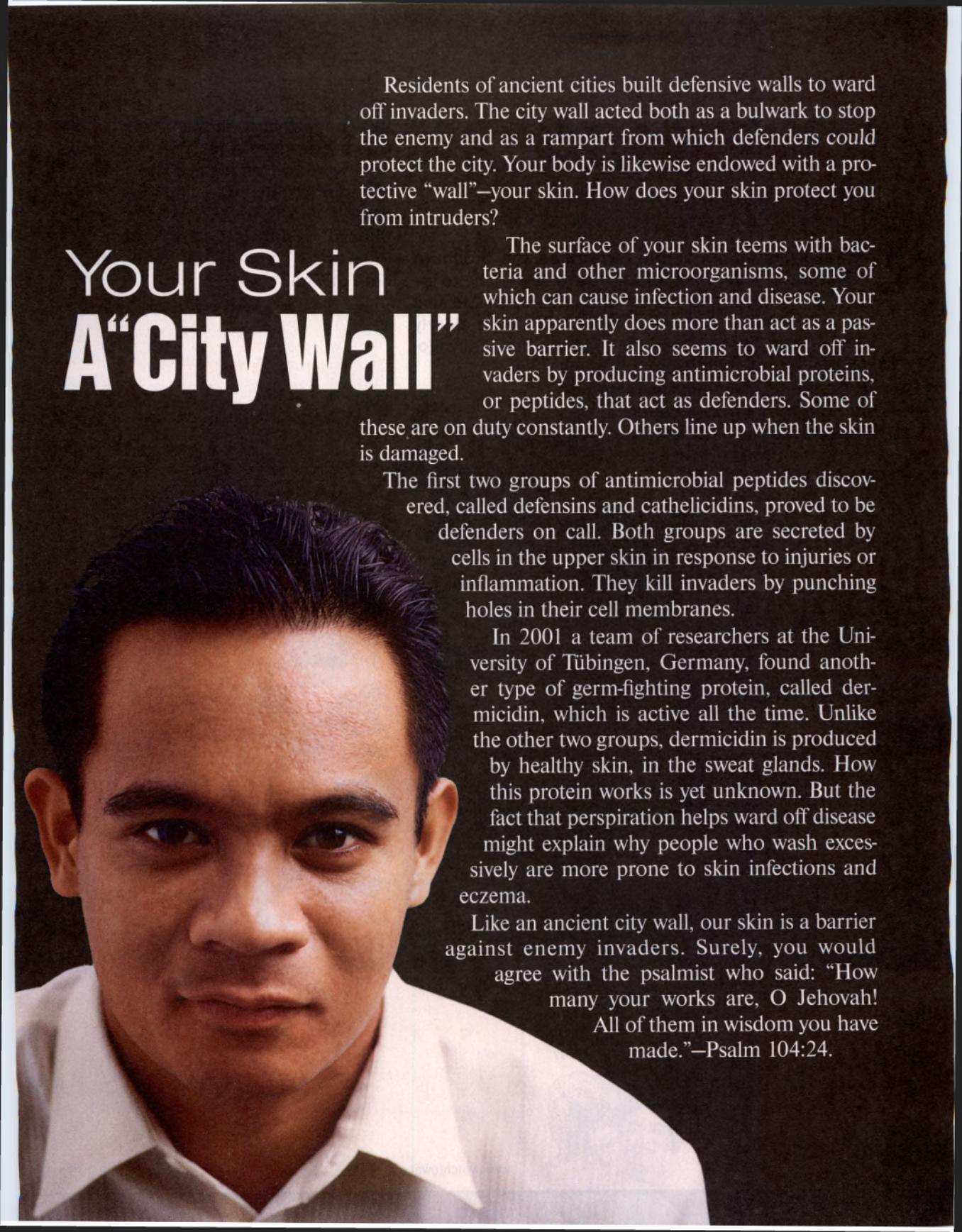
R. G., United States

I was encouraged to know that even a Christian who serves as a congregation elder has felt this type of anger and recognizes that it takes time to cope with a situation like this. Brother Ombeva related that even during the height of his affliction, he never became irregular in the ministry. I am resolved to do the same.

M. K., Japan

I fell so many times when I was younger that now I am suffering. I have constant pain, difficulty walking, and low energy. My limitations in the Christian ministry make me feel miserable. But to read of how Brother Ombeva dealt with his problem has helped me. Thank you so much!

E. E., United States



Residents of ancient cities built defensive walls to ward off invaders. The city wall acted both as a bulwark to stop the enemy and as a rampart from which defenders could protect the city. Your body is likewise endowed with a protective “wall”—your skin. How does your skin protect you from intruders?

Your Skin A“City Wall”

The surface of your skin teems with bacteria and other microorganisms, some of which can cause infection and disease. Your skin apparently does more than act as a passive barrier. It also seems to ward off invaders by producing antimicrobial proteins, or peptides, that act as defenders. Some of these are on duty constantly. Others line up when the skin is damaged.

The first two groups of antimicrobial peptides discovered, called defensins and cathelicidins, proved to be defenders on call. Both groups are secreted by cells in the upper skin in response to injuries or inflammation. They kill invaders by punching holes in their cell membranes.

In 2001 a team of researchers at the University of Tübingen, Germany, found another type of germ-fighting protein, called dermicidin, which is active all the time. Unlike the other two groups, dermicidin is produced by healthy skin, in the sweat glands. How this protein works is yet unknown. But the fact that perspiration helps ward off disease might explain why people who wash excessively are more prone to skin infections and eczema.

Like an ancient city wall, our skin is a barrier against enemy invaders. Surely, you would agree with the psalmist who said: “How many your works are, O Jehovah!

All of them in wisdom you have made.”—Psalm 104:24.

'BRIEF BUT PACKED WITH INFORMATION'

That is how one woman described the brochure *What Does God Require of Us?* She then went on to explain what prompted her remark. "Through the use of this brochure," she said, "Gloria, who is an elderly woman, has had her desire to read the Bible reinvigorated. She has gone from not being able to sit still and concentrate to studying for up to two hours. She prepares all her lessons ahead of time and examines all the scriptures."

What Does God Require of Us? is a 32-page publication, the same size as this magazine. It shows clearly what God's purpose is for mankind and tells what we need to do to receive his approval. Its appealing lessons include "Who Is God?," "Who Is Jesus Christ?," "What Is God's Purpose for the Earth?," and "What Is the Kingdom of God?"

