Lifeblood For Young Cliff Watson, Hemophiliac

Thanks to a new home program, the days of pain and inactivity are few and far between for Cliff, age 12. Now the California youngster can ride his bike, go camping, and lead a nearly normal life.

By Edwin Kiester, Jr.

A slight, tearful figure stood at the darkened bedside. "Mother, I think I'm bleeding."

Bleeding... Cliff...call the hospital ...40 miles to drive... Eleanor Watson's mind was working before her body moved. She had done all this before—many times—when Cliff had fallen, when he had been bumped, sometimes when he had just gotten overexcited. Always the bleeding; and the hospital, 40 miles away.

How well she knew the route from Saugus to Los Angeles, a drive that started in the dark, quiet suburb and ended with blood feeding slowly into Cliff's arm in the brightly lit emergency room of a big city hospital. And how well she knew the rest of the routine that must be followed to stop the chronic bleeding, to protect Cliff from the disabling effects of the disease she had unknowingly transmitted to him at birth—hemophilia.

Today, those midnight rides seem long ago. For thanks to a revolutionary new program of self-infusion for hemophiliacs, Cliff and his family now care for his disability at home. And Cliff, instead of leading a sheltered, protected life, happily rides a bike, is looking forward to two weeks at Boy Scout camp, and enjoys most other things a normal 12-year-old can do. This important advance against a scourge so old that it is mentioned in the Bible has significant implications for Cliff and his 25,000 fellow victims of severe hemophilia.

Hemophilia is one of the world's best-known, but least-understood, diseases. Most people recognize that the chronic bleeding of a hemophiliac occurs because his body has a deficiency—it fails to manufacture a substance which allows the blood to clot normally. But, generally, they believe that a simple nick or scratch can cause the victim to bleed to death. Actually, visible wounds are less grave than hidden ones; internal hemorrhages, set off by a minor bump or tumble, may pour blood into the muscles and joints, where it accumulates and destroys the tissues. Many hemophiliacs have two or three such "bleeds" a month, each of which can necessitate a costly 7- to 10-day hospitalization for the joint to heal and the blood to be replaced. Degeneration of joints caused by bleeding disables many victims before they reach their teens. Some die of blood loss that can be neither reached nor stopped.

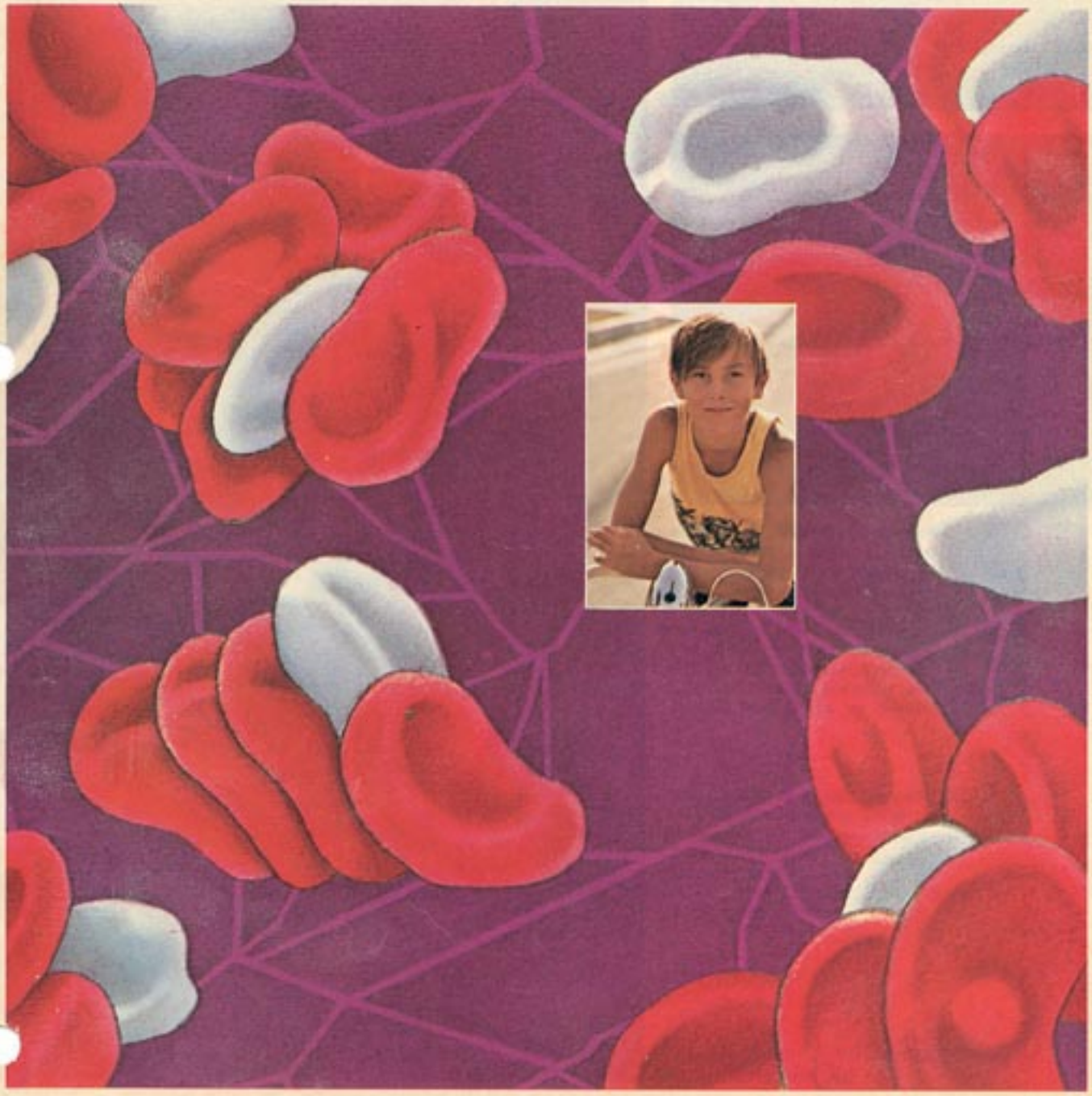
Almost all hemophiliacs are males; all are born with their deficiency. Although the mother is the one who carries and transmits the defective gene that causes hemophilia, few women show active symptoms of the disease. Typically, hemophilia is unmasked at birth, when the child is circumcised. If not then, it usually is recognized when the infant begins to show telltale purplish black hematoma, or bleeding under the skin, whenever he bumps the side of his crib.

Cliff Watson had bruises when he was a baby, but his mother dismissed them as the result of his being very active. It was not until he was nine months old that his condition was truly diagnosed—and in a near-tragic way.

The family was visiting Cliff's grandmother, when he developed an ear infection. His mother took him to the local hospital, where he was given a penicillin injection in the thigh. Within hours, the injection site began to puff up and discolor.

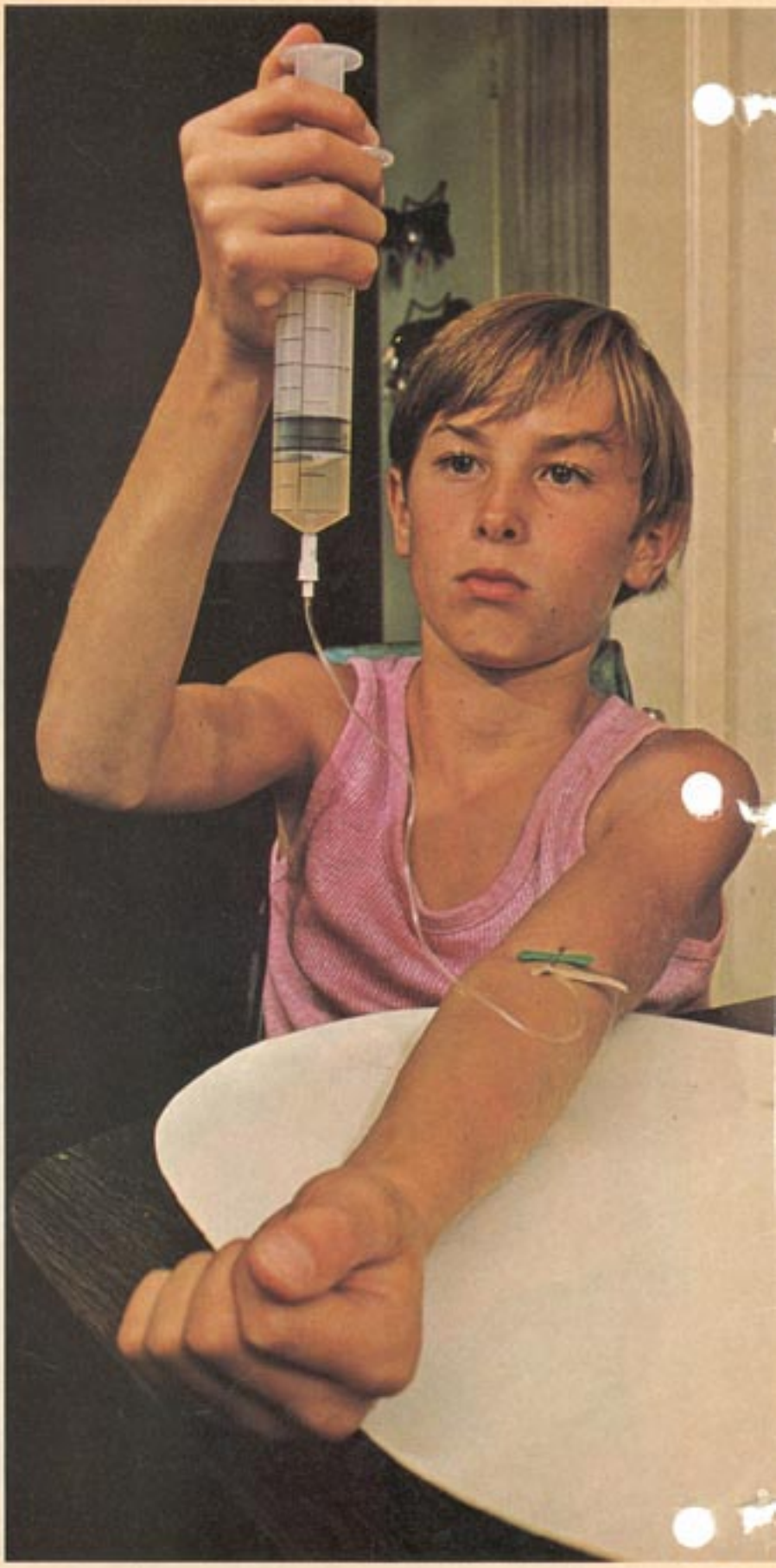
"I didn't know what it was," Eleanor Watson recalls. "I blamed it on the nurse—I thought she had been too rough with my baby. Well, he kept crying and crying, but I never associated it with his poor leg; I thought it was still an earache. Finally, I took him back to the hospital and saw a pediatrician. He looked at Cliff's ear and said the infection had cleared up. Then he saw Cliff's leg.

"He got all excited. He had never treated hemophilia but knew something about it. I remember he ran out to his car to get a camera and photograph it. He explained that it was a hematoma and told me a little of what might be causing it. He made an appointment for Cliff to go right into Children's Hospital (an affiliate of the University of Southern California). When we arrived, they told me that two-thirds of the blood that Cliff's little



When Jack Lazerson, M.D., came to Children's Hospital in 1972, he told the Watson family that Cliff would benefit from more activity. A daily swim became part of Cliff's new regimen (top). Dr. Lazerson also suggested that Cliff's father take on more responsibility for Cliff's care—to nurture a closer relationship between the two of them (above).

Cliff has been taught to take a major part in his self-infusion home-care program—under the supervision of an adult (right). It has been left to his parents to decide when he will be able to shoot alone.



Photographed for *Today's Health* by John Hamilton

heart had pumped since receiving the shot had pooled (collected) where the needle went in. That was when he got his first transfusion."

Neither Eleanor Watson nor her husband, Clifford, Sr., seems easily ruffled. Cliff, Sr., a telephone company repairman for 17 years, is a tall, friendly, hardworking man who loves to hunt and fish; he looks forward to weekends, when he can work around the house. Eleanor is a warm, gentle person who loves children and who, this year, has begun a career as a part-time teacher's aide. When Cliff, Jr.'s condition was diagnosed, the couple already had two daughters, Deborah and Deanna, and they had just moved into a new house in Saugus, a suburban development far on the perimeter of Los Angeles.

The Watsons really didn't know what to do. There were no known bleeders in Mrs. Watson's family, so she had no inkling her firstborn son might have the affliction. (Two-thirds of hemophilia cases are handed down through the generations, but the rest occur spontaneously as the result of a genetic mutation at the time of conception.) In fact, neither she nor her husband had ever even heard of hemophilia.

After the diagnosis, they were told that Cliff probably wouldn't survive his teens, and even if he did he would be an invalid. Any injury—even excitement—could trigger a hemorrhage, possibly even a fatal one. And there was little they could do to treat it. The best anyone could suggest was to apply ice and a pressure bandage to the injury, in the time-honored first-aid tradition.

"I was panicked," Mrs. Watson recalls. "I wouldn't even set him down unless he was asleep. I carried him when I washed and when I cooked, and even when I ironed. At night, I would sit by his crib so that he wouldn't bump the sides during the night."

Finally, Mrs. Watson's family doctor told her that her overprotection might do the boy more harm than good. Instead of hovering over his every move, she should try to give him as normal a childhood as possible.

That approach wasn't easy for Mrs. Watson, either, but she realized the good sense of it. "I set out to teach him self-reliance," she remembers. "I wouldn't get his toys for him, or carry him unless it was necessary. I made him do things for himself, even though it hurt. Sometimes I wanted to cry when I watched him. He would scoot along on his stomach so that he wouldn't have to use his sore knees and ankles. Some of the neighbors thought I was really cruel. But I think it was best for him in the long run."

When Cliff was two and a half, he fell backwards in a chair and bit through his tongue. The result was a foretaste of things to come: nine days in the hospital and 14 whole-blood transfusions. Then, when he was six, Cliff had a far more serious accident. Cliff himself recalls it very well:

"I was up on top of this room divider, see, up near the ceiling, in the bedroom upstairs. And then my sister Debbie, she yells: 'Here comes mom!' And I jumped off, right onto the bed, and landed on my knees. I knew I was hurt just as soon as I did it."

His mother, too, knew this was not an ordinary bleed. She applied the prescribed ice and pressure, but the right knee, in particular, continued to swell and darken. Cliff grew weaker. His mother took him first to a local hospital, then to Children's Hospital. By then, so much blood had drained into the joint that it was considered permanently deformed. Mrs. Watson was told that Cliff probably would never walk again and certainly would never run again.

She describes the next four years as a nightmare. Most of it seemed to be spent on the freeway between Saugus and Los Angeles. After the injury, Cliff remained in the hospital five months. Then he came home with his right knee immobilized in a massive brace. Once a week, he had to return to Los Angeles for physical therapy that, hopefully, would restore the range of motion in the injured knee. Every night, his mother had to help him with two or three hours of exercises to support the therapy. Then he had sessions with a psychological counselor, for the knowledge that he was not like other boys left him moody and depressed. At night, he would cry out against his mother who had "given" him the disease.

He attended school less than half the time. He could make up the lessons, but the irregular attendance estranged him from his contemporaries. His mother talked to his teacher each year, explaining hemophilia and urging that Cliff be treated as nearly as possible like the others—"just if he was hurt, watch him a little closer and don't just kiss it well." The teachers cooperated fully, yet sometimes their efforts only emphasized Cliff's difference. "I guess I became the best scorekeeper in the history of the school," he says ruefully.

Then there were the other children. The Watsons couldn't neglect them because of Cliff's illness. Yet, often, when they planned a family outing, it had to be cancelled because of an unexpected bleed (caused, at times, by Cliff's anticipation of the event), or Cliff had to be left behind—neither a happy solution. The older girls were taught to take care of him and learned how to mask their disappointments.

And Cliff himself wasn't above capitalizing on his condition. Sometimes he would taunt classmates or his sisters until they were angry, then say, "You can't hit me. I'm a hemophiliac."

Once, Mrs. Watson received an emergency call from Cliff's teacher, who reported that Cliff had suffered a bleed and couldn't walk. "I went to school and looked at him, and he had me convinced," his mother remembers. "I actually carried him all the way home. I held him in my lap for a while and told him I would take him to the doctor. I felt so sorry for him. I said he could have a piece of candy before we left. And he jumped right down off my lap and was halfway to the candy when we both realized what he was doing. I marched him right back to class and made him apologize, and I don't think he ever tried that again."

And still he bled. He wanted so desperately not to be left out that he would do foolhardy, reckless things—just to be included. Often, Cliff would not tell his mother he had been hurt until the pain became unbearable. Then it was time for another ride into Los Angeles. Between the years 1967 and 1971, he was still being hospitalized for two to three weeks every month.

Medical research that was to bring a sense of normalcy to Cliff Watson's life had been going on since the early sixties. Scientists had already isolated and identified the substance lacking in the blood of hemophiliacs—a tiny fraction of the blood volume which has been labeled Factor VIII. Historically, hemophiliacs were treated by transfusing them with whole blood until they reached the required level of Factor VIII which stopped the bleeding. But, sometimes, neither the victim's system nor his purse could tolerate such massive transfusions. Then, in 1964, Judith Pool, Ph.D., profes-

sor of hematology at Stanford University Medical School, discovered a way to separate Factor VIII from other blood components. Shortly afterwards, ways were found—first—to freeze the substance for later use, in a form called cryoprecipitate, and—then—to freeze-dry and store it in vials in concentrate form.

These developments revolutionized thinking about hemophilia treatment. Since massive in-hospital transfusions of whole blood no longer seemed necessary, the hemophiliac now was in a situation paralleling that of the diabetic. In much the same way that the latter stabilized his diabetes by regular, self-administered injections of insulin, the hemophiliac now might be able to control his condition for himself, by home use of Factor VIII.

There were certain key differences: Insulin is injected into the muscle; Factor VIII is mainlined into a vein. But hemophilia victims and their families could be trained to administer intravenous treatment.

Several major hospitals, including Mount Sinai, in New York, and Michael Reese Hospital, in Chicago, established hemophilia centers to foster "home care" of hemophiliacs. One of the pioneers was a lanky, intense pediatric hematologist named Jack Lazerson, M.D., then of Stanford Medical School, and now of the University of Southern California and its affiliated Children's Hospital.

Fortunately for the Watsons, they had been spared two of the most agonizing problems that afflict hemophiliac families—the staggering cost (see "The High Cost of Bleeding," page 63) and the emotional estrangement between the guilt-ridden mother who transmitted the disease and the father who is cutoff from his son by her overprotectiveness.

Things began to change for the Watson family about two years ago. Largely through the boy's own determination and the dedication of physical therapists, "Clifford's Magic Knee" healed well, until he had virtually full use of it, walking with only a slight limp.

Then, physicians at the hospital introduced the family to home care. Mrs. Watson was taught how to give her son an injection of a prepared commercial concentrate every 48 hours, the minimum necessary to keep the clotting factor at an acceptable level. The prophylactic program also enabled the family to proceed with knee therapy without danger of a bleed.

When Dr. Lazerson came to Children's Hospital, in 1972, he introduced an expanded program patterned after his pioneering efforts at Stanford. The new approach emphasizes the systematic lifetime aspects of care, centering treatment in one physician's hands. As soon as an infant is identified as a hemophiliac, his parents are enrolled in the program and given an indoctrination course on the disease and its meaning. A social worker counsels them on financial planning and appropriate family adjustments. Hemophiliac children who are old enough to understand are scheduled into psychological counseling and physical therapy.

Mrs. Watson kind of rebelled at some of Dr. Lazerson's changes. After years of protecting Cliff, she suddenly was told he would benefit most from activity. Strenuous physical exercise short of competitive contact sports would strengthen the muscles around the joints so that they could better absorb a blow without bleeding. Letting Cliff keep up with the others would reduce his feelings of being left out and minimize the possibility of his doing reckless things.

Cliff was encouraged to play softball, to shoot baskets, and to play catch with his father. His parents bought him a bike and installed a heated, backyard pool (a deductible medical expense) for his daily swim. Equally important, Dr. Lazerson now insisted that the main adult responsibility for Cliff's care be transferred from his mother to his father, as a way of bringing the two closer together.

Cliff, too, was taught to take a major role in caring for himself. Instead of a preventive injection every 48 hours, Dr. Lazerson substituted what he calls "early aggressive treatment" in which Cliff would receive an injection only when he believed a bleed had started, or when his parents wanted to "cover" him against some anticipated stress.

Cliff, better than anyone, can recognize the start of internal bleeding—he develops coldness in the joint and cannot straighten it. As this happened, it now became his job to notify his parents and to prepare the materials for an injection. This is a careful 20-minute process in which he goes to the refrigerator where a 40-day supply of concentrate is kept, mixes two vials with an equal amount of sterile water, and allows the mixture to "set." Then he assembles the other

The joys of Clifford Watson, Jr., are simple joys—the kind another 12-year-old might take for granted. Last summer, the freckle-nosed blond with gleaming teeth played in the class championship softball game; he went camping; and he rode his own 10-speed bike (right).

Cliff used to attend school less than half the regular time, and had few friends. Last year, he had normal attendance and proved that he could make and keep friends.

After the Watsons learned that Cliff was a hemophiliac, they waited four years before risking the chance of having another child who might be afflicted with the disease. Then another boy, Chris, was born—without the genetic taint. Three years later they had their third daughter, Darlene. Tests indicate that she, too, has escaped the defective gene. (Below) Clifford and Eleanor Watson with their four youngest children (left to right), Deanna, Cliff, Jr., Chris, and Darlene. The Watsons' eldest daughter, Deborah, is married.

equipment—a large, disposable syringe, a "butterfly" needle and tubing, and a length of rubber hose used as a tourniquet to help make the vein in the forearm stand out. The needle is then inserted into the vein until there is a blood return, after which the solution is slowly fed in from the syringe. Cliff has been taught to perform the procedure, but always in the presence of an adult. It was left to his parents to decide when he would be able to "shoot" himself alone.

Today, following his "as-needed" schedule, Cliff averages about one shot a week, with extras to "cover" him for a special outing or other occasions when a bleed would be inconvenient. He hasn't been hospitalized in two years and has rarely needed a physician's care. The family keeps a monthly record of shots, entering the reason each was given, and mails it to Dr. Lazerson. Unless something unusual occurs, the doctor talks to the family only by phone and sees Cliff just twice a year. A local physician has been enlisted for emergency backup, and Cliff still has quarterly sessions with his therapist to schedule home exercises and swimming drills that will further strengthen the knee and reduce a slight spinal curvature caused by the knee problem.

Last year, all seven Watsons went camping at Millerton Lake, in the Sierra Nevada, far from a hospital—an unthinkable trip for them in the past. The Watsons simply loaded the ice chest with concentrate and gave Cliff shots when he needed them. One winter weekend, everyone went skiing. Cliff had been "covered" beforehand, so he was permitted to push around on level surfaces at the base of the mountain. Ironically, while Cliff was being careful, his father fell and broke an ankle.

Of course, Cliff Watson is by no means cured, just as insulin does not heal diabetes, so injections of Factor VIII are only a supplement for the missing material—the body still cannot produce it for itself. Nor is Cliff's life completely normal, yet. Some activities are still off-limits. Recently, his father had to pull him out of a touch football game in the street. "One shot doesn't make you Superman," he said.

Cliff still has bleeds and pain. Sometimes he will be jostled while playing and not recognize the injury until the pain and swelling begin. Occasionally he wakes in the night with a swollen knee or

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they ran down the stairs in the morning. And I remember, born of the Magian night and the mesmerizing tree, the train which was my family's gift to me on a Christmas 40 years ago.

Forty years ago... yet even as the relentless passage of time stirs a melancholy within my spirit, I am, in a way, reassured. For even as the beauty and magic of that train belongs to me, so in the holidays we spend together now, my sons, nephews and nieces, great-nephews and great-nieces, are provisioning their own storehouses of memories. The graceful sleep of a deaf, white cat, a sled swooping down a snow-packed hill, the old grandmother and a swarm of 20 grandchildren grinning for the camera, a music box playing some haunting refrain to be heard again in years to come, a glimpse of a star-filled night through the boughs of a pine tree—any of these might form the core of their recollections, graced in years to come by a significance known only to them. Perhaps it will be the assembly, the memory of 40 of us gathered around the long table, joined by the blood of our families, sharing the luminous warmth of the day.

I would like to believe that our lives do not run in horizontal lines, broken at the beginning and at the end, but—like the tracks of my talismanic train—in circles of memories and love. Sharing this inestimable legacy, we experience joy and a harmony with the ancient truth of Ecclesiastes, the words of the preacher, the son of David, king in Jerusalem: "One generation passeth away and another generation cometh: But the earth abideth forever."

Meanwhile, my train roars on, careening swiftly around the circle of silver track, sparks flying from the wheels, miniature figures framed in tiny squares of light, carrying me on solitary journeys across the vast, limitless night.

My train speeds on and on as long as I am the teller of the story.

Tomorrow, someone else will spin the tale...

Harry Mark Petrakis is one of the Midwest's most celebrated authors-in-residence. His works include The Odyssey of Kostas Volakis; A Dream of Kings; Pericles on 31st Street; Lion at My Heart; *and* In The Land of Morning. *Mr. Petrakis currently is involved with a major work, a trilogy of novels set against the background of the 1821 Greek war of independence.*

Storytelling

[Continued from page 41]

They are specialists in the irrelevant and the verbose; they are bores.

There are, of course, degrees of boredom and levels of bores: the mitigated bore, whose audience is defeated but not yet doomed; and the unmitigated bore, who wears many guises. *The Compulsive* clutches your lapel to prevent escape, pokes your belly to emphasize a point, and crouches when someone else is speaking, ready to pounce into the first pause. *The Collaborator* cannot resist taking part in another's story; he corrects it, embellishes it, and offers the punch line. *The Prima Donna*—male or female—has to be coaxed to tell a story. *The Gossip, The Pedant*... the list is long and familiar. Perhaps the dullest is *The Card*, who resorts to gags or jokes which are often pointless, inappropriate, or stale. These are usually nothing more than oral graffiti and, like all graffiti, are done less for content than for leaving an impression. Sometimes these stories are funny; more often they are not, but it seems obligatory to laugh at them—out of embarrassment, perhaps, or as proof of broadmindedness, or through sheer social contagion.

"Off-color," of course, is a comparative term. An Oxford Don whom I had occasion to visit allowed himself to tell me—with much clearing of the throat, harrumphing, and even blushing—a story he considered terribly racy.

He had been invited to attend an all-girl performance of *A Midsummer Night's Dream* at a girls' school. At the end of the play, he arose to compliment the young ladies. "This is the first time in my life," he confided, "that I have been privileged to see a female Bottom."

This exemplifies some of the qualities of a successful story: It is personal, apropos, brief, amusing, and to the point. It reveals a person of charming innocence, at the same time it subtly flatters the audience by assuming they are familiar with Shakespeare's play.

The bore would try to top this story: "Which reminds me," he might begin; or "Stop me if you've heard this one..."

No one ever does. On the contrary, he is offered the counterfeit tribute of pale attention or a spurious laugh. He thrives on the good manners of his listeners; if he were as sensitive as they, he would not be a bore.

Not everyone possesses a dynamic presence, a flair for histrionics, a quick wit, or a talent for mimicry; but if it is impossible for a dull, lethargic personality to be transformed into a sparkling raconteur, at least he can learn how not to be a bore.

The art of storytelling can be cultivated—up to a point. The first step is curiosity about people, for people are all we have. A subway face, a street scene, snatches of overheard conversation—if you have eyes that see and ears that hear, a heart more or less in the right place, and a bit of imagination, you're on your way to becoming a storyteller.

Like Molière's gentleman, who was surprised to learn he had been speaking prose all his life, you may be unaware when you tell a story that you are practicing a highly skilled art. Yet skill is not enough. In the last analysis, a good story casts a spell. There is no recipe for magic, but you come close if you know how to begin and when to end.

When a story is over, don't explain or rehash it. Once you have made your exit line, there should be no dawdling at the door, no returning to look for your rubbers. When you're finished, stop.

Like this.

Bel Kaufman's first novel, Up the Down Staircase, *won the 1966 Paperback of the Year award. In addition, her articles and short stories have appeared in such magazines as* Esquire, Collier's, *and the* Saturday Review. *She is currently in the process of writing her second novel.*

Lifeblood

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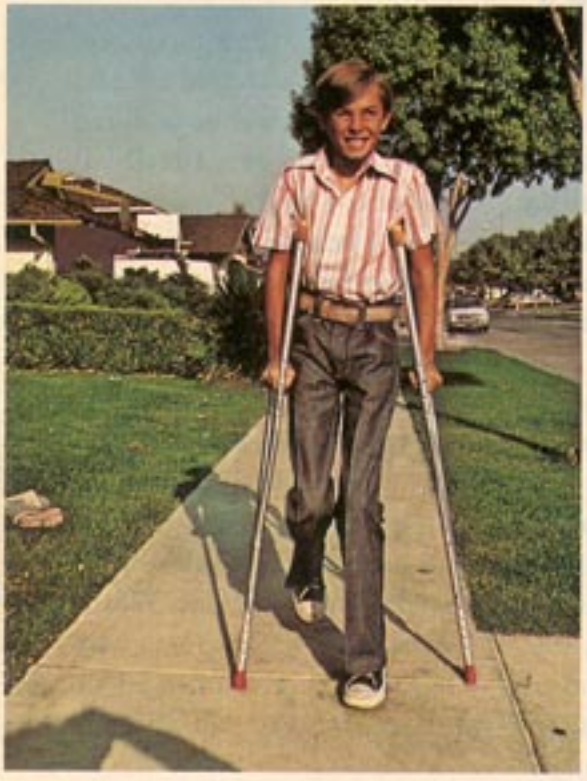
elbow, uncertain how it occurred. But, now, an immediate injection stops the bleed, and a short rest stops the swelling.

One question yet to be answered is whether regular, clockwork treatment produces better results than Dr. Lazerson's "early aggressive" regimen. First indications are that the patient's condition is the same under both programs, but long-range results have yet to be assessed. Dr. Lazerson favors injections as needed, supported by prophylactic injections "when a student is getting ready for exam week, or when a bleed might be inconvenient."

But if home care has proved so successful in giving Cliff Watson a new life, what about his fellow hemophiliacs? Unfortunately, most of them are not so lucky. A survey conducted as part of a study of national blood resources by the management firm of Booz Allen & Ham-

As part of Cliff's overall home-care program, Dr. Lazerson encouraged his participation in sports and exercises that would strengthen the muscles around the joints so that they could better absorb a blow without bleeding.



Recently, Cliff fell in the swimming pool and set off an ankle bleed that was painful enough to put him on crutches for a day or two (above).

Cliff's dad takes him for a ride on the back of a motorcycle (right), the kind of thrill that was forbidden just a short time ago.

ilton used the lifelong needs of hemophiliacs as a starting point. Published results show that fewer than 10 percent of the 25,000 severe victims and 10,000 moderate ones receive home care or are affiliated with a hemophilia center; and almost 9 out of 10 are under the care of a general practitioner or internist who has no other hemophilia patients. Their care is episodic at best, generally occurring only when they come to a hospital with a bleed. Significantly, in the eight states without hemophilia centers, the census turned up no hemophiliacs. Apparently, they had moved closer to places where they could receive the essential care.

Cliff Watson is living in the right place at the right time. And he is enjoying things—simple things. Last summer he played in the class championship softball game at Cross Creek Elementary School, in Saugus, and helped his team win. He had normal attendance at school for the first time and, at last, could make and keep friends. He camped, pedaled his own 10-speed bike, and even went for a motorcycle ride with his father. For Cliff Watson and his family, the hemophilia home-care program has, indeed, meant a whole new way of life.

The High Cost Of Bleeding

The home-care treatment program proved to be good news for hemophiliacs. But the program also spotlighted another problem. Hemophiliac home care, particularly if used preventively, seemed to call for more blood than traditional methods, and no one knew if the national blood collection and distribution system could make it available—or if hemophiliacs could afford it if it were. No one knew, either, if the increased demands might overwhelm the needs of other patients.

In 1970, the National Heart and Lung Institute commissioned the management firm of Booz Allen & Hamilton to conduct a survey of the nation's blood needs and supplies and also to see how the supplies were being utilized. The firm based its study on the continuing needs of the hemophiliac.

The survey resulted in the publication of four volumes of *Blood Resource Studies* which showed that widespread preventive home care could consume up to 13 million units of blood annually in the United States—and only 15 million are now collected. Yet even these maximum needs might be met by better donor recruitment, full use of all blood components, more uniform pricing, and less wasteful practices—all of which now cause up to 20 percent of blood to be discarded. Secretary of Health, Education, & Welfare, Caspar Weinberger, this fall announced a national blood policy incorporating these and other proposals and gave major blood-banking organizations until early 1974 to declare how they might comply with it.

In the present hodgepodge of practices and prices, one expert reported, families often have to pay $20 a unit for blood in the West, but only $7 in Cleveland. One result is that hemophiliac families are forced to relocate where the vital ingredients are cheaper. Another result is that one-third of all mothers of hemophiliacs have to work, and one-fourth of all fathers have to "moonlight" in order to meet bills.

The National Hemophilia Foundation estimates that medical and hospital bills, including blood, can run $20,000 to $25,000 a year, with the average, per family, totaling about $6,000 to $8,000. Ninety percent of this cost is for blood or blood products, the rest for hospital and medical charges. How much of this comes out of the families' pockets depends on where they live and the fine print in their hospitalization insurance. Assuming the policy was in effect before the condition was discovered, it may cover a large portion of hospital treatment, including blood. Outpatient treatment may or may not be covered, and most policies have a cutoff point for maximum payment. In some places, families must recruit donors to replace all blood used. Eight states now provide aid to families of hemophiliacs. Legislation is now before Congress to provide similar federal support.

Clifford and Eleanor Watson, fortunately, have been spared the disastrous financial woes that overtake many families of hemophiliacs. Presently, Cliff, Jr., receives about one transfusion a week, at a cost of approximately $100. Mr. Watson's employer, the Pacific Telephone Company, provides coverage which underwrites the majority of costs, and the California Crippled Children's Service picks up the rest. Still, out-of-pocket costs related to Cliff's life-threatening disease have totaled, in some years, more than $1,000.

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