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A shock to the system

Electroshock therapy is returning to favor as an important treatment for depression

By **Amy Ellis Nutt**
STAR-LEDGER STAFF

The ride to the hospital is silent, except for Jimmy. He can't stop talking, mostly to himself, but sometimes to me - and only because I'm sitting next to him in the back of the van.

"I looked it up in the Guinness Book of World Records," he says to me. "Did you know that the only living thing that lives alone is the human being?"

I shake my head no and turn away to look out the window, but he has a second question:

"You're just a shell of a person, too, right?"

In his startingly blue eyes, in his unanswerable question, I suddenly see a fear that is all too familiar - the fear that we will never be whole again, the fear that the depression that has ransacked our lives and held us hostage for weeks, for months, for years even, will never let us go.

As we reach the hospital I want to run, but my legs are leaden and I can barely walk. Every sound seems amplified: the slamming of the van door, the squeaking of my sneakers on the hospital linoleum, the ping of the elevator as it reaches the third floor.

I am about to undergo a procedure that some in the medical profession and many in the public still view as barbaric. But it is my last best hope for health.

I barely notice the short, cheerful nurse in blue scrubs as she wheels a tray up to the side of my bed like a waitress with a dessert cart. It is only 7:25 in the morning. On top of the tray is a benign-looking device not much larger than a VCR.

Quickly, the nurse attaches a blood pressure cuff to my left arm and three EKG leads to my shoulders and chest to monitor my heart. Above the bed, a scope comes to life. For the length of the procedure it will continually flash my vital signs.

A clothespin-sized pulse oximeter is clipped to the end of my right index finger to keep track of my blood oxygen level. A second blood pressure cuff is wrapped around my right calf, but not inflated.

An IV line is started, and a bit of sodium chloride gel is dabbed onto two small areas of my head. My pulse is racing at 89 beats per minute and my blood pressure is starting to take off.

When the anesthesiologist arrives - a muscular older man in tan scrubs - he sits on a stool beside the gurney and begins to administer 0.2 milligrams of Brevital, a sedative, which will put me to sleep for about two minutes.

At 7:30, Dr. Kurt Stuebben takes over. He attaches two EEG leads, one behind my left ear and the other above my left eyebrow, to monitor my brain activity.

Next, the anesthesiologist asks me to count. "Backwards or forwards?" I ask in a nervous attempt at levity. "Whatever you like," comes the flat, distracted response. By the time I count down from 10 to 7, the lights in the room have been sucked into a hole the size of a pin prick. The next moment I'm asleep.

At this point the nurse inflates the second blood pressure cuff on my calf while the anesthesiologist runs a muscle relaxant, succinylcholine, through my IV.

A rubber bite block is inserted into my mouth so that I won't break my teeth or bite into my tongue. And an oxygen mask is placed over my face. From the cart, Stuebben picks up two 8-inch-long handles that look like bicycle grips. One end of each handle has a round metallic surface, called a plate, about the size of a quarter. An electrical cord is attached to the other end and snakes back to the machine on the cart. While the anesthesiologist uses his hand to brace the left side of my head, Stuebben places the metallic end of one handle against my right temple and the other against the parietal area on the top right of my head.

With that, he pushes a button on the end of one of the grips and 100 to 200 volts of electricity - enough to power a 50-watt light bulb for about one second - shoot through my skull and into my brain. Almost immediately, I have a grand mal seizure. If not for the muscle relaxant, I would be violently convulsing up and down on the gurney. Instead, only two parts of my body react. One is the masseter muscle in my upper jaw, which tightens briefly into a grimace. The other is my right foot.

The second blood pressure cuff, the one on my right calf, is acting like a tourniquet, preventing the muscle relaxant from reaching my right foot. The result is that when the stimulus is administered, the foot immediately responds, first bending backward, then jerking rapidly back and forth. Like a track coach, the nurse assigned to my bed keeps her eyes riveted on my twitching foot, timing the duration of my seizure with a stopwatch. When the twitching stops, so does her watch. It is 7:37. Start to finish, the procedure has lasted a total of seven minutes. My seizure has lasted 33 seconds - right on target - and Stuebben is pleased.

I have just had my first shock treatment.

An old technique, revived

The concept of passing electricity through the brain is daunting enough to frighten even the most educated of lay people. It's not hard to understand why. The reputation of electroshock - also known as electroconvulsive therapy - has suffered almost from its inception in 1938, when an Italian psychiatrist, Ugo Cerletti, first got the idea for human shock treatments after watching slaughterhouse pigs being electrocuted into unconsciousness to make it easier to slit their throats. Not long after - only a year, in

fact - the New York State Psychiatric Institute introduced ECT, or shock treatment, into the United States.

For the next 30 years or so, hundreds of thousands of patients of all ages, some as young as 7 and 8, received shock treatments for everything from schizophrenia to homosexuality to truancy.

By the end of the 1960s, electroshock had all but disappeared from the psychiatric scene, including the curricula of most medical schools. It was discredited, in part, by such movies as "The Snake Pit" (1948) and "One Flew Over the Cuckoo's Nest" (1975), in which ECT patients were portrayed as lobotomized-looking, hollowed-out souls who could no longer recognize friends and family, whose capacity for language and speech had been seriously damaged and who often ended up being institutionalized for years.

In large part, however, shock treatment was phased out by the discovery of psychotropic medications, especially anti-depressants, which could do what shock treatment was supposed to do, only more efficiently - and more humanely.

But while old-school therapies - insulin comas, cold sheets and ice-pick lobotomies - remain consigned to the psychiatric dust heap, shock treatment recently has been undergoing an image makeover. Many psychiatrists now consider ECT an efficient way to relieve severe depression. Its success rate, according to the American Psychiatric Association, is 80 percent, considerably higher than the 50 to 65 percent success rate of most anti-depressant medications. And where medication can take up to six weeks to reach a therapeutic level, electroshock, advocates say, can restore a severely depressed person to health in half that time, or less.

Critics of electroshock argue that the treatment is still primitive, that any positive results are short-term and that patients still suffer cognitive problems, including memory loss and difficulty learning. Moreover, what looks like relief from depression, they say, is really just the slap-happy effect of a head trauma.

Nonetheless, in the last days of the 20th century, shock treatment is clearly no longer a relic of the past; it's a reality of the present, perhaps even a vision of the future.

In New Jersey, 32 hospitals - nearly a third of all hospitals in the state - perform ECT. This number includes both free-standing mental health facilities and those general, county and city hospitals that have psychiatric units. (No state or veterans hospitals in New Jersey do ECT.)

The 1999 New Jersey Psychiatric Association membership directory includes at least three dozen psychiatrists who list electroshock as one of their sub-specialties. Last year, they were responsible for performing more than 5,000 shock treatments in this state on approximately 800 to 900 patients. Most shock therapy is given in courses of six to 12 treatments.

New Jersey keeps few hard statistics on ECT use. In fact, only five states - California, Colorado, Illinois, Massachusetts and Texas - require its hospitals to do so. The most recent year for which the National Institute of Mental Health has any ECT data is 1980, when it reported that 33,384 patients underwent shock treatments in the United States. By 1996, that number jumped to an estimated 55,000. And by 1998, it had doubled to more

than 100,000.

Exactly how common is that? Roughly twice as many shock treatments as tonsillectomies were performed in this country in 1998.

Into the abyss

My own path to electroshock now seems stunningly predictable. Even inevitable. According to the Diagnostic and Statistical Manual of Mental Disorders - the bible of the psychiatric profession - I have bipolar disorder, also known as manic depression. That means I am among about 2 million people in this country whose biochemistry is such that I am susceptible to extreme mood swings, susceptible enough to need medication to keep me from falling too low or flying too high. I have been dealing with this illness half my life, so I have grown familiar with its tidal patterns.

Mania is an impossibly unstable place where euphoria yields to insomnia, and insomnia escalates into frenzy. Mania is like walking over hot sand: You can't stop moving, you can't turn around and you can't slow down, not for a moment.

But if I am familiar with mania, then I am intimate with depression, where waking is dangerous, every breath a threat and sunlight an accusation. Depression smashes everything of value. It storms through your life and leaves it uninhabitable. Even so, the darkness that descended on me six months ago caught me off guard and the despair was so ferocious I thought I'd never return to the world.

The Maginot line of manic depression is held in place by medication. In addition to lithium, which controls the manic part, I have taken a wide variety of anti-depressants over the years, all with either no or only moderate success, until six years ago. That's when my doctor prescribed Prozac. It was transformative. Within two weeks, I felt more stable, more content and more productive - and felt fewer side effects - than I had in years.

Then, six months ago, the Prozac started to fail. It was less effective - something that can happen, my therapist told me, over time when the body becomes too accustomed to the drug. The more I took, the less it seemed to work.

The failure was catastrophic. I became increasingly anxious and couldn't sleep. I didn't want to leave the house. I didn't want to see my family. I didn't want to talk to friends. Finally, I didn't even want to move. The world was diminished: Time. Memory. Motion. I began to live in inches, word by word, minute to minute.

By mid-April, with my medication not working and my depression deepening, I was hospitalized at Princeton House, the psychiatric arm of the Medical Center at Princeton. Within days, Stuebben, my psychiatrist at Princeton House, suggested ECT. I had little reaction to his words and little hope in them. In fact, I had confidence in nothing, except the possibility that I might never get well.

Joining the fraternity of the lost

While medication and ECT are the principal methods of treatment for depression at Princeton House, patients also are given a daily schedule.

The schedule is actually a series of groups - issues group, psychotherapy group, self-esteem group, crafts group, relaxation group. Relaxation group is the least favorite. It's a lot of pressure to relax when you're depressed, and so the patients' efforts are often unsuccessful. Still, the therapist has us sit in red plastic chairs in a circle and close our eyes. Then she asks us to visualize ourselves walking on a beach. This is a mistake, I later learn when one very suicidal woman in our group confesses that as soon as she pictured herself strolling along the shore, she saw herself make a sharp turn away from the beach and walk straight out into the water until the ocean closed over her head.

Most patients become ECT candidates because they are suffering from what is clinically called a Major Depressive Episode. They are people who can't sleep, can't eat, can't work and can't get out of bed in the morning. They are people who think about suicide and they are people who have tried it. They are people like me. We want relief, we really do, but we haven't found the right medication, or the one we're on has too many side effects or we've been on it so long it no longer helps.

The five other patients in my ECT group are Joan, a business executive; Jimmy, a World War II veteran and former laborer; William, a retired energy analyst and recent widower; Andy, a retired school teacher, and Daniel, a college professor. We are a desperate fraternity. Desperation, of course, can be a great equalizer: We have nowhere else to go and nothing left to try.

Daniel has had a series of small strokes that have left him physically feeble and disoriented. His white hair flying everywhere, Daniel needs to be watched all the time because he might walk off the grounds. He is most himself, most at peace, when he's sitting at one of the long cafeteria-type tables in the Princeton House rotunda, holding in front of him a scholarly journal called *The New Criterion*. He never turns a single page, but just handling the journal seems to give him comfort.

Joan's spouse of 20 years walked out on her two years ago, and she has been in and out of Princeton House several times since. She has had to take time off from her job and no medication blunts her depression. Always neatly dressed, usually in a gray T-shirt and jeans, Joan spends much of her time working on jigsaw puzzles - pictures of mountains, flowers, kittens - that can't be completely put together because there are too many missing pieces.

Depression is itself a puzzle still being put together by scientists: How is it that one person can suffer a loss, grieve and come out the other side, while another ends up needing shock treatment? Virtually anything can trigger a depression - from a divorce to a physical illness to a simple lack of sleep.

The question is, why are 8 to 10 percent of us triggered into a *major* depression? The answer lies both within and without. Clearly, external situations can spark a depressive reaction. But in large part, it is the person's brain chemistry that determines the depression's severity. The more skewed the balance of the brain's mood-related chemicals, the greater the likelihood of a major depression - and the need for medication, hospitalization and even electroshock.

Genetics can be predictive in figuring out who will become severely depressed and who will not. Manic depression, for example, is one of those psychiatric illnesses with a strong hereditary component. Any family member diagnosed

with, or suspected of having, bipolar disorder significantly increases the risk of the illness appearing in other family members. In my own case, I have relatives on both my father's and mother's side who have been diagnosed with manic depression. In many ways, my vulnerability to the illness was inescapable.

So is William's sorrow. His wife, whom he had been married to for 50 years, died last spring, and he is still shell-shocked, unable to shake his sadness. Soft-spoken - when he speaks at all, which isn't often - William had been scooped out by his grief, and wishes only for release from the world.

Andy, too, wants release - not from the present, or the past, but from his future. His depression is tinged with a kind of bewilderment, as if, given the opportunity to leave the world, he wouldn't quite know how to do it. Retirement from teaching has left him with time, but no suggestion how to fill it. And every hurt, every pain, every confusion he had neatly stored away over the years threatens to drown him.

You can see the struggle in the strained look on his face, in his slightly soiled clothes, in the scragginess of his gray beard, which becomes a resting place for errant crumbs at mealtime. Trying not to think about the emotions roiling inside him, Andy asks me about my own life - my past, my job, my illness. His interest derives not so much from curiosity as from a need to anchor himself to something familiar.

A key, a clue - that is what Jimmy is looking for. A thin, still boyish-looking man in his 70s, Jimmy is a former sailor, a veteran of WWII, and a man riddled with questions. He is desperate to connect to anything or anyone. He is trying to figure out not the "why" of his depression, but the "whether." Whether he is alone in his hopelessness. Whether he belongs in the past or the present. Whether he'll be alone in the future.

"Do you know the old saying," he asks me, "the one that goes 'you're nobody till somebody loves you'?"

It's a line from a song, of course, but it's also another thread in what is for Jimmy an endless work-in-progress. The German philosopher Nietzsche once wrote that the human condition was like hanging in dreams on the back of a tiger. He could have been talking about Jimmy or me or any one of us.

This is who we are. This is what it means to be lost, to have wandered away from oneself, to be eternally poised at the precipice, always ready to take the final ride out. And yet even in that grinding despair, still wanting to find a way back to a life we've somehow lost.

Trauma that heals

Some suggest that electroshock is itself soul-numbing, but evidence also suggests that it works to relieve depression. How it does so is as much a mystery today as depression itself was 100 years ago. The conundrum - and the controversy - is how a trauma to the brain, induced by an electrical shock, can somehow heal that brain. Some proponents of ECT believe that the electricity literally shakes things up inside, somehow changing the balance of the brain's mood-related chemicals.

Dr. Philippe Khouri is the head of the ECT program at Princeton House. (He was unavailable for my first treatment, which was given by Stuebben, but

he administered all my remaining ones.) ECT works to rapidly relieve depression, says Khouri, because "when we induce a grand mal seizure, we raise that person's seizure threshold, and it's the raising of the seizure threshold that seems to correlate with an anti-depressant effect." In other words, by inhibiting seizures, electroshock appears to subdue the abnormally high brain activity associated with mood instability.

Kathy, a small-business owner who lives in central New Jersey, has no idea how electroshock works. All she knows is that it worked for her. Two years ago, Kathy's child suddenly died, and she felt the shroud of depression descend upon her.

"My baby was gone and all I wanted was to join him," she says. "I didn't shower for days. I didn't eat. I didn't get out of bed."

After two suicide attempts, one serious enough to require hospitalization, Kathy's husband and therapist convinced her to have electroconvulsive therapy at the Princeton Surgical Center. During the summer months of 1998, she had about a dozen outpatient treatments.

"At first, when they would put me under anesthesia," says Kathy, "I would pray, "Please God, let me die.'"

Instead, Kathy started to get better.

"The healing was gradual," she says. "I just slowly started to get interested in life again, to have some hope. Somehow, the ECT helped me to think rationally. And by the end of my treatments, I started to feel whole again."

Today, Kathy has a 6-month-old baby girl. She's working again, too, and says, "If it hadn't been for the ECT, I wouldn't have gotten this second chance at life."

How ECT works, with minimal damage to the patient, has a lot to do with how it is currently administered. Two advances in particular have helped refine the procedure. The first is non-dominant unilateral ECT, which is the application of electrodes only to the right side of the patient's head, thereby protecting the left side of the brain, site of language and auditory memory.

The other advance has been the introduction of brief-pulse stimulus - a quick hit of electricity rather than a steady stream, making it less likely that the patient will later suffer serious cognitive difficulties.

"The dose of electrical stimulation varies from treatment to treatment to treatment," says Khouri. "I use tables that allow me to look at ranges and adjust pulse width, frequency, duration of stimulation and amount of current. There are ways now of delineating what a patient needs and when he needs it. It isn't haphazard. ECT is a modern medical procedure."

Anesthesia has been the biggest development in terms of patient comfort, but the ECT machines themselves have played an important part in the modernization of the procedure.

"There are so many different parameters that the machines can handle now," says Dr. Umesh Mehta, ECT director at the Carrier Foundation in Belle Mead, where he gives about 3,000 treatments a year. "In the old days, a fixed amount

of energy was given to everyone. Now, however, an ECT doctor tries to find just the right amount of electricity at just the right intensity for each patient."

Comparing ECT today with what it was 40 years ago is like comparing micro-surgery to blood-letting, says Stuebben:

"Just look at other branches of medicine. Surgeons used to put their dirty hands into wounds because they didn't know any better. Was that barbaric? If you use today's standards, yes - but at the time, no one knew about the importance of sterile conditions."

Clearly, many patient advocacy groups agree. The National Depressive and Manic Depressive Association, the National Alliance for the Mentally Ill and the nonprofit National Mental Health Association all recognize the value of ECT.

ECT also appears to be unusually effective in the elderly, who often respond rapidly and dramatically to electroshock, though no one seems to know exactly why.

Arnold is in his 70s, semi-retired and living in central New Jersey. Two years ago, he was hospitalized at Princeton House for a psychotic depression. Both he and his daughter, a mental health professional, resisted the idea of ECT, but when Arnold's paranoid delusions threatened to completely overwhelm him, he agreed.

"I started to feel better after the third treatment," says Arnold. "I cried for the first time in a long time, and I had no more delusions. I'd tried a lot of medications before that and nothing worked. But after six treatments, I came back home and started working immediately. Even with six outpatient treatments still to go. It was an educational experience. A real revelation ... I have no memory problems at all. In fact, I think my memory has improved."

There is no doubt in Nick Alloco's mind that he has improved. An 86-year-old patient of Mehta's at Carrier, Alloco is alert, smiling and joking with the nurses just minutes after receiving his shock treatment. A retired farmer from South Jersey, Alloco has suffered repeated depressions over the last decade and has undergone at least four courses of ECT.

"(The ECT) takes all that depression away," says Nick, his arms outstretched, as if trying to fully embrace this second chance at life. "After a treatment, you're sharper. It helped me good with eating. I felt blah before that. I had difficulty concentrating, and my stomach tightened up. Now I feel great."

After shock

After my first shock treatment, I feel slightly nauseous. My legs ache, my jaw is sore and it feels like I've bitten into my tongue despite the rubber block. "No worse than going to the dentist," the pamphlet I'd received before the treatment had said. Who were they kidding?

My head hurts, too. I suddenly wonder what I've just lost, what things have leaked out of my brain - a thought, a memory, something once said to me, something I once said to someone. I want to ask the staff person driving us back to Princeton House a question, but in my search for words, I lurch

from thought to thought, shaking off unfinished sentences like a dog leaving the water after an unexpected plunge.

Back on our unit, we stumble to our rooms and then to our beds. Even in the summer heat, we burrow under the covers and, like stones dropped through water, sink into heavy sleep. Before I lose consciousness, before the safety of temporary oblivion descends, I think maybe the aches, the nausea, the soreness and the shakiness are just signs that I'm alive. I'm feeling something, after all. Maybe this is the beginning of health.

Too high a price?

To Peter Breggin, a psychiatrist and author of several books, including "Toxic Psychiatry," if ECT is the way back to mental health, the price is too high. Taking a chance at electroshock, he says, is like playing Russian roulette with your brain. In fact, Breggin thinks ECT is no more sophisticated than hitting someone over the head with a 2-by-4 - what looks like relief from depression is just the effect of a head trauma.

The headache, dizziness and nausea that are sometimes a byproduct of ECT, says Breggin, are called tolerable side effects by ECT doctors. But when the headache, dizziness and nausea are byproducts of a blow to the head, the doctor sends the patient to the emergency room.

"When you damage the brain, you create a closed-head injury," says Breggin. "The signs of an organic brain injury are very, very clear cut: memory loss, disorientation, inability to recognize others, even oneself. For a time, people become silly, shallow and giggly, like a teenager who has sniffed glue - or a person who has just had shock treatment."

"My view is that the proponents (of ECT) mistake brain damage as improvement," said Dr. John Friedberg, a San Diego neurologist, when he testified in 1997 before a Texas State Senate committee that was considering ECT restrictions. "When patients become less cranky and stop complaining, it's because their brains have been damaged," not because their depression has been relieved.

A study done at Duke University in 1996 by a leading proponent of ECT, Dr. C. Edward Coffey, looked at the brain scans of patients before and after ECT. Out of 35 participants, eight - nearly a quarter of the patients in the study - had changes in their MRIs after shock treatment.

A 1986 study conducted in England compared the brain scans of 101 depressed patients who had received ECT to 52 normal volunteers. As reported in the journal *Psychology and Medicine*, the authors found a significant relationship between treatment with ECT and brain atrophy, with ECT recipients being twice as likely to have a measurable loss of brain tissue in the front area of the brain. Perhaps more significantly, the abnormalities were correlated only to ECT, and not to age, alcohol use, gender, severity of mental illness, etc.

Some of those patients most severely affected by electroshock have difficulty learning new things. They have huge gaps in their memory, are unable to concentrate for extended periods of time and have diminished language skills. Some have been unable to return to their jobs, or have been forced to take lower-skilled ones. For these people - for whatever reason - electroshock not only failed them, it maimed them.

Mary believes she is one of those people. A middle-aged woman who used to hold down a high-paying white-collar job, Mary is out of work and living with her sister in South Jersey. Two years ago, she underwent six electroshock treatments for major depression, despite the fact that she had suffered a compressed skull fracture in an auto accident when she was a child, and still has a space-occupying lesion, or scar, on the left parietal lobe of her brain. Although the American Psychiatric Association says, in its 1990 Task Force Report on Electroconvulsive Therapy - a new report is due out next year - that there are no "absolute" contraindications to ECT, they put space-occupying cerebral lesions at the top of their list of "Situations Associated with Substantial Risk."

Mary's present difficulties, she says, are a direct result of ECT. She is taking classes at a local college, but has a hard time writing papers, something that never used to be the case:

"I have trouble making links from one idea to another, and so I have to write papers over and over. It's been cumbersome."

But what makes Mary most upset is her memory, which has become spotty and unreliable - at times even nonexistent.

"I used to have a fabulous memory," says Mary. "I would help my mother put family photos in albums, and I always remembered every event. I look at photos now and I don't remember when they happened. I don't even remember my brother's wedding two years ago. It makes me angry."

Even ardent supporters of ECT acknowledge there are risks - serious risks - any time electricity is introduced into the brain. In 1997, the Journal of the American Medical Association published an Electroconvulsive Therapy Consensus Conference Report, which said, in part:

"It is well established that ECT produces memory deficits. Severity of the deficit is related to the number of treatments, type of electrode placement, and nature of the electric stimulus. ... The ability to learn and retain new information is adversely affected for a time following the administration of ECT; several weeks after its termination, however, this ability typically returns to normal."

Memory impairment is the side effect most frequently cited by ECT patients - and most frequently cited by critics as evidence of brain damage. But most memory loss, say ECT specialists, is transient, and concerns principally the time immediately before and immediately after electroshock treatment. Still, there are anecdotal reports in the ECT literature about patients who have forgotten their weddings, the births of their children, even how to play the piano.

In July 1961, after being released from the Mayo Clinic, where he received three dozen shock treatments, Ernest Hemingway told his biographer, A.E. Hotchner: "What's the sense of ruining my head and erasing my memory, which is my capital, and putting me out of business? It was a brilliant cure, but we lost the patient." The words were prophetic. Days later, Hemingway shot and killed himself.

On auto pilot

None of us is thinking about the risk of brain damage when we are awakened for another ECT treatment - the sun not yet up, the sky still a bruise of black and blue.

We are not thinking about memory loss, the odds for or against recovery, or about that sentence in the little blue pamphlet that says they don't really know how ECT works. What we are thinking about, the six of us, is getting a good place in line at the nurse's station, where we have to get our vital signs recorded: temperature, blood pressure, pulse. "Vitals" are taken four times a day in mental hospitals, so standing in line for them is a little like waiting for the PATH train. You never know how long the wait will be.

Wobbling forward, we are each of us trapped inside our own private chaos. One person has forgotten to put on socks, another his belt. Most of us haven't bothered to comb our hair, although all of us have washed our hair after being pressed into it by the nursing staff. The reason is simple: oily hair and hair products can make it difficult to place the electrodes securely on a person's head.

Before we leave, we also turn in our watches and any other jewelry we're wearing, since metal, of course, conducts electricity. By a quarter to seven, we are all in the white Princeton House van, ready for the two-mile trip to the Surgical Center, a three-story building surrounded by neatly pruned bushes and thick beds of pachysandra. We will be back at Princeton House before 10 a.m., because the center needs to use the room in which we have our treatments for its own outpatient surgeries - mostly hernias, cataracts and ear tubes.

After the first week of three treatments, I'm shaky and forgetful. One of my editors, who calls, thinks I sound emotionally flat. She refers to something I told her a few days earlier and it surprises me. I don't remember telling her the story at all. When I talk to my mother, she has to remind me about her recent visit.

Before the second week of ECT, I am told by the social worker assigned to my case that my insurance has run out. He apologizes and looks genuinely sorry, even helpless. I am anxious and uneasy and suddenly feel trapped - prevented from getting treatment and still so desperately depressed that some nights I wish I would die in my sleep. I cry on the phone - with my parents, my sisters, my brother, my friends, my editors. I relinquish any ability I still have to make decisions, and somehow other forces come together and take over. The insurance will be taken care of by my employer, I am told. I can stay in the hospital. I can finish the shock treatments.

Cost-effective treatment

The truth of the matter is, managed-care companies love ECT. Reimbursing for a course of electroshock treatments is a lot more cost-effective than reimbursing for years of expensive medications and psychotherapy.

The price of an average course of ECT treatments is roughly \$4,000, which includes the fees of both the attending psychiatrist and the anesthesiologist. In many private hospitals, that's less than four days of room and board. Where a patient might otherwise spend weeks in the hospital, a single course of ECT can result in the patient's discharge in a fraction of that time, making the savings for the insurer considerable.

It's a profitable procedure, too. A psychiatrist who does ECT three mornings

a week and charges a standard \$250 per treatment can add a hefty \$25,000 or so to his or her annual income. An anesthesiologist can add even more.

Just sign here

Before patients at Princeton House undergo electroshock, they are given both a pep talk and a kind of virtual tour (on videocassette) of the procedure by the ECT nurse coordinator. Barbara Curran is a tall, graying, soft-spoken woman who believes passionately in electroconvulsive therapy, a procedure she feels has been unfairly maligned.

"There are so many misconceptions, so much misunderstanding out there," she says. "It's because of the way it's been portrayed in the movies and in some articles, and it's just not that way at all. Not now, at least."

Curran also has every ECT patient sign a consent form. (This is law in New Jersey and a handful of other states.) As it is, most patients probably don't get all the way through the five-page document before giving up and writing their name on the dotted line, right underneath the sentence that says, "I certify that I have read (or have had read to me) and I fully understand this form ..."

But this is surely a problem. In the middle of a severe depression, many other mental faculties besides the emotions are compromised - concentration, the ability to make decisions or judgments, even sensory perceptions. So it comes as no surprise that many ECT patients, post-treatment, question whether they should have signed a consent form in the first place. In my case, I have no willpower left, but I also have nothing else to lose. If I had been less depressed, I might not have signed, but then I probably wouldn't have been considering ECT. All I know is that time is running out, and like a highway drunk, I can't stop spinning toward the only tree.

If this had been 1959 and not 1999, I don't know that I wouldn't have signed. I only know that I am grateful it isn't 1959, when shock treatment was nothing short of brutal: Patients were strapped down to their beds and were wide awake during the procedure. Their faces turned blue from a temporary lack of oxygen, and their bodies convulsed so violently that even restraints couldn't prevent many from breaking bones, even vertebrae. There was no adjusting of stimulus to suit the patient, and no short-acting anesthesia, just a rag in the mouth to bite down on.

Staying the course

When we arrive at the Surgical Center for what will be my fifth treatment, even Jimmy is silent. A sign inside the hospital elevator reads, "In case of emergency, dial '0' for operator," but a phone is nowhere in sight.

In the patient lounge - referred to, ominously, as the Final Waiting Area - we take turns in the two dressing stalls, stripping to our underwear. Each of us is given a faded blue hospital gown and a bathrobe worn thin from hundreds of washings. We are also handed cheap plastic garment bags with stick-on labels that have our names inked onto them.

Most of us are too depressed or too distracted to hang up our clothes. We just throw everything, including our shoes, into the bags and zip them shut. Jimmy is the first patient called, then the other older men, then the rest of us.

An hour later, all of our treatments are over. Because the chemicals in our

brains have just been violently shaken up, each of us wakes in a different mood. Some are crying, some feel giddy, some, like me, are simply silent and bewildered. One by one, dazed and slightly disoriented, we are chaperoned back into the Final Waiting Area and deposited into easy chairs. Like dutiful flight attendants, the nurses ask us what we'd like to drink, offering orange, apple and cranberry juice. Our vital signs are taken for the 100th time and finally we are allowed to put on our clothes, though the nurses have to find our garment bags for us since most of us are too befuddled to find them ourselves.

Back at Princeton House, I have a difficult time remembering how I felt before the last treatment. I even have difficulty recognizing who I am. The next morning, when sleep rushes out, I find myself beached on the sheets and my body feels odd, slightly foreign. The right foot doesn't know where the left foot is; I am a comedy of thumbs. Getting dressed, however, becomes a way to get reacquainted with myself and by breakfast, I have eased myself back into my skin and remembrances slowly come to life.

After my sixth treatment - usually the minimum number for a single ECT course - Khouri decides I should have one more. He has been adjusting the parameters, increasing the intensity of the stimulus, and believes a seventh treatment would be therapeutic. I don't care one way or the other. For two weeks, before entering the hospital and through the middle of my treatments, I've been in a mixed manic-depressive state: desperately sad and immobile during the day; agitated, confused and anxious at night.

By the end of the second week of treatments, though, the cycling seems less pronounced. I am calmer. I even help Joan with her puzzles. But I still can't concentrate and I still can't read.

The seventh treatment does not bring a miraculous cure, but it's not a catastrophe either. I come back to Princeton House with the others, skip the cold breakfast the staff has left for us and seek the refuge of sleep. When I wake, I still feel exhausted but make my way to the payphone in the hallway where I call home. It takes me a couple of tries to punch in the right phone number. When my mother answers, I learn something I've apparently forgotten: I'm going to be released in 24 hours. I greet the news indifferently, but afterward feel a sense of relief. Even if I can't remember how I feel from one moment to the next, the doctors must think I'm better.

At home and away from the hospital, there is suddenly a lot more to deal with, including my own expectations of emotional stability. The agitation returns and threatens to derail me every day. I want to return to work right away, but my editors suggest I take a bit more time to adjust. They're right, although I don't realize it at the time.

The combination of the agitation, the fear of the depression coming back and my frustration with my illness makes it difficult for me to speak, to get the words out in complete sentences. My thoughts are disconnected, the emotions close to the surface. Steadiness comes incrementally, but it does come, and every so often, out of the corner of my eye I can see the hopelessness recede a little bit more.

As for my memory, there is still the occasional tug backward as I reach for a word or a phrase I can't quite get to. I seem to forget new things more quickly than before the depression and the ECT. But the other holes in my memory are subtle and mostly insignificant - memories either I do not need or do not worry about missing.

I asked Stuebben after I left Princeton House whether he thought the shock treatments had helped me.

"The ECT got you to a place you would have gotten to eventually," he said, "but only after a lot more suffering. It just got you there faster."

Joan stopped her ECT treatments after the fourth one. She had accidentally seen me being shocked when a nurse inadvertently left the curtain around my bed open. The experience had shaken her, and she decided not to continue. Joan's depression is deep and intractable.

"You have to lean into your sadness," she said once, as though she expected never really to be free of her grief, only better able, she hoped, to shoulder it. I got a message from Joan a couple of months ago that she was back in the hospital.

Daniel, the professor, has had a lot of medical problems, and is still not very functional. Andy, the retired high school teacher, has taken a part-time job and appears to be feeling better. Jimmy, however, remains in a kind of emotional twilight. The former sailor attends a day treatment program, but he's still confused, still asking questions, still searching for something he can't quite name or place.

When I returned to Princeton House for an appointment just a few weeks after I left, I saw William. When we were both receiving shock treatments I rarely, if ever, saw him smile, much less talk to anyone. But here he was now, an outpatient, seated in the cafeteria, smiling, laughing and clearly enjoying a conversation he was having with several other patients.

Last month, we talked on the phone. William, who underwent eight treatments, had just sold his house, the one he had lived in for nearly five decades with his wife, and he was moving to a new place where he could meet people his age and play more golf.

"I don't know what happened with the ECT and all, I just know I feel great," he said. "I've never felt this good, in fact. To me (the ECT) was like an answer to a prayer. I have so much energy. I even cook now. I make meat loaf and stew. And they come out good!"

If mine is an ECT success story, it is certainly not as dramatic as William's, but success, I've discovered, can be measured in more ways than one. I measure mine every day in the slow accumulation of ordinary moments when daylight doesn't paralyze me, when darkness seeps across the windowsill and I am not afraid, when I lie awake and in that pause just before sleep slides in, I do not wish for oblivion.

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Names of patients in this article, and details about their lives, have been changed, with the exception of Nick Allocò.

