

CHAPTER 10

The Power of Price

Why a 50-Cent Aspirin Can Do What a Penny Aspirin Can't

If you were living in 1950 and had chest pain, your cardiologist might well have suggested a procedure for angina pectoris called internal mammary artery ligation. In this operation, the patient is anesthetized, the chest is opened at the sternum, and the internal mammary artery is tied off. Voilà! Pressure to the pericardiophrenic arteries is raised, blood flow to the myocardium is improved, and everyone goes home happy.⁷

This was an apparently successful operation, and it had been a popular one for the previous 20 years. But one day in 1955, a cardiologist in Seattle, Leonard Cobb, and a few colleagues became suspicious. Was it really an effective procedure? Did it really work? Cobb decided to try to prove the efficacy of the procedure in a very bold way: he would perform the operation on half his patients,

and fake the procedure on the other half. Then he would see which group felt better, and whose health actually improved. In other words, after 25 years of filleting patients like fish, heart surgeons would finally get a scientifically controlled surgical trial to see how effective the procedure really was.

To carry out this test, Dr. Cobb performed the traditional procedure on some of the patients, and placebo surgery on the others. The real surgery meant opening the patient up and tying up the internal mammary artery. In the placebo procedure, the surgeon merely cut into the patient's flesh with a scalpel, leaving two incisions. Nothing else was done.

The results were startling. Both the patients who did have their mammary arteries constricted and those who didn't reported immediate relief from their chest pain. In both groups, the relief lasted about three months—and then complaints about chest pain returned. Meanwhile, electrocardiograms showed no difference between those who had undergone the real operation and those who got the placebo operation. In other words, the traditional procedure seemed to provide some short-term relief—but so did the placebo. In the end, neither procedure provided significant long-term relief.

More recently a different medical procedure was submitted to a similar test, with surprisingly similar results. As early as 1993, J. B. Moseley, an orthopedic surgeon, had increasing doubts about the use of arthroscopic surgery for a particular arthritic affliction of the knee. Did the procedure really work? Recruiting 180

patients with osteoarthritis from the veterans' hospital in Houston, Texas, Dr. Moseley and his colleagues divided them into three groups.

One group got the standard treatment: anesthetic, three incisions, scopes inserted, cartilage removed, correction of soft-tissue problems, and 10 liters of saline washed through the knee. The second group got anesthesia, three incisions, scopes inserted, and 10 liters of saline, but no cartilage was removed. The third group—the placebo group—looked from the outside like the other two treatments (anesthesia, incisions, etc.); and the procedure took the same amount of time; but no instruments were inserted into the knee. In other words, this was simulated surgery.⁸

For two years following the surgeries, all three groups (which consisted of volunteers, as in any other placebo experiment) were tested for a lessening of their pain, and for the amount of time it took them to walk and climb stairs. How did they do? The groups that had the full surgery and the arthroscopic lavage were delighted, and said they would recommend the surgery to their families and friends. But strangely—and here was the bombshell—the placebo group also got relief from pain and improvements in walking—to the same extent, in fact, as those who had the actual operations. Reacting to this startling conclusion, Dr. Nelda Wray, one of the authors of the Moseley study, noted, “The fact that the effectiveness of arthroscopic lavage and debridement in patients with osteoarthritis of the knee is no greater than that of placebo surgery makes us question whether the \$1

billion spent on these procedures might be put to better use.”

If you assume that a firestorm must have followed this report, you’re right. When the study appeared on July 11, 2002, as the lead article in the *New England Journal of Medicine*, some doctors screamed foul and questioned the method and results of the study. In response, Dr. Moseley argued that his study had been carefully designed and carried out. “Surgeons...who routinely perform arthroscopy are undoubtedly embarrassed at the prospect that the placebo effect—not surgical skill—is responsible for patient improvement after the surgeries they perform. As you might imagine, these surgeons are going to great lengths to try to discredit our study.”

Regardless of the extent to which you believe the results of this study, it is clear that we should be more suspicious about arthroscopic surgery for this particular condition, and at the same time increase the burden of proof for medical procedures in general.

IN THE PREVIOUS chapter we saw that expectations change the way we perceive and appreciate experiences. Exploring the placebo effect in this chapter, we’ll see not only that beliefs and expectations affect how we perceive and interpret sights, tastes, and other sensory phenomena, but also that our expectations can affect us by altering our subjective and even objective experiences—sometimes profoundly so.

Most important, I want to probe an aspect of placebos

that is not yet fully understood. It is the role that *price* plays in this phenomenon. Does a pricey medicine make us feel better than a cheap medicine? Can it actually make us *physiologically* better than a cheaper brand? What about expensive procedures, and new-generation apparatuses, such as digital pacemakers and high-tech stents? Does their price influence their efficacy? And if so, does this mean that the bill for health care in America will continue to soar? Well, let's start at the beginning.

PLACEBO COMES FROM the Latin for "I shall please." The term was used in the fourteenth century to refer to sham mourners who were hired to wail and sob for the deceased at funerals. By 1785 it appeared in the *New Medical Dictionary*, attached to marginal practices of medicine.

One of the earliest recorded examples of the placebo effect in medical literature dates from 1794. An Italian physician named Gerbi made an odd discovery: when he rubbed the secretions of a certain type of worm on an aching tooth, the pain went away for a year. Gerbi went on to treat hundreds of patients with the worm secretions, keeping meticulous records of their reactions. Of his patients, 68 percent reported that their pain, too, went away for a year. We don't know the full story of Gerbi and his worm secretions, but we have a pretty good idea that the secretions really had nothing to do with curing toothaches. The point is that Gerbi believed they helped—and so did a majority of his patients.

Of course, Gerbi's worm secretion wasn't the only placebo in the market. Before recent times, almost all medicines were placebos. Eye of the toad, wing of the bat, dried fox lungs, mercury, mineral water, cocaine, an electric current: these were all touted as suitable cures for various ailments. When Lincoln lay dying across the street from Ford's Theater, it is said that his physician applied a bit of "mummy paint" to the wounds. Egyptian mummy, ground to a powder, was believed to be a remedy for epilepsy, abscesses, rashes, fractures, paralysis, migraine, ulcers, and many other things. As late as 1908, "genuine Egyptian mummy" could be ordered through the E. Merck catalog—and it's probably still in use somewhere today.⁹

Mummy powder wasn't the most macabre of medicines, though. One seventeenth-century recipe for a "cure all" medication advised: "Take the fresh corpse of a red-haired, uninjured, unblemished man, 24 years old and killed no more than one day before, preferably by hanging, breaking on the wheel or impaling.... Leave it one day and one night in the light of the sun and the moon, then cut into shreds or rough strips. Sprinkle on a little powder of myrrh and aloes, to prevent it from being too bitter."

We may think we're different now. But we're not. Placebos still work their magic on us. For years, surgeons cut remnants of scar tissue out of the abdomen, for instance, imagining that this procedure addressed chronic abdominal pain—until researchers faked the procedure in controlled studies and patients reported equal relief.¹⁰ Encainide, flecainide, and mexiletine were widely

prescribed off-label drugs for irregular heartbeat—and were later found to cause cardiac arrest.¹¹ When researchers tested the effect of the six leading antidepressants, they noted that 75 percent of the effect was duplicated in placebo controls.¹² The same was true of brain surgery for Parkinson's disease.¹³ When physicians drilled holes in the skulls of several patients without performing the full procedure, to test its efficacy, the patients who received the sham surgery had the same outcome as those who received the full procedure. And of course the list goes on and on.

One could defend these modern procedures and compounds by noting that they were developed with the best intentions. This is true. But so were the applications of Egyptian mummy, to a great extent. And sometimes, the mummy powder worked just as well as (or at least no worse than) whatever else was used.

The truth is that placebos run on the power of suggestion. They are effective because people believe in them. You see your doctor and you feel better. You pop a pill and you feel better. And if your doctor is a highly acclaimed specialist, or your prescription is for a new wonder drug of some kind, you feel even better. But how does suggestion influence us?

IN GENERAL, TWO mechanisms shape the expectations that make placebos work. One is belief—our confidence or faith in the drug, the procedure, or the caregiver.

Sometimes just the fact that a doctor or nurse is paying attention to us and reassuring us not only makes us feel better but also triggers our internal healing processes. Even a doctor's enthusiasm for a particular treatment or procedure may predispose us toward a positive outcome.

The second mechanism is conditioning. Like Pavlov's famous dogs (that learned to salivate at the ring of a bell), the body builds up expectancy after repeated experiences and releases various chemicals to prepare us for the future. Suppose you've ordered pizza night after night. When the deliveryman presses the doorbell, your digestive juices start flowing even before you can smell the pie. Or suppose that you are snuggled up on the couch with your loved one. As you're sitting there staring into a crackling fire, the prospect of sex releases endorphins, preparing you for what is to come next, and sending your sense of well-being into the stratosphere.

In the case of pain, expectation can unleash hormones and neurotransmitters, such as endorphins and opiates, that not only block agony but produce exuberant highs (endorphins trigger the same receptors as morphine). I vividly recall lying in the burn ward in terrible pain. As soon as I saw the nurse approaching, with a needle almost dripping with painkiller, what relief! My brain began secreting pain-dulling opioids, even before the needle broke my skin.

Thus familiarity may or may not breed contempt, but it definitely breeds expectations. Branding, packaging, and the reassurance of the caregiver can make us feel better. But what about price? Can the price of a drug also affect

our response to it?

ON THE BASIS of price alone, it is easy to imagine that a \$4,000 couch will be more comfortable than a \$400 couch; that a pair of designer jeans will be better stitched and more comfortable than a pair from Wal-Mart; that a high-grade electric sander will work better than a low-grade sander; and that the roast duck at the Imperial Dynasty (for \$19.95) is substantially better than the roast duck at Wong's Noodle Shop (for \$10.95). But can such implied difference in quality influence the actual experience, and can such influence also apply to objective experiences such as our reactions to pharmaceuticals?

For instance, would a cheaper painkiller be less effective than a more expensive one? Would your winter cold feel worse if you took a discount cold medicine than if you took an expensive one? Would your asthma respond less well to a generic drug than to the latest brand-name on the market? In other words, are drugs like Chinese food, sofas, blue jeans, and tools? Can we assume that high price means higher quality, and do our expectations translate into the objective efficacy of the product?

This is a particularly important question. The fact is that you can get away with cheaper Chinese food and less expensive jeans. With some self-control, we can usually steer ourselves away from the most expensive brands. But will you really look for bargains when it comes to your health? Putting the common cold aside for the moment,

are many of us going to pinch pennies when our lives are at risk? No—we want the best, for ourselves, our children, and our loved ones.

If we want the best for ourselves, does an expensive drug make us feel better than a cheaper drug? Does cost really make a difference in how we feel? In a series of experiments a few years ago, that's what Rebecca Waber (a graduate student at MIT), Baba Shiv (a professor at Stanford), Ziv Carmon, and I decided to find out.

IMAGINE THAT YOU'RE taking part in an experiment to test the efficacy of a new painkiller called Veladone-Rx. (The actual experiment involved about 100 adult Bostonians, but for now, we'll let you take their place.)

You arrive at the MIT Media Lab in the morning. Taya Leary, a young woman wearing a crisp business suit (this is in stark contrast to the usual attire of the students and faculty at MIT), greets you warmly, with a hint of a Russian accent. A photo ID identifies Taya as a representative of Vel Pharmaceuticals. She invites you to spend a moment reading a brochure about Veladone-Rx. Glancing around, you note that the room looks like a medical office: stale copies of *Time* and *Newsweek* are scattered around; brochures for Veladone-Rx are spread out on the table; and nearby is a cup of pens, with the drug's handsome logo. "Veladone is an exciting new medication in the opioid family," you read. "Clinical studies show that over 92 percent of patients receiving Veladone in double-blind controlled studies reported

significant pain relief within only 10 minutes, and that pain relief lasted up to eight hours.” And how much does it cost? According to the brochure, \$2.50 for a single dose.

Once you finish reading the brochure, Taya calls in Rebecca Waber and leaves the room. Rebecca, wearing the white coat of a lab technician, with a stethoscope hanging from her neck, asks you a set of questions about your medical condition and your family’s medical history. She listens to your heart and measures your blood pressure. Then she hooks you up to a complicated-looking machine. The electrodes running from the machine, greased with a green electrode gel, encircle your wrists. This is an electrical shock generator, she explains, and it is how we will test your perception and tolerance of pain.

With her hand on the switch, Rebecca sends a series of electrical shocks through the wires and into the electrodes. The initial shocks are merely annoying. Then they become painful, more painful, and finally so painful that your eyes fly open and your heart begins to race. She records your reactions. Now she starts delivering a new set of electrical shocks. This time she administers a set of charges that fluctuate randomly in intensity: some are very painful and some merely irritating. Following each one, you are asked to record, using the computer in front of you, the amount of pain you felt. You use the mouse to click on a line that ranges from “no pain at all” to “the worst pain imaginable” (this is called a “visual pain analog”).

When this part of the torture ends, you look up.

Rebecca is standing before you with a Veladone capsule in one hand and a cup of water in the other. “It will take about 15 minutes for the drug to reach its maximal effect,” she says. You gulp it down, and then move to a chair in the corner, where you look at the old copies of *Time* and *Newsweek* until the pill takes effect.

Fifteen minutes later Rebecca, smearing the electrodes with the same green electrode gel, cheerfully asks, “Ready for the next step?” You say nervously, “As ready as I can be.” You’re hooked up to the machine again, and the shocks begin. As before, you record the intensity of the pain after each shock. But this time it’s different. It must be the Veladone-Rx! The pain doesn’t feel nearly as bad. You leave with a pretty high opinion of Veladone. In fact, you hope to see it in the neighborhood drugstore before long.

Indeed, that’s what most of our participants found. Almost all of them reported less pain when they experienced the electrical shocks under the influence of Veladone. Very interesting—considering that Veladone was just a capsule of vitamin C.

FROM THIS EXPERIMENT, we saw that our capsule did have a placebo effect. But suppose we priced the Veladone differently. Suppose we discounted the price of a capsule of Veladone-Rx from \$2.50 to just 10 cents. Would our participants react differently?

In our next test, we changed the brochure, scratching out the original price (\$2.50 per pill) and inserting a new

discount price of 10 cents. Did this change our participants' reaction? Indeed. At \$2.50 almost all our participants experienced pain relief from the pill. But when the price was dropped to 10 cents, only half of them did.

Moreover, it turns out that this relationship between price and placebo effect was not the same for all participants, and the effect was particularly pronounced for people who had more experience with recent pain. In other words, for people who had experienced more pain, and thus depended more on pain medications, the relationship was more pronounced: they got even less benefit when the price was discounted. When it comes to medicines, then, we learned that you get what you pay for. Price can change the experience.

INCIDENTALLY, WE GOT corroborating results in another test, a study we conducted one miserably cold winter at the University of Iowa. In this case we asked a group of students to keep track of whether they used full-price or discount medicines for their seasonal colds, and if so, how well those remedies worked. At the end of the semester, 13 participants said they'd paid list price and 16 had bought discount drugs. Which group felt better? I think you can guess by now: the 13 who paid the list price reported significantly better medical outcomes than the 16 who bought the medication at a discount. And so, in over-the-counter cold medication, what you pay is often what you get.

FROM OUR EXPERIMENTS with our “pharmaceuticals” we saw how prices drive the placebo effect. But do prices affect everyday consumer products as well? We found the perfect subject in SoBe Adrenaline Rush, a beverage that promises to “elevate your game” and impart “superior functionality.”

In our first experiment, we stationed ourselves at the entrance of the university’s gym, offering SoBe. The first group of students paid the regular price for the drink. A second group also purchased the drink, but for them the price was marked down to about one-third of the regular price. After the students exercised, we asked them if they felt more or less fatigued relative to how they normally felt after their usual workouts. Both groups of students who drank the SoBe indicated that they were somewhat less fatigued than usual. That seemed plausible, especially considering the hefty shot of caffeine in each bottle of SoBe.

But it was the effect of the price, not the effect of the caffeine, that we were after. Would higher-priced SoBe reduce fatigue better than the discounted SoBe? As you can imagine from the experiment with Veladone, it did. The students who drank the higher-priced beverage reported less fatigue than those who had the discounted drink.

These results were interesting, but they were based on the participants’ impressions of their own state—their subjective reports. How could we test SoBe more directly and objectively? We found a way: SoBe claims to provide

“energy for your mind.” So we decided to test that claim by using a series of anagrams.

It would work like this. Half of the students would buy their SoBe at full price, and the other half would buy it at a discount. (We actually charged their student accounts, so in fact their parents were the ones paying for it.) After consuming the drinks, the students would be asked to watch a movie for 10 minutes (to allow the effects of the beverage to sink in, we explained). Then we would give each of them a 15-word puzzle, with 30 minutes to solve as many of the problems as they could. (For example, when given the set TUPPIL, participants had to rearrange it to PULPIT—or they would have to rearrange FRIVEY, RANCOR, and SVALIE to get...).

We had already established a baseline, having given the word-puzzle test to a group of students who had not drunk SoBe. This group got on average nine of the 15 items right. What happened when we gave the puzzles to the students who drank SoBe? The students who had bought it at the full price also got on average about nine answers right—this was no different from the outcome for those who had no drink at all. But more interesting were the answers from the discounted SoBe group: they averaged 6.5 questions right. What can we gather from this? Price does make a difference, and in this case the difference was a gap of about 28 percent in performance on the word puzzles.

So SoBe didn't make anyone smarter. Does this mean that the product itself is a dud (at least in terms of solving word puzzles)? To answer this question, we devised

another test. The following message was printed on the cover of the quiz booklet: “Drinks such as SoBe have been shown to improve mental functioning,” we noted, “resulting in improved performance on tasks such as solving puzzles.” We also added some fictional information, stating that SoBe’s Web site referred to more than 50 scientific studies supporting its claims.

What happened? The group that had the full-price drinks still performed better than those that had the discounted drinks. But the message on the quiz booklet also exerted some influence. Both the discount group and the full-price group, having absorbed the information and having been primed to expect success, did better than the groups whose quiz cover didn’t have the message. And this time the SoBe did make people smarter. When we hyped the drink by stating that 50 scientific studies found SoBe to improve mental functioning, those who got the drink at the discount price improved their score (in answering additional questions) by 0.6, but those who got both the hype and the full price improved by 3.3 additional questions. In other words, the message on the bottle (and the quiz cover) as well as the price was arguably more powerful than the beverage inside.

ARE WE DOOMED, then, to get lower benefits every time we get a discount? If we rely on our irrational instincts, we will. If we see a discounted item, we will instinctively assume that its quality is less than that of a full-price item—and then in fact we will make it so. What’s the

remedy? If we stop and rationally consider the product versus the price, will we be able to break free of the unconscious urge to discount quality along with price?

We tried this in a series of experiments, and found that consumers who stop to reflect about the relationship between price and quality are far less likely to assume that a discounted drink is less effective (and, consequently, they don't perform as poorly on word puzzles as they would if they did assume it). These results not only suggest a way to overcome the relationship between price and the placebo effect but also suggest that the effect of discounts is largely an unconscious reaction to lower prices.

SO WE'VE SEEN how pricing drives the efficacy of placebo, painkillers, and energy drinks. But here's another thought. If placebos can make us feel better, should we simply sit back and enjoy them? Or are placebos patently bad—shams that should be discarded, whether they make us feel good or not? Before you answer this question, let me raise the ante. Suppose you found a placebo substance or a placebo procedure that not only made you feel better but actually made you physically better. Would you still use it? What if you were a physician? Would you prescribe medications that were only placebos? Let me tell you a story that helps explain what I'm suggesting.

In AD 800, Pope Leo III crowned Charlemagne emperor of the Romans, thus establishing a direct link between church and state. From then on the Holy Roman

emperors, followed by the kings of Europe, were imbued with the glow of divinity. Out of this came what was called the “royal touch”—the practice of healing people. Throughout the Middle Ages, as one historian after another chronicled, the great kings would regularly pass through the crowds, dispensing the royal touch. Charles II of England (1630–1685), for instance, was said to have touched some 100,000 people during his reign; and the records even include the names of several American colonists, who returned to the Old World from the New World just to cross paths with King Charles and be healed.

Did the royal touch really work? If no one had ever gotten better after receiving the royal touch, the practice would obviously have withered away. But throughout history, the royal touch was said to have cured thousands of people. Scrofula, a disfiguring and socially isolating disease often mistaken for leprosy, was believed to be dispelled by the royal touch. Shakespeare wrote in *Macbeth*: “Strangely visited people, All sworn and ulcerous, pitiful to the eye...Put on with holy prayers and ’tis spoken, the healing benediction.” The royal touch continued until the 1820s, by which time monarchs were no longer considered heaven-sent—and (we might imagine) “new, improved!” advances in Egyptian mummy ointments made the royal touch obsolete.

When people think about a placebo such as the royal touch, they usually dismiss it as “just psychology.” But, there is nothing “just” about the power of a placebo, and in reality it represents the amazing way our mind controls

our body. How the mind achieves these amazing outcomes is not always very clear.* Some of the effect, to be sure, has to do with reducing the level of stress, changing hormonal secretions, changing the immune system, etc. The more we understand the connection between brain and body, the more things that once seemed clear-cut become ambiguous. Nowhere is this as apparent as with the placebo.

In reality, physicians provide placebos all the time. For instance, a study done in 2003 found that more than one-third of patients who received antibiotics for a sore throat were later found to have viral infections, for which an antibiotic does absolutely no good (and possibly contributes to the rising number of drug-resistant bacterial infections that threaten us all¹⁴). But do you think doctors will stop handing us antibiotics when we have viral colds? Even when doctors know that a cold is viral rather than bacterial (and many colds are viral), they still know very well that the patient wants some sort of relief; most commonly, the patient expects to walk out with a prescription. Is it right for the physician to fill this psychic need?

The fact that physicians give placebos all the time does not mean that they want to do this, and I suspect that the practice tends to make them somewhat uncomfortable. They've been trained to see themselves as men and women of science, people who must look to the highest technologies of modern medicine for answers. They want to think of themselves as real healers, not practitioners of voodoo. So it can be extremely difficult for them to

admit, even to themselves, that their job may include promoting health through the placebo effect. Now suppose that a doctor does allow, however grudgingly, that a treatment he knows to be a placebo helps some patients. Should he enthusiastically prescribe it? After all, the physician's enthusiasm for a treatment can play a real role in its efficacy.

Here's another question about our national commitment to health care. America already spends more of its GDP per person on health care than any other Western nation. How do we deal with the fact that expensive medicine (the 50-cent aspirin) may make people feel better than cheaper medicine (the penny aspirin). Do we indulge people's irrationality, thereby raising the costs of health care? Or do we insist that people get the cheapest generic drugs (and medical procedures) on the market, regardless of the increased efficacy of the more expensive drugs? How do we structure the cost and co-payment of treatments to get the most out of medications, and how can we provide discounted drugs to needy populations without giving them treatments that are less effective? These are central and complex issues for structuring our health care system. I don't have the answers to these questions, but they are important for all of us to understand.

Placebos pose dilemmas for marketers, too. Their profession requires them to create perceived value. Hying a product beyond what can be objectively proved is—depending on the degree of hype—stretching the truth or outright lying. But we've seen that the perception of

value, in medicine, soft drinks, drugstore cosmetics, or cars, can become real value. If people actually get more satisfaction out of a product that has been hyped, has the marketer done anything worse than sell the sizzle along with the steak? As we start thinking more about placebos and the blurry boundary between beliefs and reality, these questions become more difficult to answer.

AS A SCIENTIST I value experiments that test our beliefs and the efficacy of different treatments. At the same time, it is also clear to me that experiments, particularly those involving medical placebos, raise many important ethical questions. Indeed, the experiment involving mammary ligation that I mentioned at the beginning of this chapter raised an ethical issue: there was an outcry against performing sham operations on patients.

The idea of sacrificing the well-being and perhaps even the life of some individuals in order to learn whether a particular procedure should be used on other people at some point in the future is indeed difficult to swallow. Visualizing a person getting a placebo treatment for cancer, for example, just so that years later other people will perhaps get better treatment seems a strange and difficult trade-off to make.

At the same time, the trade-offs we make by *not* carrying out enough placebo experiments are also hard to accept. And as we have seen, they can result in hundreds or thousands of people undergoing useless (but risky) operations. In the United States very few surgical

procedures are tested scientifically. For that reason, we don't really know whether many operations really offer a cure, or whether, like many of their predecessors, they are effective merely because of their placebo effect. Thus, we may find ourselves frequently submitting to procedures and operations that if more carefully studied, would be put aside. Let me share with you my own story of a procedure that, in my case, was highly touted, but in reality was nothing more than a long, painful experience.

I had been in the hospital for two long months when my occupational therapist came to me with exciting news. There was a technological garment for people like me called the Jobst suit. It was skinlike, and it would add pressure to what little skin I had left, so that my skin would heal better. She told me that it was made at one factory in America, and one in Ireland, from where I would get such a suit, tailored exactly to my size. She told me I would need to wear trousers, a shirt, gloves, and a mask on my face. Since the suit fit exactly, they would press against my skin all the time, and when I moved, the Jobst suit would slightly massage my skin, causing the redness and the hypergrowth of the scars to decrease.

How excited I was! Shula, the physiotherapist, would tell me about how wonderful the Jobst was. She told me that it was made in different colors, and immediately I imagined myself covered from head to toe in a tight blue skin, like Spider-Man; but Shula cautioned me that the colors were only brown for white people and black for black people. She told me that people used to call the police when a person wearing the Jobst mask went into a

bank, because they thought it was a bank robber. Now when you get the mask from the factory, there is a sign you have to put on your chest, explaining the situation.

Rather than deterring me, this new information made the suit seem even better. It made me smile. I thought it would be nice to walk in the streets and actually be invisible. No one would be able to see any part of me except my mouth and my eyes. And no one would be able to see my scars.

As I imagined this silky cover, I felt I could endure any pain until my Jobst suit arrived. Weeks went by. And then it did arrive. Shula came to help me put it on for the first time. We started with the trousers: She opened them, in all their brownish glory, and started to put them on my legs. The feeling wasn't silky like something that would gently massage my scars. The material felt more like canvas that would tear my scars. I was still by no means disillusioned. I wanted to feel how it would be to be immersed completely in the suit.

After a few minutes it became apparent that I had gained some weight since the time when the measurements were taken (they used to feed me 7,000 calories and 30 eggs a day to help my body heal). The Jobst suit didn't fit very well. Still, I had waited a long time for it. Finally, with some stretching and a lot of patience on everyone's part, I was eventually completely dressed. The shirt with the long sleeves put great pressure on my chest, shoulders, and arms. The mask pressed hard all the time. The long trousers began at my toes and went all the way up to my belly button. And there were the

gloves. The only visible parts of me were the ends of my toes, my eyes, my ears, and my mouth. Everything else was covered by the brown Jobst.

The pressure seemed to become stronger every minute. The heat inside was intense. My scars had a poor blood supply, and the heat made the blood rush to them, making them red and much more itchy. Even the sign warning people that I was not a bank robber was a failure. The sign was in English, not Hebrew, and so was quite worthless. My lovely dream had failed me. I struggled out of the suit. New measurements were taken and sent to Ireland so that I could get a better-fitting Jobst.

The next suit provided a more comfortable fit, but otherwise it was not much better. I suffered with this treatment for months—itching, aching, struggling to wear it, and tearing my delicate new skin while trying to put it on (and when this new thin skin tears, it takes a long while to heal). At the end I learned that this suit had no real benefits, at least not for me. The areas of my body that were better covered looked and felt no different from the areas that were not as well covered, and the suffering that went along with the suit turned out to be all that it provided me.

You see, while it would be morally questionable to make patients in the burn department take part in an experiment that was designed to test the efficacy of such suits (using different types of fabrics, different pressure levels, etc.), and even more difficult to ask someone to participate in a placebo experiment, it is also morally difficult to inflict painful treatments on many patients and

for many years, without having a really good reason to do so.

If this type of synthetic suit had been tested relative to other methods, and relative to a placebo suit, that approach might have eliminated part of my daily misery. It might also have stimulated research on new approaches—ones that would actually work. My wasted suffering, and the suffering of other patients like me, is the real cost of not doing such experiments.

Should we always test every procedure and carry out placebo experiments? The moral dilemmas involved in medical and placebo experiments are real. The potential benefits of such experiments should be weighed against their costs, and as a consequence we cannot, and should not, always do placebo tests. But my feeling is that we are not doing nearly as many of them as we should.