

Dr. Feel



That's no youth serum: Too many hormones may endanger, not extend, your life.

Women are willing to risk health complications, maybe even cancer, on the promise they can stay slim and beat back time. And M.D.s are helping them do it. SELF talks to the antiaging extremists.

Sometime after her 43rd birthday, Dawn Foley noticed she was beginning to look her age. And she didn't like it one bit. A former beauty queen turned sales professional in Los Angeles, the blue-eyed brunette is used to turning heads. "I just did not want to look older," she says. "You end up with wrinkles. Your skin starts to sag. And no matter how much you exercise, you just don't have the body you had when you were 30." She tried everything to stop the clock: diet pills that claim to stave off weight gain; photo facials and Fraxel laser treatment to rejuvenate skin and erase wrinkles. She even had her breasts lifted. "I'm happy with those," she says. "But I wanted to look younger without any more surgery."

Then Foley saw a news report about practitioners who claim we can reverse the aging process using a souped-up hormone regime. Getting old and fat is no longer inevitable, they said. It's only a glandular disorder caused in part by dwindling hormones. And the way to fight that disorder is to replenish our levels to what they were in our 20s or 30s—whereupon we will once again feel as if we were that young. A little more digging brought Foley to Suzanne Somers's best-selling books extolling the virtues of hormones. Somers, 62, takes daily shots of human growth hormone (hGH). Using a plastic applicator, she shoots a so-called bioidentical hormone called estriol directly into her vagina. She rubs bioidentical estrogen cream on her left arm every day, and two weeks out of the month adds progesterone on her right arm. "A lot of women, as they get older, their breasts start to droop," Somers has said. "But when you put the hormones back in the right template, everything perks up again!"

Foley bought the pitch. "I thought, This is it! This is the magic potion!" she says.

Leading endocrinologists would call it something else: dangerous. "Use of these products for antiaging is based on hype, not science," says Steven Petak, M.D., of Houston, president of the American College of Endocrinology. Despite what bloviating celebrities like Somers claim, there is no evidence that hormones have antiaging powers—and plenty of reasons to think they might cause harm, including diabetes and possibly cancer. Somers herself developed breast cancer while on her

Young

By Harriet Brott
Photographs by Bill Diodato

hormone-heavy routine and had a hysterectomy due to precancerous changes in her uterus. The FDA has not approved any of the substances for antiaging. In the case of hGH, it's a flat-out felony to prescribe it for reasons other than short stature in children, AIDS wasting syndrome or a condition called growth hormone deficiency syndrome, which is so rare it affects fewer than 5 out of every 10,000 adults.

When Foley approached her ob/gyn seeking hormones, the doctor told her that her levels fell within the normal range of a woman her age and that she didn't need any more. So Foley instead turned to the world of "age management," whose practitioners have learned to skirt the law by expanding the definition of growth hormone deficiency syndrome to include almost anyone over the age of 30. "That's one of the first things I learned," Foley says. "If a regular doctor tests your levels, he'll say you're within range even if you're all the way down at the low end. But [an antiaging] specialist is going to tell you, 'You're within the normal range, but if we bring those levels up, you'll feel a whole lot better.'"

An M.D. in Beverly Hills, California, prescribed Foley identical estrogen and testosterone creams, which she uses each morning; progesterone pills that she pops before bed; and hGH, which she injects nightly into her abdomen or thigh. Foley says she plans to use hGH every day for the rest of her life, or at least as long as she can afford the nearly \$500-a-month cost. If she lives another 40 years, she could spend nearly a quarter of a million dollars on the stuff. "I don't think there's anything illegal about the way it's being prescribed to me. I'm taking it because of a hormone imbalance," she says. "I'm absolutely going to stay on it forever."

Welcome to the newest cult in America's worship of youth, in which thousands of women are following elaborate, unproven regimens for antiaging and weight loss—and increasingly, like Foley, finding doctors who will help them do it. Without any additional training, an entrepreneurial physician can declare herself an antiaging specialist, hang out a shingle and begin prescribing hormones, including estrogen, hGH and human chorionic gonadotropin (hCG), a pregnancy hormone injected during fertility treatments that doctors are touting as a miracle weight loss cure. Needless to say, the shots, which insurance generally doesn't cover, are making these "antiaging" doctors plenty of money.

Some of these physicians operate out of clinics with names like the Center for Clinical Age Management. Others dole out hormone therapy at medical spas, where it has been added to the list of quasi-medical antiaging procedures that now include Botox injections, laser hair removal, skin resurfacing, oxygen facials and the occasional vaginal rejuvenation surgery. Spas

have a huge incentive to diagnose their patients with hormone deficiencies, says Lorne Caplan, a consultant to the medical spa field in New York City. "The med spa industry has expanded so much in the past three years that most of them are getting hammered by the competition," he says. "You can't make money on laser hair removal anymore. You can't make money on cosmetic injectables. You can't even make money by antiaging consultations or weight management. But they can charge whatever they want for hCG and hGH. That's why they're pushing them so hard. And in a lot of [states], there's no regulation. It's the Wild West." (See "Stay Safe at the Med Spa," page 143.)

Amir Friedman, M.D., an anesthesiologist who now specializes in preventive medicine and antiaging, runs the California Wellness Center in Encino. Dr. Friedman says about 10 percent of his patients use human growth hormone. He claims the shots can cure depression, sharpen your memory and improve your sex drive—enough that he's seen crumbling marriages revived. "The greatest benefit is an overall sense of well-being that's hard to quantify," Dr. Friedman says. "It makes you feel like someone's blowing back your hair all day long. Like this... whoosh. Like you can do anything!"

Foley says hormones had a dramatic effect on her. She credits growth hormone in particular with burning 10 pounds of belly fat she'd begun referring to as her pooch and restoring

"There is no harmless hormone. This is a case of unproven benefits and known risks."

muscles she thought were gone forever. She claims the sun damage and fine lines on her face started to fade. She slept better and had more energy. "Whatever dangers they say it has aren't a concern for me. The benefits outweigh them," she says.

Such glowing anecdotal testimonials have never been replicated in scientific studies, however. And many physicians—as well as the U.S. government—have deepening concerns about doctors' willy-nilly promotion of hormones for lifestyle benefits. "If I had my druthers, I would take away their license. Because people *believe* you when you have an M.D.," says Adriane Fugh-Berman, M.D., associate professor in the department of physiology and biophysics at Georgetown University Medical Center in Washington, D.C. "It is a perfect marketing opportunity, because you can't prove the claims. We all age, but people take hormones and think, I wouldn't have aged *as well* if I hadn't taken them."

Proponents of bioidentical hormones argue that they are safer than traditional hormone brands because bioidenticals are made from plants and have the same molecular structure as the hormones we produce naturally. But what we produce is not necessarily benign: We know that women with higher levels of estrogen have a higher rate of breast and endometrial cancer. And Dr. Fugh-Berman's research on bioidentical hormone regimens has found no evidence they act differently in the body than conventional hormone replacement therapy does, which the federal Women's Health Initiative study linked to heart disease, blood clots and breast cancer. Estriol increases the risk for uterine cancer, she adds. The hormone hCG, while seemingly more benign, can cause birth defects if taken while pregnant. And the side effects of human growth hormone can include carpal tunnel syndrome, swollen limbs, diabetes and, according to the FDA, possibly even cancer. "Science has never identified a harmless hormone," Dr. Fugh-Berman says. "It's one thing making an informed decision about risks when there are proven benefits. This is a case of unproven benefits and known risks."

During the past few years, federal regulators have become so concerned about the overprescription of hGH that they are lobbying to reclassify it as a controlled substance. The U.S. Drug Enforcement Agency has raided antiaging clinics that distribute it, confiscating hormones of dubious quality shipped from far-flung nations like China and India. "There's a lot of stuff out there that may have been made in the bathtub of somebody's apartment," says Michael Sanders of Washington, D.C., a spokesman and special agent for the DEA. Often, pharmacies mix bioidenticals specially for each patient in a process called

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compounding, which becomes necessary when doctors prescribe unorthodox combinations of hormones or substances such as testosterone that aren't approved for use in women. Physicians brag about their "customized" programs, but the American Association of Clinical Endocrinologists in Jacksonville, Florida, warns that compounding often results in imprecise dosing, unsterile conditions and cross-contamination.

None of which seems to dissuade true believers like Dawn Foley, who are convinced their doctor is doling out the elixir of youth in a syringe. "Somehow we got the notion that aging and menopause are unnatural," says Barbara A. Brenner, executive director of Breast Cancer Action in San Francisco. "This is an uncontrolled experiment being done on women, and anybody who thinks you can alter your body chemistry and only get positive effects doesn't understand how chemistry works."

Green Valley Spa & Weight Loss Clinic, a posh destination perched in the red-rock-canyon country of St. George, Utah, with rooms that run as high as \$995 a night, seems an unlikely hormone

headquarters. But co-owner Carole Coombs confirms that Green Valley's offerings now include a very popular hCG diet combining hormone shots and low-calorie meals. What's more, the program is a direct response to popular demand ginned up by controversial infomercial guru Kevin Trudeau, who gushed during ads for his 2007 book, *The Weight Loss Cure "They" Don't Want You to Know About*, that taking hCG left him able to eat whatever he wants and still stay thin. "I'm talking real food! Mashed potatoes loaded with butter and cream!" he raved. After the book came out, Green Valley's visitors inundated the weight loss clinic with requests for hCG, so much so that Coombs decided to try it for herself. "We always have our eyes and ears out for what's newly happening and isn't harmful to one's health," says Coombs, who says she lost 38 pounds on the program and was inspired to offer it to clientele.

The medical director at Green Valley is Gordon Reynolds, M.D., a gynecologist with a specialty in endocrinology. Dr. Reynolds claims that hCG is different from other weight loss treatments because it gets rid of hard-to-lose fat first—"visceral fat, intra-abdominal fat, the fat at the back of the arms," he says. The program requires eating fattening foods for two days, theoretically to kick-start your metabolism; then patients begin injections of hCG and a spartan diet of 500 calories a day for three weeks. Ordinarily, a patient on such a diet would go into starvation mode and their muscle would begin to break down, but Dr. Reynolds claims hCG accesses the deep reserves of fat, giving you the energy to withstand it.

A protocol developed by British doctor A.T.W. Simeons using hCG as a cure for obesity became popular in the 1970s, but studies debunked it: Double-blind studies showed that the injections do not aid weight loss, redistribute fat, stave off

hunger or promote a feeling of well-being. The Federal Trade Commission forced the Simeon Management Corporation to halt its deceptive advertising, and the hCG diet all but faded away as a miracle weight loss cure until Trudeau resurrected it. Last year, the FTC, long at war

with Trudeau, convinced a federal judge to fine him \$37 million and ban him from infomercials until 2011 for "clearly, and no doubt intentionally," misrepresenting his plan on the air.

It's likely that any success on the hCG diet is due not to magical properties of the shots but rather to the extreme, 500-calorie diet, reports a review of research published in the *British Journal of Clinical Pharmacology*. Women trying to lose weight should eat 1,200 to 1,500 calories a day at a bare minimum, according to registered dietitians. Studies also show a heightened risk for breast and ovarian cancer in women who use hCG for fertility treatments, says endocrinologist Rhoda H. Cobin, M.D., clinical professor of medicine at the Mount Sinai School of Medicine in New York City. The doses prescribed for weight loss, however, are roughly half of those used for fertility. "For a period of three weeks, is it going to cause cancer? I don't know," Dr. Cobin says.

Then again, patients can repeat the three-week program as many times as they choose, as long as they take a three-week rest in between, Dr. Reynolds says. And they can take any dose they like if they are left to administer their (continued on page 144)

Stay safe at the med spa

Nothing like a nice, relaxing...laser burn?
Your guide to anxiety-free visits —*Maura Corrigan*

Spas' dirty secrets The premise entices: medical makeovers in the serene environs of a day spa. But the reality isn't always so pleasant. In a field in which regulations are loose and profit is a driving force, unqualified staff can end up doing procedures for which they aren't trained or licensed, with disappointing—even deadly—outcomes. "My office sees problems resulting from medical spa treatment on an almost daily basis," says Joel Schlessinger, M.D., of Omaha, Nebraska, past president of the American Society of Cosmetic Dermatology and Aesthetic Surgery.

Staff inspection

"Just wearing a white coat doesn't mean someone is qualified," says Hannelore Leavy, executive director of the International Medical Spa Association in Union City, New Jersey. Anything beyond a facial should be done by an M.D., a physician's assistant or a nurse-practitioner with proof of training in the specific procedure you're seeking.

First-visit vetting

If a spa fails to take your medical history, that's a red flag. Having a supervising doctor on-site—not merely on call—is another must for your safety. Request to see before and after photos of other patients and to speak to someone like you who has had the procedure. Are there any possible side effects? How long and painful will recovery be, and what signs of complications should you look out for after you are treated?

The riskiest treatment? Serious complaints about med spas involve misuse of lasers to zap hair or resurface skin; patients have gone home with third-degree burns, facial discoloration and permanent checkered or zebra skin patterns. Any laser treatment should be supervised by a medical doctor, Leavy says. Ask a dermatologic surgeon (if the spa doesn't have one, get a consult) what kind of laser should be used and whether your skin makes you a good candidate. Avoid the sun for four weeks before and after laser hair removal; exposure can cause burns or discoloration.

Shot warnings

"I've seen lips that are nearly unrecognizable from fillers done poorly at med spas, and eyelids that have to be taped up due to incorrectly injected Botox," says Dr. Schlessinger. Before getting any injection, visit FDA.gov to confirm that the substance is approved for the use the med spa is proposing. Examine the substance itself, to check that the packaging looks genuine, and beware of deep discounts.

Be a spa cop

States are responsible for regulating med spas but have been slow to do so, says Dr. Schlessinger. Visit FSMB.org to find a link to your state's medical board, which can supply info on local laws. "Be vigilant as a consumer," Leavy says. "This isn't like going to the hairdresser. It's your health we are talking about."

If you have sensitive skin or feel nervous, ask for a test patch before cosmetic injections or laser surgery.



Dr. Feel Young

(continued from page 142) own shots—a practice especially common when medical spas prescribe hCG, as consultant Caplan notes. The lack of supervision came as a shock to Beverly, a 26-year-old from Southern California, who says she sought out hormone treatments to rid herself of the “after-baby fat” she couldn’t lose since giving birth to her son. After doing some online research, she found a facility in Beverly Hills that looked clean and was staffed by people in medical scrubs. But in retrospect, she says, “none of the staff looked older than 20, and nobody seemed informed.” She says the doctor, after a brief interview, handed her a big IV bag of hCG and said, “See you soon.” Beverly was charged \$1,000 for the first two weeks’ supply and \$250 a week thereafter, but no one taught her how to inject herself.

“I told the staff that my arm was starting to get sore, but they said, ‘Don’t worry; just keep doing it there.’” Eventually, Beverly decided to seek the same hormones at a different clinic and was stunned at the many tests she underwent on her first visit, including a pregnancy test. “They told me you can’t be on this stuff if you’re pregnant [because it causes birth defects]. They never tested me for that in the other place! What if I had been [pregnant]?”

Whatever controversy surrounds hCG is nothing compared with the controversy over hGH, which the FDA has declared illegal to prescribe or distribute for antiaging purposes. Not that you’d know it from the thousands of websites touting hGH and sometimes even selling it directly to consumers. This was where Marla, a boutique owner in Phoenix, first discovered hGH. By the time she hit her 40s, Marla says, she’d already had her breasts done, and—inspired by none other than Suzanne Somers—she was ready for the next step. “I was looking for youth and energy,” she says. “So I found a doctor on the Internet.”

After one meeting and a round of blood tests, the doctor—a pediatrician running an antiaging clinic in Scottsdale, Arizona—agreed to prescribe growth hormone to Marla. But after three months, the daily shots hadn’t done anything to make her feel younger—or more energetic. “I spent \$1,500 a month giving myself injections, and it didn’t do anything at all,” she says. “After a while, my legs swelled up, and they

looked terrible. I didn’t feel comfortable taking the hGH after that.” A new doctor diagnosed Marla with edema, swollen tissue due to water retention. “When I found out that doctors were illegally prescribing hGH for reasons other than what it is meant for, I got mad. I realized it might even be dangerous,” she says.

How did an unproven and risky treatment become such a burgeoning industry? The first signs of how lucrative the growth hormone business could be emerged in 1990, when *The New England Journal of Medicine* published a study stating that a dozen older men who were given daily injections of hGH had seen an increase in lumbar bone density and lean body mass and a decrease in fat. Never mind that the study was too small to be statistically relevant, did not investigate side effects and did not apply to women. For some in the medical community, there was only one sentence that mattered: “The effects of six months of human growth hormone on lean body mass and adipose-tissue mass were equivalent in magnitude to the changes incurred during 10 to 20 years of aging.” Ten years erased in six months! It is this one sentence, you could say, on which the antiaging industry has been built and continues to flourish.

Endocrinologists criticizing hGH as an antiaging supplement find the very premise of its pitch to be flawed; as Dr. Cobin notes, it’s a natural physiologic phenomenon to see a decline in growth hormone secretions with age, and there may be consequences if you take more than your body intends for you to have. “You can see the results of having too much hGH in people who have acromegaly, a disease caused by a tumor that makes growth hormone,” she says. “People with the disease have swollen features, a higher risk for hypertension, more heart disease, arthritis, colon polyps and possibly colon cancer.”

A 2007 review of studies of healthy elderly men and women taking growth hormone reports only small changes in body composition—“comparable to what could be achieved by moderate weight training in the gym,” says study author Hau Liu, M.D., associate chief of endocrinology and metabolism at Santa Clara Valley Medical Center in San Jose, California. At the same time, the study found hGH significantly increased rates

of adverse events, including swelling, joint pain and carpal tunnel syndrome.

No one knows the long-term effects of growth hormones for antiaging, Dr. Friedman concedes. “But there are no studies showing that it definitely causes cancer,” he adds. “We do know the deficiency and lack of growth hormone are strongly associated with the major diseases that affect the United States: cancer, diabetes, heart disease, stroke. How can we feel good about letting hormone levels decline to such an extent when clearly there are major problems with an individual’s health? Of course, more studies should be done. But do we have outcome levels for 50 years for Prozac?”

Eventually, pharmaceutical companies hope to profit even further from the hormone-happy trend by developing drugs that would trigger the pituitary gland to release unused reservoirs of human growth hormone, says L. Stephen Coles, M.D., a researcher on aging at the David Geffen School of Medicine at UCLA. Clinical trials of such substances, called hGH secretagogues, are ongoing, and Dr. Coles says he expects the FDA to approve at least one of them, an oral spray called tesamorelin, by the end of the year. The primary indication would be for patients with HIV, but Dr. Coles suspects physicians will leap to use it for antiaging even if it is not officially approved for that purpose. For now, though, the most proven antiagers we have are old-fashioned, low-risk and practically free: a diet rich in antioxidants such as vitamins A, C and E, along with regular exercise. (See page 114 for SELF’s plan.)

All we know for sure is that as long as there’s money to be made, there will be people selling antiaging cures, says S. Jay Olshansky, Ph.D., professor of epidemiology at the University of Illinois at Chicago School of Public Health and the author of *The Quest for Immortality: Science at the Frontiers of Aging* (W.W. Norton). Among the hundreds of methods we humans have tried in the past are bathing in solid-gold bathtubs and sleeping with virgins. “Some men had doctors cut the testicles off goats and sew them onto their own testicles—which is the same theory behind hormone replacement today, if you think about it,” Olshansky says. “All of this antiaging nonsense goes back thousands of years. That’s why I call it the world’s second-oldest profession.” ■