



# VIGOR

## QUEST

JOHN BELLIZZI,

LIKE A GROWING NUMBER OF WELL-OFF MEN,  
INJECTS HIMSELF WITH A HORMONE  
TO FORESTALL THE AGING PROCESS.

DOES IT WORK - OR IS IT ENOUGH THAT HE  
SIMPLY THINKS IT DOES?

BY TOM DUNKEL

NEARLY EVERY SUNDAY morning- Easter and Mother's Day included - John Bellizzi says goodbye to his wife, Francesca, grabs an equipment bag and slides into the front seat of his black BMW. He drives to a high-school soccer field about 10 miles from his home in the New York City suburb of Rye .

Bellizzi, who is 51, is a member of the Old Timers Soccer Club, a band of stubborn, aging athletes who refuse to fall under the spell of golf . Technically, these are just pickup games, but they have been happening weekly since the early 1980s .

The players go to the trouble of hiring a referee and battle full tilt (think slide tackles and heels-over-head bicycle kicks) for an hour and a half. Many of them were high-school and collegiate stars, decades ago. "One guy had a hip replacement," Bellizzi, a former soccer captain at Queens College, says. "He was out for a year, then he came back ."

For the average older American male Advil, hot tubs and surgery keep most of the Old Timers going, but Bellizzi has ventured further. Two summers ago he became a patient of Dr. Florence



Comite, a Manhattan endocrinologist affiliated with Cenegenics Medical Institute. Cenegenics, a privately held company based in Las Vegas, claims to have 10,000 patients and annual revenue of \$50 million, making it the country's foremost purveyor of so-called age-management medicine.

Comite's relationship to Bellizzi is like that of an ace mechanic to a classic car. Her job is to keep him finely tuned despite worn parts. "I consider what I do aggressive prevention, the basis of which is metabolism modulation," Comite says. "Twenty years from now, this will be the standard of care."

Bellizzi is a vice president of business development at Thomson Reuters. Every three months a Cenegenics contractor comes to his office in Stamford, Conn., and draws 10 vials of blood. Comite receives a lab report that isolates scores of variables on those samples, among them glucose and cortisol, a stress hormone produced by the adrenal glands. The readings, in part, tell her if any metabolism tweaking is in order.

Under Comite's guidance - and at an annual cost of about \$10,000, most of it not covered by insurance - Bellizzi has gobbled vitamins and prescription-strength Omega-3 fatty acids. He follows a low-glycemic diet, lifts weights and jogs, all of which is familiar-enough health-and-fitness fare. Comite asserts, however, that "lifestyle alone isn't enough" to counter the corrosive effects of aging. Therefore, twice a week Bellizzi grabs a pinch of abdominal skin and injects himself with human chorionic gonadotropin, or H.C.G., a hormone distilled from the urine of pregnant women.

H.C.G. is commonly used as a fertility drug. Comite uses it for an alternative application that's perfectly legal and, she insists, safe: regular doses of H.C.G. signal the testes to secrete more testosterone, which the body generates in progressively smaller amounts after about age 30.

Testosterone is a naturally produced anabolic steroid, best known as the male sex hormone. But Comite and a growing minority of physicians regard it as motor oil that keeps bodies running smoothly. For testosterone to trigger a cellular response, receptors must be present to receive its coded messages. Surprisingly, testosterone receptors are highly concentrated inside the heart, indicating its larger biochemical role. Numerous studies, Comite says, show that low testosterone contributes to a loss of lean muscle mass, bone density, energy and libido, thereby making older men more susceptible to cardiovascular disease, diabetes, osteoporosis, sexual dysfunction and, possibly, depression.

Comite says she believes in the existence of male menopause. She pegs it to when the testicles stop responding to a testosterone stimulant like H.C.G., for all intents and purposes shutting down. That occurs anywhere between the ages of 45 and 75. Women also produce testosterone, though in relatively small amounts. Female hormone production is prone to sharp spikes and dips, moving in concert with the fertility cycle. For males, fluctuations tend to be less extreme. Still, similarities between the sexes far outweigh any differences. Both men and women experience systemic changes associated with aging that "lead you down the path to disease," Comite says.

Mainstream medicine does not join her in embracing the idea of male menopause. The position of the National Institute on Aging is that "there is scant scientific evidence that this condition, also known as andropause or viropause, exists." Likewise, micromanaging the body's metabolism strikes most physicians as an overly bold intervention: yet to be proved at best, dangerous at worst. The Endocrine Society, for example, questions the benefits of testosterone therapy except when administered to counteract a specific malady like delayed puberty or AIDS wasting. The society's guidelines "recommend against . . . offering testosterone to all older men with low testosterone" barring definitive proof of its efficacy.

S. Jay Olshansky, a professor of public health at the University of Illinois at Chicago, is an author of "The Quest for Immortality: Science at the Frontiers of Aging" and is at work on a sequel titled "Huckster's Paradise." He is wary of most things that smack of antiaging medicine.

"If anyone is arguing that this is the new medical profession or the way things are going to be done 20 years from now, I would say they're drinking the Kool-Aid of the antiaging industry," Olshansky says. "They're making money selling a repackaged version of traditional preventive medicine, and then they add some hormones and supplements. It's just such a racket."

Comite's notion of metabolism modulation extends beyond H.C.G. and testosterone. It encompasses health-food-store staples like the fruit extract saw palmetto and vitamin D, as well as heavier artillery that includes melatonin (an antioxidant), dehydroepiandrosterone (the body's most abundant steroid) and even human-growth hormone. When it comes to testosterone, she opts for injections over more user-friendly gels and patches.

Comite has impeccable credentials. After graduating from Yale School of Medicine and working at the National Institutes of Health in Bethesda, Md., she was a part-time faculty member at Yale, a job she has held for the last decade. Much of her recent professional life is devoted to bridging the divide between conventional medicine and age-management medicine. That bridge probably won't be completed anytime soon. Do a Google search of "Florence Comite" and the first item that pops up is her biographical entry on the Web site Quackwatch.com.

John Bellizzi has unwavering trust in her, though. They talk for hours on end about body chemistry, his treatment and lab results. Comite has pored over generations of his family medical history and sent him multiple research studies.

"This notion of 'we're getting old; it's bound to happen' doesn't make any sense to me," Bellizzi says. "I don't think I'm so far out on the edge here that I'm gambling with my life. What I do know is I feel better."

**I**t may be tempting to dismiss Bellizzi as a soccer fanatic afraid to age gracefully or to accuse Comite of squandering her talent by catering to affluent, youth-clinging patients. Nonetheless, their medical partnership could have broad, perhaps profound, implications. At root, this is a tale of empowerment, of humankind's primordial urge to exert control over the aging process. That raises intriguing questions. What constitutes responsible cutting-edge science as opposed to a reckless pushing of the envelope? Where is

the line separating a vanity fix from a genuine quality-of-life improvement? Imagine that a miracle drug is discovered that guarantees vigor far beyond retirement age, but shortens your life by, say, four years. Is it worth the trade-off?

The human body is a symphonic masterpiece of flesh and blood, but it wears out like any clanking machine on the factory floor. The ruthless tick, tick, tick of time strips gears, nibbles at bushings. On a submicroscopic level, damage is done by free radicals, unstable atoms that have a toxic effect on cell membranes and DNA. In addition, telomeres, the protective tips on chromosomes, fray from the stress of continual regeneration, much as serial photocopies of an image lose their crispness.

Some antiaging proponents make seductive promises about prolonging longevity. Comite steers clear of that camp. Her interest lies in extending the length of "health span," as opposed to life span. Does the body have to slide inexorably downhill after 40? She says she is convinced that metabolism modulation can help stave off stroke, heart disease and diabetes; can flatten the trajectory of corporeal decline. Ideally, age-management medicine patients will keep humming along nicely, then crash like a spent computer. As Comite puts it, "Can we maintain optimal health until one day when we just don't wake up?"

Tantalizing though it is, Comite's question is just philosophical conjecture. But the first hint that such a situation might be achievable came in a study that appeared in the July 5, 1990, issue of The New England Journal of Medicine. Dr. Daniel Rudman wanted to test the prevailing notion that older

people lose muscle and gain fat because they produce less growth hormone. Twelve men, ages 61 to 81, were given small doses of synthetic human-growth hormone three times a week. After six months they showed a 9 percent increase in lean-muscle mass, a 14 percent decline in fat and a modest improvement in bone density. "The overall deterioration of the body that comes with growing old is not inevitable," Rudman declared. "We now realize some aspects of it can be prevented or reversed."

Rudman, who has since died, reportedly came to regret his choice of words and the fact that so many overlooked that this was a small test-group participating in a short-term study; it was not an experiment he intended to be conclusive. Still, a kind of growth-hormone and anabolic-steroid gold rush ensued -witness the fact that today you can buy hormones from China online and consult how-to books like "The Secrets of Mail Order Steroid Success."

Within two years of Rudman's study, the American Academy of Anti-Aging Medicine was established. It unabashedly presses the case for growth hormones, but there's room in the tent for low-level light therapy, whole-body vibration machines and assorted New Age nostrums. The organization boasts of being "the first scientific nonprofit medical society to forecast the deliverance of human life spans in excess of 100 years." A Chicago-area doctor and amateur bodybuilder named Alan Mintz also took keen interest in Rudman's experiment. Mintz was soon augmenting his gym workouts with testosterone and growth hormone. He and his exercise partner, John Adams, owned a radiology-diagnostics company. They sold the business in 1994, pocketing millions. Rather than retire and work full time on their pecs, they started Cenegenics Medical Institute, a boutique age-management center, and relocated to Las Vegas.

The cultural demographics couldn't be better for their company. Baby boomers - some 79 million strong - are going gray. Many, like John Bellizzi, refuse to surrender their youth without a fight. By the summer of 2008, he was closing in on 50: pudgy, sluggish and worried he had lost his edge at work as well as on the soccer field.

Flipping through an airline magazine while on a business trip, Bellizzi stumbled on an ad for Cenegenics Medical Institute. It featured startling photographs of Dr. Jeffry Life, a Cenegenics physician. The "before" shot showed Life with a pot belly and noodle arms. The "after" picture looked like some grandfather's head had been superimposed on Mr. Universe's body. Apparently no trick photography was involved; that was Life showing off his new age-management-medicine physique.

Bellizzi pondered the ad for a few months, then called Cenegenics' toll-free number. Soon he was sitting in Comite's office on East 86th Street, exhibiting classic signs of the middle-age fade. Blood tests showed he had an underactive thyroid. He was flirting with obesity. He had high cholesterol and low testosterone. Comite made immediate diet and exercise suggestions and put him on thyroid medication; then six months later she prescribed the H.C.G. booster. She opted for using H.C.G. because it nudges the testicles into making more testosterone. With



direct testosterone injections, they would be bypassed entirely and gradually atrophy.

Bellizzi used to collapse exhausted on his couch after soccer games. Now, he says, he can "play for another hour." He feels mentally sharper and is 15 pounds lighter. It's difficult to say what's benefiting him most. Eating more protein or laying off the Haagen-Dazs ice cream? Running four times a week? Bellizzi says he thinks H.C.G. deserves a great deal of credit too, while acknowledging it is "fairly controversial."

Consensus is elusive in the realm of age-management medicine. There are known side effects for the more controversial treatments. For growth hormone: joint pain, fluid retention, a possible diabetes link; for testosterone: thickening of the blood, rashes, swelling of the breasts. There is a strong presumption that those compounds will supercharge an existing cancer. Some doctors, however, say these effects can be controlled or eliminated by monitoring dosages and screening at-risk patients.

But the bigger issue is that the medical literature pertaining to steroids and hormones is characterized by a dearth of long-duration, large-population, placebo-controlled studies.

"The same body of data, different people look at it and have very strong and opposing points of view," says Dr. Shalender Bhasin, a professor at Boston University School of Medicine and chairman of the Endocrine Society's testosterone-guideline panel.

The Food and Drug Administration originally approved human-growth hormone as a treatment for stunted growth in children and then for atrophy in AIDS patients, but later authorized it for what is termed "adult growth-hormone deficiency." There is wiggle room as far as interpreting that syndrome and therefore opportunity for unscrupulous doctors to prescribe the drug for somebody who merely wants to bulk up and look buff.

Dr. Tom Perls, an associate professor of medicine also at Boston University School of Medicine, has testified before Congress that growth-hormone deficiency occurs only in about 1 adult out of 10,000. By comparison, nearly 10 percent of Cenegenics' patients receive human-growth hormone. Perls says he believes some age-management doctors fudge their diagnoses. "They certainly could be well meaning," he says, "but I think it's irresponsible to treat people, particularly with potent drugs, just because you yourself think it has some benefits."

Critics cite situations in which physicians enthusiastically prescribed Vioxx with disastrous consequences or prescribed hormones for post-menopausal women only to learn about an N.I.H. study released later that linked those hormones to breast cancer. They cite the case of the professional wrestler Chris Benoit, who regularly injected freakishly high amounts of testosterone and who committed suicide after killing his wife and son. Then there's Hanneke Hops, a 56-year-old Californian who died of liver cancer in 2004, six months after becoming a Cenegenics patient. Her family says growth-hormone supplements aggravated latent tumors. Alan Mintz called that "speculation," saying his company would never give hormones to anyone suspected of having cancer.

Advocates of age management have their favorite rebuttals. If athletes abused insulin, nobody would seriously consider outlawing it for the treatment diabetes, they say. We don't accept osteoporosis as a nec-

essary condition of growing old. Why not be just as proactive with declining hormones as we are with brittle bones?

Dr. Marc Blackman is associate chief of staff for research and development at the Veterans Affairs Medical Center in Washington. Regardless of the quality and quantity of cumulative human research, many holes remain, he says. What constitutes low testosterone for a man at age 40? At 60? At 80? Thus far, there are no universal standards. Blackman, an endocrinologist, poses a cogent question: "How do you distinguish between a normal age decline and a chemical deficiency?"

That's "the art" of medicine, Florence Comite says. Judgment calls have to be made. She worries more about what gets lost in this discussion; namely, the wide-angle view of her kind of intense preventive medicine. True, her methods are expensive. But she imagines an affordable model designed for the masses, one that would be an antidote for what's ailing America's disease-based health care system. "This isn't about the future Fountain of Youth," she says. "This is about the big picture."



**COMITE GREW UP** in Brooklyn and Queens, a daughter of Holocaust survivors. Family members were so hungry for knowledge that they read not only at the dinner table but also while washing dishes. Her favorite book as a teenager was "Stranger in a Strange Land," Robert Heinlein's science-fiction classic about an earthling boy raised by Martians. Like the book's hero, Comite knew something about alien environments. She graduated from high school at 16, sped through Brooklyn College and entered Yale Medical School at 20. Next came a fellowship in reproductive endocrinology at the National Institute of Child Health and Human Development, which led to a job at N.I.H. doing research in gynecology and precocious puberty.

In 1985, Comite returned to Yale as part of the medical faculty. In addition to teaching, she founded Women's Health at Yale, arguably the first clinic in the country to treat women's health issues as a special discipline. Many men on the faculty questioned the need for such a clinic. Comite says she used to "wake up scared" at night, career-killer thoughts racing through her head. What if I'm wrong? What if I'm going down a path that doesn't lead anywhere?

"It was not a hot topic, and medicine in general was not interested in women's health," Dr. Paul Barash, a professor of anesthesiology at Yale, says. "Eclectic" is a very good term to describe her. Basically, she had to mobilize public opinion to start getting women's health on the radar screen."

Comite left a tenure-track position at Yale because she became frustrated with what she saw as medicine's red tape and tunnel vision. One galvanizing moment involved a woman named Vivian, who had a badly scarred uterus and who had tried repeated in vitro fertilizations without success. She came to see Comite at Yale, still hoping to have a child, but failed to conceive. At wit's end, Vivian consulted an acupuncturist. She became pregnant after only a few treatments.

"I would swear on a stack of Bibles and all my oaths there was no way that woman could conceive," Comite says. "That experience turned me into an open-minded skeptic."

This ushered in a restless phase of her career. Comite briefly reconnected with the N.I.H. as a research adviser. She helped establish a women's health clinic in Egypt, served on an Institute of Medicine committee that compiled a report on alternative medicine. Comite went into private practice in January 2005, doing what she does now but not articulating it as age-management medicine per se. That June, Alan Mintz invited her to Las Vegas, and she ultimately joined Cenegenics' medical advisory board. (Two years later, Mintz, while doing an overhead press in the gym, lost control of the weighted bar, which struck him in the back of his head. He died while undergoing a brain biopsy.) About 80 percent of Comite's patients are men. It's a good match. She finds male menopause an area ripe for exploration, and men are generally more receptive to the notion of age management than women, who have been bombarded for years with conflicting information about hormone therapy.

Bob Fitzmaurice, a 48-year-old New Hampshire businessman, spent seven years trampolining around to doctors and psychiatrists, searching for relief from a crippling

lethargy. Comite treated him for abnormally low testosterone. Jerome Baron, 83, made an appointment at the behest of his son, who was already a Comite patient. He had fallen several times, once breaking his nose. He takes a shot of testosterone every week and about 45 vitamins and nutrition pills every day. "I don't trip," Baron cheerfully remarks. "I'm stronger. My legs are stronger." And there's an added bonus: "I started to get urges for sex, which I hadn't had in a few years."

Critics scoff at such anecdotal evidence. Comite understands that it comes with the territory. One of the lessons Yale taught her is that change makes most people "uncomfortable." A vignette sticks in her mind. She was a junior faculty member, walking down a corridor one afternoon at the medical school, when a distinguished department head sidled up to her. She says he icily remarked, "The problem with you, Florence, is that you're an independent thinker." That was not meant to be a compliment. She considers it one of the nicest things anybody has ever said to her.

**THE HEADQUARTERS OF Cenegenics Medical Institute** sits on the fringe of Las Vegas, where the pavement peters out and turns to desert sand. The facade of the two-story building, with its picket line of alabaster Corinthian columns, evokes a Greek temple. This could be an embassy in some sun-drenched principality: the People's Republic of Rejuvenation.

Dr. Jeffrey Life, dressed in a dark suit and with a Bluetooth headset clinging to one ear, was seated at a desk inside a cramped, temporary office. He was in the process of moving off campus. His Cenegenics ad succeeded beyond his wildest expectations, becoming the focal point of a \$5 million a year media blitz. Life had decided to lighten his Cenegenics load in favor of pursuing spinoff opportunities: speaking engagements, a book deal, a Web site and a wellness center in Las Vegas under the Cenegenics banner.

"I want to get my message out to a wider audience," he said, his voice simultaneously authoritative and avuncular. "I want to capitalize on this image I've created."

Life's message is that if a fat, 59-year-old, divorced family physician from eastern Pennsylvania can reinvent himself through a combination of lifestyle alterations and modern pharmacology, so can you. (By the way, that makeover didn't include his name. He was born Jeffrey Life.) In June 2003, Life signed up as a patient with Cenegenics and a year later joined the corporate team, which now includes 40 staff physicians in Las Vegas and in branches in eight other cities, with five more scheduled to open soon.

Every year, Life gets a new set of beefcake photos taken. Now 71, he said he put on five pounds of muscle this past year by scheduling extra taekwon do practices and cranking it up a notch in the weight room. He can bench-press 235 pounds and can do 10 pull-ups, "full extension."

His age-management program could fill a spreadsheet. Life began reciting from memory: 1,000 milligrams of calcium daily, coenzyme Q10 pills twice a day, 5,000 units of vitamin D, 4 grams of fish oil, 10 milligrams of melatonin at bedtime, a testosterone injection once a week, human-growth hormone once a day. "That reminds me," he said, reaching into his desk drawer. "I've got to give myself a shot."

He pulled out a syringe, loaded up on human-growth hormone, raised a pants leg and stuck the needle into his left thigh.

Life is good for Dr. Life. He relocated, remarried and rediscovered what it feels like to be 30. "I sometimes think what would have happened if I'd started this at 45 like a lot of my patients," he mused.

Doctors and their family members account for about a quarter of Cenegenics' patients, according to John Adams, the company president. Roughly 75 percent of them are men, and the recession doesn't appear

DR. FLORENCE COMITE ASKS,  
'CAN WE MAINTAIN  
OPTIMAL HEALTH  
UNTIL ONE DAY WHEN WE JUST  
DON'T WAKE UP?'

to be discouraging newcomers. Cenegenics' revenue rose 35 percent in both 2007 and 2008, and growth was 10 percent in 2009, Adams said. There's a five-month waiting list for doctors wanting to enroll in one of Cenegenics' training seminars, but professional suspicion lingers. A neonatologist in Florida recently became a Cenegenics patient, but didn't tell any of his physician friends. "They would think I'm crazy or vain or stupid," he says.

Dr. Pinchas Cohen, chief of endocrinology at Mattel Children's Hospital U.C.L.A. and a member of the Growth Hormone Society's executive board, concedes that Jeffrey Life "looks pretty good" but cautions that he is flirting with disaster because of the possible deleterious effects of human-growth hormone and testosterone: "I'm quite sure that he will end up a tragic case. Sooner or later, his cancer or diabetes will be diagnosed."

Every field of medicine is in constant flux. Old maxims evolve into newer truths; yesterday's hypothesis becomes tomorrow's scientific breakthrough or dead-end fizzle. But that process of intellectual friction can generate a lot of emotional heat.

"There is a fascinating but very clear philosophical divide between the antiaging folks and mainstream medicine," says Dr. Abraham Morgentaler, associate clinical professor of urology at Harvard Medical School. "What's remarkable to me is how everybody has an opinion that often isn't based on much."

Morgentaler has no ties to Cenegenics Medical Institute. The feud over testosterone therapy in particular piqued his curiosity. When he was in medical school, the accepted truth was that the higher a man's testosterone level, the greater his risk of contracting prostate cancer. Morgentaler decided to investigate that premise, unearthing as many re-

lated research papers as he could, dating back more than half a century. The trail led him to a study done in 1941 that helped Dr. Charles Huggins win a Nobel Prize. Huggins's focus was advanced prostate cancer. He discovered testosterone can feed existing tumors, a revelation that has stood the test of time. But other studies extrapolated on Huggins's work, Morgentaler says, sparking a chain reaction of soft science that went a step further and implied that testosterone causes prostate cancer. As Morgentaler delved deeper, he said he was "dumbfounded" at all the positive evidence of testosterone's general health benefits that had been ignored. His research odyssey turned into a book, "Testosterone for Life."

"The stuff Dr. Comite is talking about is real," says Morgentaler, referring to the biological causes of middle-age malaise. He frequently prescribes testosterone and offers this prediction: within five years testosterone will be as popular a yardstick of good health as cholesterol. "There are all these people walking around the United States who are getting older," he said. "They know they don't feel right. They've lost pep. Their brain doesn't work as well. Mainstream medicine has no answers for them."

ON A FEBRUARY afternoon seven and a half months into his Cenegenics journey, John Bellizzi sat on a stationary bicycle in Comite's Manhattan office, pedaling as if he were on a Tour de France hill climb. He was in the final stages of a VO2 aerobic fitness test. A conelike rubber mask covered his nose and mouth, sucking up information from his labored breathing. Lance Armstrong pedals a test bike like this for an hour at high resistance. Bellizzi cranked for 12 minutes. "I couldn't have done a lot more," he said upon dismounting.

Steven Villagomez, an exercise physiologist, stood close by. "I'll go over this with Dr. Comite," he said, scanning a computer printout. "She'll be thrilled to see these numbers." Since his intake exam in June 2008, Bellizzi had seen his weight drop to 165 pounds from 181; body fat to 15 percent from 27 percent. His cholesterol level declined to 162 from 231 and continues to fall. "Your heart is stronger, pumping more effectively," Comite pronounced after digesting his VO2 results. This summer Bellizzi celebrated his first anniversary of treatment. He's feeling energetic enough that Comite has twice cut his H.C.G. dosage. His body is generating double the amount of testosterone that it did a year ago.

Is this the future of health care? Will metabolism modulating soon gain widespread acceptance? The National Institutes of Health announced in November that they are embarking on a six-year, \$45 million study of the mental and physical benefits of testosterone therapy. Eight hundred elderly men will undergo tests at 12 facilities nationwide.

Preliminary results of the Testosterone Trial, as it is called, won't be available until at least 2015. In the meantime, Bellizzi's one-man experiment rolls on. He and his wife weighed the pros and cons over a kitchen-table brunch of fresh fruit and organic yogurt following a Sunday soccer game.

"I wish he wouldn't do it," Francesca said. She's comfortable with everything but the H.C.G. injections. Have they done enough testing? Is this worth the expense and the uncertainty?

"I'd be a little concerned about taking testosterone," John admitted. "I'd have to re-evaluate. But I'd be very leery about H.G.H. and doing more hormone modulation than I am now."

The majority of Comite's patients never need human-growth hormone, although a guy who says he intends to kick soccer balls until "the pain exceeds the pleasure" may want to keep that option open. As for testosterone, H.C.G. eventually loses its effectiveness as the testicles run dry. The only option is to turn to synthetic testosterone.

Comite has no doubt, when that time comes, that Bellizzi will make the decision to start injecting testosterone. "He'll make it because he'll realize he's not feeling as good as he was before," she says.

Maybe he will reach for the needle. Maybe he won't. Right now, all Bellizzi knows is that he'll be playing soccer next Sunday.