

Making Hypertension History

Courage. Determination. And plenty of grit. Those are just a few of Hazelene Jackson's traits that helped set the stage for her to become the first patient in Pennsylvania to be implanted with a still-experimental medical device designed to treat drug-resistant hypertension, or high-blood pressure.

the neck) to the brain – to signal that an inappropriate increase in blood pressure has occurred. Once alerted, the brain rushes signals to all parts of the body – with instructions to take whatever measures are necessary to reduce the blood-pressure level.

The Rheos™ system includes an iPod-sized "pulse



Of course, Jackson's pretty smart, too – so, before agreeing to enroll in the FDA-approved clinical trial, she sized-up the surgeon who would be performing the delicate procedure. She quickly concluded that John Blebea, MD, Professor & Chief of Vascular Surgery at Temple University School of Medicine and Temple University Hospital, was the man for the job.

Drug-Resistant Hypertension Hypertension, called the 'silent killer,' is the leading cause of stroke, heart attack, heart failure, and kidney disease. For most of the estimated 72 million Americans diagnosed with the chronic condition, treatment involves the use of medications – which, in most instances, may require the use of multiple drugs each day. However, for nearly one-quarter of all such patients, no amount (or combination) of pills can effectively manage their disease.

And that's the precise patient population – those with drug-resistant hypertension – that the device, called the Rheos™ system, hopes to treat. Rather than rely totally on drugs, the system is designed to jump-start the body's natural regulation system to reduce high blood pressure – which kicks in when electrical impulses race from baroreceptors (nerves nestled in the carotid arteries of

generator" that is implanted below the collar bone; two thin electrode wires (connected to the pulse generator) that are implanted and delicately wrapped around the baroreceptors on top of the left and right carotids, respectively; and an external device used by physicians to non-invasively regulate the electrical energy from the pulse generator to the wires. "Think of it as a pacemaker for blood pressure," says Blebea, who serves as principal investigator for the study.

An Eager Participant

A resident of Northeast Philadelphia, Jackson was an ideal candidate for the innovative device. "She's had severely high blood pressure since her 20s, with her most recent average monitored at 215 [systolic] over 110 [diastolic]," explained Arnold Meshkov, MD, her Temple cardiologist, adding that a normal reading is about 160 over 90. "She's also been evaluated by multiple physicians, been hospitalized multiple times, suffered a serious stroke in September of 2004, and has been taking up to seven different medications a day," added Meshkov, who serves as coinvestigator for the study.

In addition, as part of the side effects of taking so many pills, Jackson's energy had been zapped – so much so

that she had severely limited many of her favorite activities– including cooking, gardening, dancing, deep-sea fishing, and playing with her four grandchildren. "Oh, and I love to gamble ... just love the slots!" she laughs.

Consequently, Jackson was eager to participate in the study. "I feel like I'll be giving birth to a solution to my problem. And even if it doesn't work for me, others will benefit from what the doctors learn."

The Pioneering Surgery

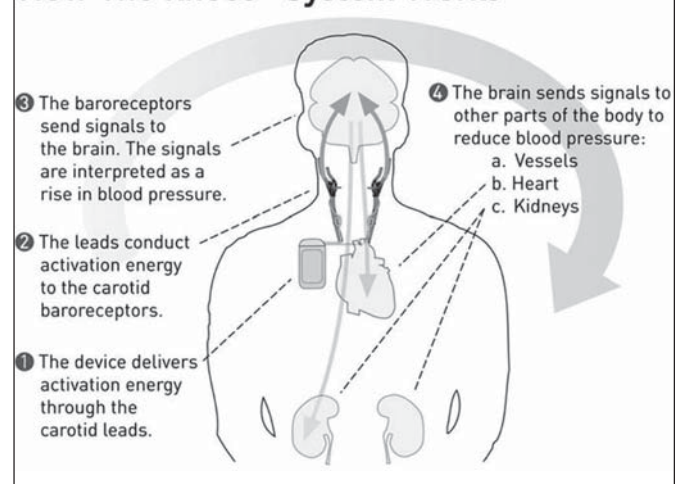
In the early morning hours of December 17, 2007, Blebea methodically prepared for Jackson's surgery. His sole objective was to successfully implant the medical device and its ancillary wires into his 53-year-old patient.

Five hours later, Blebea reported, "Everything went according to plan. There were no surprises – which is good."

His patient concurred. Just two days after surgery, she appeared – along with her husband Elijah, and daughter Marie – before a roomful of local reporters to announce that she felt "fantastic!"

As part of the research study's protocol, the system is not activated until 30 days after surgery, to allow the patient to heal. So, one month after her implant, Jackson returned to Temple University Hospital to have her pulse-generator started. "Upon turning on the stimulator, we successfully decreased her blood pressure from 200/101 to 120/75 – normal!" said Blebea. "The effect was better than either we or the patient could have hoped for."

How The Rheos™ System Works



"Not only was her blood pressure within the normal range for the first time in decades," he continued, "but it was taking place without any side effects or symptoms of any kind. Furthermore, it was achieved with only a moderate level of stimulation."

At press time, Jackson's blood pressure has remained consistently normal, based on daily readings. Her Temple doctors will continue to carefully monitor her pressure for the next year.

For Hazelene Jackson, though, the immediate results have been optimal. "I already feel like I've been given a new lease on life," she said, adding that she also dropped seven pounds and quit smoking – cold turkey. "And I'm cha-cha-cha'ing again!" she added, with a wink.

Rebecca Harmon

Government optimism

The Romanian Business and Investment Roundtable, held by The Economist recently in Romania, discussed the impact of global warming on the Romanian economy, improving the competitiveness on the market, better collaboration between businesses and government, as well as encouraging foreign investment. Among the speakers at the event were the prime minister, Calin Popescu Tariceanu, reiterated the progress made by the country lately: "In the last 3 years, Romania had an economic growth above the EU average, and that will continue".

Tariceanu also talked about Romania's priorities for this year, such as improving health, infrastructure and agriculture, as well as rural development. Another topic was the Romanian labor market: "Salaries in Romania have long stopped being "social assistance", right now they are the reward for profitability, and in some areas Romania has salaries comparable to the ones in Spain or Italy". The IT area is one good are for Romania, which now ranks 3rd in Europe in terms of experts, Tariceanu said. The premier also mentioned the construction sector, which has had 30% growth in the last year.

ECONOMIC OFFICE'S NEWSLETTER

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Quote of the month: "In the last 3 years, Romania had an economic growth above the EU average, and that will continue", Prime Minister Calin Popescu Tariceanu, during a roundtable held by The Economist.

6 pc economic growth in 2007, down 1.9 pc against 2006

Romania's Gross Domestic Product rose to RON 404.7 bln last year, and the economic growth reached 6 per cent, down 1.9 per cent from 7.9 per cent in 2006, the National Institute of Statistics (INS) reported.

During Q4 of last year, the estimated GDP came to RON 137.76 bln, up 6.6 per cent from the year-earlier period, in real terms. The level of economic growth was close to that predicted by the National Commission of Prognosis (CNP), which forecast a GDP rise of 6.1 per cent in real terms. Constructions, services and industry were the sectors which saw the highest increase - 34.4 per cent, 7 per cent and 5.6 per cent respectively. Agriculture fell by 18.3 per cent due to drought.

Last year's GDP calculated at the annual average exchange rates announced by the National Bank of Romania (BNR) came to EUR 121 bln, up 24.1 per cent from 2006, when it stood at nearly EUR 98 M. Also, the

INS revised up economic growth data for 2006 from 7.7 per cent to 7.9 per cent, with the latest estimate at RON 344.53 bln. For 2008, CNP projects an economic growth of 6.5 per cent, higher than last year's, unless agriculture faces problems again.

Last year's economic investments up 29 pc

Investments made in the economic sector rose 29 per cent last year, to RON 68.3914 bln, from 2006, with industrial investments standing at the top, 39 per cent, followed by trade, 34.07 per cent, according to provisional data released by INS.

Investments in new constructions totaled RON 31.04 bln, up 31.35 from 2006. According to INS, investments focused on industry, wholesale and retail trade, car and motorcycle repairs, personal assets, constructions, transport, storage and communications, and social security in the public sector. Romania is among Europe's top 10 countries in terms of direct foreign investments, according to a study conducted

by the consulting company OCO Global, quoted by Mediafax. The number of registered tourists in January was 383,400 - higher by 6.9 per cent against the similar period in 2007. January industry prices up 13 pc from year-earlier rate

The overall prices of industrial products on the domestic and foreign market registered a 2.3 per cent rise in January of this year from December of 2007, INS also shows. Compared to January 2007, the extractive sector proved as the most dynamic, 16 per cent, followed by the manufacturing sector, 14 per cent. Electricity, heat, gas and water registered price rises of 5.1 per cent, lower than the overall increase.

Homes built last year reached 45,867 units

In 2007, there had been built 7,689 more homes than in 2006, to 45,867 finished units, of which 90 per cent were made from private funds, according to INS. Constructions in urban areas accounted for 47.7 per cent of all the built housing, up 21 per cent from a year before. The number of houses erected in rural areas equaled 23,061 units, up nearly 10 per cent from 2006. Bucharest-Ilfov noticed the highest rise, about 2,000 homes