



WORLD OF SURGERY

Because nothing else can give both Dad a new ticker and your lady a new chest

CUTS

ROBO SURGEON

Doctors play God without touching your dirty body

SURGEON
Moves the arms and camera inside the body

Worth \$1.3 million and available in only 300 hospitals worldwide, the da Vinci Surgical System makes human surgeons look like epileptic butchers. In a prostate removal—the bot's most common surgery—the human surgeon cuts the body, then he's hands-off.

"In classic surgery, the incision is six to eight inches," says Dr. David Samadi, director of robotic surgery at New York's Columbia Presbyterian Hospital. "The holes I cut are 2 to 3 mm. We insert tools into the arms, line them up with the holes and I control the arms with joysticks. The

inside of the body is magnified 15 times and the view is 3-D, so I can see things I couldn't in classic surgery. We distend the stomach with gas to make more room for the tools, but the pressure also stops the bleeding. Because there's less trauma, most patients are discharged in 24 hours."

NURSE
Hands over new tools and watches monitor

ASSISTANT
Changes the tools in the robot's arms

ARMS
Hold tools and carry out surgeon's bidding

BURNING QUESTION

Q Can the Surgeon General actually cut people open?

A Despite the title, most Surgeons General were never surgeons. Richard Carmona, the current Surgeon General, handled a scalpel before taking his post, but he's only the second to practice modern surgery. "Surgeons General are mostly physicians interested in public health," says Alexandra Lord, historian for the U.S. Public Health Service. "The position is a bully pulpit for general health issues such as obesity and AIDS."

'QUICK, CUT HIS THROAT!'

Friend can't breathe? Operate on him MacGyver-style



"This is your last resort when an upper airway is blocked," says Hugh Coffee, author of *Ditch Medicine*. "You'll need a knife and a pen. Make a shallow vertical incision below the Adam's apple."



"Pull the layer of tissue apart," Coffee says. "You'll see the cricothyroid membrane. Make a horizontal incision through it. If you have major bleeding here, it's bad."



"Gut the pen and insert the tube into the hole," Coffee says. "Blow into it to inflate the lungs. Leave it in there to allow the patient to exhale. This is not going to last for days, so get him to a hospital."

BY THE NUMBERS

308,080

Average cost, in dollars, of a heart transplant surgery

264,375

Median annual income, in dollars, for general surgeons as of 2003

264,041

Breast augmentation surgeries performed in 2004 in the U.S.

51,931

Average cost, in dollars, of a surgery to remove a lobe of the brain

115

Approximate pounds lost by Al Roker after his gastric bypass surgery

5

Approximate hours it takes a doctor to switch a patient's gender organs

ORGAN FEELING

Dr. Alan Goldman, surgeon at North Fulton Regional Hospital in Roswell, GA, reveals what your innards feel like

Liver "The liver is the size of a loaf of bread. It's also heavy—it can weigh four or five pounds. Healthy livers are firm, but squeezable. If it's diseased, it turns rock hard, nodular and white."

Bladder "If there isn't pee in the bladder, you can barely see it. It's like a water bag: When empty, the walls are thick like cardboard, but

when full, the walls are as thin as a piece of paper. Seat belts often rupture full bladders in car accidents."

Lung "Lungs are like loose sponges. You could actually take a lung into your hands, hold it and squeeze it and it will collapse. It's that spongy. When healthy, they're pink and smooth. Smokers' lungs turn black and become covered in bumps."

