

## Surgeons Report High-Tech Spectacles Ease Strain

Patients going under the knife aren't the only ones who end up with their share of aches and pains after an operation. Many physicians grapple with substantial neck and back strain by the end of a grueling day in the surgical suite.

Now University of Florida researchers say a pair of lightweight, high-tech glasses could be the prescription for relief. They put the eyewear to

only for the safety and comfort of patients but also for cost and outcome," said Dr. Scott Schell, an assistant professor of surgery and of molecular genetics and microbiology at UF's College of Medicine. "But, in contrast to standard operating procedure where surgeons stand and look down at their hands while operating, during minimally invasive surgery the hands may be pointed in a completely different orientation than where the eyes are looking because the surgeons are not looking at

a wound, they're looking at a screen. So in lengthy procedures, that practice increases the possibility they could develop neck and back strain because they're not in a comfortable position."

During minimally invasive procedures, surgeons make tiny incisions — some as small as an eighth of an inch — and thread a fiber-optic camera through a catheter to see inside the

body. The operation is performed using surgical instruments inserted through the incisions. Depending on the operation, minimally invasive procedures can last anywhere from 30 minutes to eight hours.

Surgeons wearing the video-projection glasses can look down at their hands while operating — a more natural and comfortable orientation, Schell said. The eyewear resembles a large pair of sunglasses and weighs about 3.5 ounces.

"The glasses provide a picture of what you'd see inside the abdomen if you opened up the abdomen," Schell said.

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Melanie Fridl Ross

## Gene Therapy Could Protect Heart During Attacks

A team of University of Florida researchers has used gene therapy to develop a tiny biological machine that could one day be injected into heart attack-prone patients to recognize and stop new heart attacks.

The UF team used a harmless virus to deliver a combination of genes to animal heart tissue that protected the tissue from heart attacks, according to an article in *Hypertension*, a journal of the American Heart Association. The virus sensed when the heart tissue began to experience hypoxia, or oxygen deprivation, and switched on the protective genes, which prevented the damage and

## Plastic Film Being Tested To Regulate Plant Growth

To help commercial nurseries keep plants uniform in size, University of Florida researchers are testing colored plastic films that filter out growth-promoting light waves.

Sandra Wilson, an assistant professor of environmental horticulture with UF's Institute of Food and Agricultural Sciences, said the photo-selective plastic film in her current experiment filters out far-red light, which is responsible for stem elongation in plants.

"When grown in a greenhouse covered with photo-selective film, plants respond to subtle changes in the amount of far-red light they receive," Wilson said. "The goal is to inhibit stem elongation without sacrificing plant quality."

The horticulture industry prefers uniform plant size because it speeds plant establishment in the field and makes it easier to pack and ship mature plants. Traditionally, chemicals have been used to control plant height but, because of increasing environmental

*Dr. Scott Schell demonstrates eye-glasses he developed that project the view from microsurgical equipment directly in front of the eyes so a doctor does not have to twist in an unnatural and tiring position to watch a monitor.*



the test and found it helped prevent much of the discomfort surgeons experience after performing minimally invasive procedures. These operations usually require surgeons to peer at a small video monitor placed at an awkward angle up to 10 feet away.

The high-resolution glasses project a 52-inch stereoscopic image about six feet into space, enabling doctors to view the operative field no matter where they turn their heads.

"Minimally invasive or laparoscopic surgery has really been a dramatic and revolutionary improvement in the performance of certain procedures, not





# Explore

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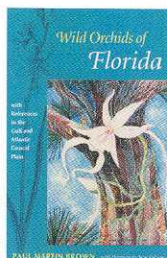


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