

LOS ANGELES EVENING AND SUNDAY

# HERALD EXAMINER

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## Medical Milestones

Anyone who doubts the value of space programs and the resultant spinoffs in the medical field should visit the California Museum of Science and Industry during the Los Angeles County Medical Assn.'s Centennial Exhibit, continuing through Oct. 28.

In many of these modern medical miracles, economy is coupled with efficiency, releasing nursing personnel from intensive attendance and activating remote control devices that permit constant surveillance without physical presence.

For example, an electro-optical system, developed by the National Aeronautics and Space Administration's Marshall Space Flight Center to register liquid levels, led to a signal device by which totally paralyzed (quadriplegic) patients can summon help as needed.

Blind persons also have benefited from NASA instrumentation through adaptation of a portable light detection system with which the blind can determine when lights are off or on, even ceiling fixtures which cannot be checked through touch sensations.

The same minute sensor has been modified to indicate by an audible signal if it is daylight or dark outside — and to call attention to completed cycles of automatic cooking devices or effectiveness of pilot light systems.

The sight switch, developed by NASA for control functions during blast-off, has been applied to standard eyeglass frames. Utilizing a low-intensity light beam directed into the white of the eye, a photodetector allows the user, through eye movement, to control the mechanism of a battery-powered wheelchair, position a motorized bed, door or

window, turn pages, tune televisions, answer or dial a telephone, control lights, fans, air conditioners and electric heaters as well as feeding devices.

NASA's gravity reduction simulators have opened doors to therapeutic retraining of damaged muscles and are used as walking supports in therapy. An easily handled air-free syringe developed by NASA reduces danger of embolism in collection of blood samples and provides bubble-free fluids for other types of medical analyses.

Space helmets have given doctors a convenient, painless way to measure brain waves, even in small children — a procedure valuable in diagnosis of epilepsy and other such irregularities. The patient would prefer wearing a specially equipped helmet to having his head shaved for application of electrode pastes.

Cleft palate victims benefit, too, from the space program, which has resulted in development of accurate measuring devices to reveal charges in the palate's fissure history, response to treatment, etc.

The list is endless. Charge indicators for battery-powered prosthetic devices, in-office fabrication of orthotic supports, human waste management for the handicapped, pressure-flow materials to prevent bed sores and improved electrodes for hand therapy are among the innovations, as are infra-red photos that can spot soft-tissue irregularity not disclosed by X-ray.

We congratulate NASA, the Medical Association and the Museum on this most interesting and informative exhibit and encourage everyone to see it. The effect has to be one of personal identification with the program that has sent men to the moon.