

New technology to mass produce artificial skin offers hope for burn victims, cancer patients

BY Rosemary Black
DAILY NEWS STAFF WRITER

Thursday, July 16th 2009, 11:32 AM



A new technique to produce artificial skin is more affordable than current options.

A German company is showing some skin - artificial skin, that is. And if all goes according to plan, the brand new technique to mass produce the product may offer life-changing hope to burn victims, cancer patients and those recovering from surgery as early as next year, according to PopSci.com.

Germany's Fraunhofer-Gesellschaft science institute created the technique to make the artificial skin, which is more affordable than similar ones in use now. It relies on computers that control the solution in which the skin grows.

These computers also check the vats for infection, guide the blade that cuts the little swatches of skin, and tests the final product to make sure it meets standards.

The new artificial skin is complete with blood vessels, which sets it apart from older types of artificial ones, medical experts say.

“Doctors will be able to cover large areas with skin,” explains Dr. Kelly Nelson, assistant professor in dermatology at Duke University. “With other artificial skin, the body would reject it. But this skin, with a viable blood supply, could be a long-term solution for many patients.”

It's estimated that the skin production system could produce 5,000 swatches of skin every month, which comes to more than 600 square inches of mass-produced tissue, PopSci.com says.

Every 0.12-square-inch section of skin would cost around \$49 to produce.

Burn victims and skin cancer patients stand to benefit the most from the new skin, says Dr. Michael Eidelman, dermatologist at Beth Israel Medical Center and St. Vincent's Medical Center.

"The greatest need for something like this is people who lose skin as the result of some sort of damage in an area that does not heal well," he explains. "Say you have a skin cancer on the face. With this artificial skin, you don't have to take skin from another part of the body so the patient does not have to have two surgeries."

The new technique could transform the field of burn care, says Dr. Ariel Ostad, dermatologic surgeon and assistant clinical professor of dermatology at New York University Medical School. "There's a much better take when the blood vessels are in it," he explains. "And since it's produced in a sterile way, there is less risk of infection."

The swatches made by the fully automated system could also be used in place of animals during medical and cosmetic testing, says PopSci.com. And in the future, what about using artificial skin as a do-it-yourself treatment for cuts, scrapes and minor burns?