

# The Power of Place

THE DESIGN OF A BUILDING CAN HELP PEOPLE HEAL. DR. ESTHER STERNBERG EXPLAINS THE SCIENCE BEHIND THE NEW TOWER

By **KEN BUDD**

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uring a recent talk at the University of Arizona, Dr. Esther Sternberg asked the audience a question.

“How many of you believe that stress can make you sick?”

Nearly every hand shot into the air.

“An enthusiastic yes,” said Dr. Sternberg, a rheumatologist and research director for the University of Arizona’s Andrew Weil Center for Integrative Medicine. Her next question:

“How many of you believe that place can make you well?”

Many hands stayed down, which wasn’t a surprise. When Dr. Sternberg asks audiences if they view hospitals as healing environments, the question often draws laughs. Yet as the author of *Healing Spaces*:

*the Science of Place and Well-Being* (which inspired the title of this magazine), Dr. Sternberg believes not only that stress can make us sick, but also that peaceful environments can help us heal. In hospitals, that means focusing on factors such as air quality, lighting, color and sound, as well as creating spaces that evoke nature, boost moods and increase social interactions.

Those ideas have been incorporated into the new \$450 million Banner - University Medical Center tower. The nine-story tower, along with a 75,000-square-foot renovation of the existing facility, includes features such as abundant natural light, local artwork, warm desert colors, and views of the Santa Catalina Mountains. Ceiling and flooring materials reduce noise, and the floors are even designed to cushion feet and minimize fatigue. The nature-nurture design also extends beyond the hallways and rooms.

“Some of my favorite subtle design elements can be found on the





Both inside and outside,  
the nine-story tower  
evokes the calming feel  
of the desert.







Public spaces were designed for circulation, contemplation and gathering with family.



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exterior,” says Angela Watson, an architect with the firm of Shepley Bulfinch and the principal in charge of the project. “Differences in surface texture on the heavy block walls reflect light in different ways and create a wonderful effect that changes throughout the day.” Watson is particularly excited about the public spaces, which include healing gardens and walking paths to promote movement and relaxation, and to connect patients, guests and staff with the natural world.

“The spaces are special because they provide a common ground for circulation, contemplation and gathering,” she says. Whether you’re inside or outside, the design connects you to the desert environment. “On every floor, the family spaces make you feel like you are at the edge of a canyon, looking over Tucson and the Catalinas to the north,” says Watson. “Soft light washes the walls, so they glow in the evening.”

These patient-pleasing concepts may seem obvious, but the healing-design movement is relatively new. In the late 19th century and early 20th century, the greatest cause

of mortality was infection, so sterile environments felt safe. “People dreaded going to the hospital because most of the time they didn’t come out,” says Dr. Sternberg. “So sterile was a good thing. But sterile also became a word for depressing, empty spaces that didn’t remind you of home.”

The first major research on healing and hospital design was published in 1984 in the journal *Science*. In a study of patients recovering from gallbladder surgery, those whose beds provided views of trees left one day earlier and needed less pain medication than patients with views of, ugh, brick walls.

The results have been repeated elsewhere, says Dr. Sternberg. Studies in Canada and Italy found that patients on the sunny side of a ward left the hospital two to four days sooner than those on the dark side. A project sponsored by the Center for Health Care Design showed that retrofits in 50 hospitals led to significant decreases in patient falls, medical errors, infection rates and nursing turnover, along with increased





patient and staff satisfaction.

For Dr. Sternberg, revelations about healing spaces came not only from research, but also from a period of severe stress. Her mother was dying from cancer, and an exhausted Dr. Sternberg developed inflammatory arthritis, with stiffness, pain, and swelling in her wrists, shoulders and knees. She underwent tests and took various

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## FROM THE PRESIDENT OF THE UNIVERSITY OF ARIZONA

**“One of the most important areas of impact for the University of Arizona is in health care and the health sciences, and the UA depends on our partnership with Banner Health to meet our goals and improve the lives of Arizonans. Banner has built the Tucson community and the University of Arizona an academic medical center for the 21st century. This beautiful new hospital will be a state-of-the-art learning ground for future generations of UA physicians, nurses and scientists. It is the realization of the promise and potential we envisioned four years ago in partnering with Banner Health.”**

**— University of Arizona President  
Dr. Robert C. Robbins**

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medications and was planning to enter a hospital for treatment. But then, after her mother died, a neighbor invited her to stay at their cottage on the Greek island of Crete. She swam in the ocean and ate a healthy Mediterranean diet, rich in olive oil, fresh fruits, vegetables and seafood. She walked in the village and talked with local women. And each day she would climb a hill, visiting the ruins of a temple to Asclepius, the Greek god of healing.

“I’d go up there and sit and just look out over the ocean and listen to the birds and the sheep and the goats,” she says. “I didn’t realize at the time that I was meditating. But in fact, I was doing what we call mindfulness meditation.”

When she returned home, she felt so good that her doctor saw no need for additional drugs or tests. She maintained her diet and exercise regimen, and she added gardenia trees and jasmine plants to her deck — the fragrances reminded her of Greece.

In Tucson, the new tower does something similar. It evokes the natural sights and sensations that make us feel good, and creates spaces where patients can relax, reflect and heal.

“It costs more to build a hospital that optimizes health, well-being and patient experience,” says Dr. Sternberg. “But that extra cost is recouped in the first year of operation because of the health benefits to all — including the staff.”



▶ The design features plentiful natural light, which can reduce stress, improve moods and shorten patient recovery times.



