



# STRAINING TO THRIVE



The first closed mission of the Biosphere 2 project started in September 1991. Intended to study the interactions between life and technology in a closed system, the project helped researchers understand the challenges of sustaining life outside Earth. Eight

crew members set out to sustain life through farming and ecologic efforts for 2 years. They maintained ocean systems as well as forests and deserts in a 3.14-acre research facility in Arizona.

One unanticipated discovery was the importance of reaction wood, sometimes referred to as *stress wood*. Stress wood develops when small cracks are formed in a tree's wood when placed under stress. Scientists found that, although trees grew more rapidly in Biosphere 2 than in nature, they toppled over before reaching maturity. They realized that, without wind strain, stress wood formation was reduced and the trees could not remain upright under otherwise normal conditions.

The stress and strain we surgeons undergo during complex cases cannot be overstated. However, over time, these stressors likely prevent us from fully unraveling when we are presented with simple deviations from the norm. In this issue of *GT*, skilled surgeons discuss the management of surgical complexities that might uproot the most experienced of us. I hope that their insights give readers some pointers for the OR and, more importantly, help them see the need to endure some strain to thrive in the long run. ■

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