scenes where a single bullet shot through the fuselage has sent people flying about the cabin. It makes for high drama but it is pure nonsense. If you can have a fairly large outflow valve open to the atmosphere, what difference would a small bullet hole make? As long as the bullet hole remains small, the outflow valve can compensate instantly.

A pilot may depressurize the cabin intentionally if the pressurization system begins to pump contaminated air into the cabin. Also, if the pilot discovers a window is cracking, depressurization will relieve the pressure differential and take stress off the window.

There are two ways to depressurize a cabin intentionally. The gentlest would be to increase the cabin altitude slowly with the manual controller until there is no longer a pressure differential; this would be an appropriate method in the case of a cracked window, limited smoke, or fumes. In a life-threatening situation, such as a cabin fire or dense smoke, the pilot could elect to activate the depressurization switch. This reduces the pressure differential to zero rapidly, but not instantly; the outflow and safety valves are not that large!

One of the frequent causes of rapid decompression is the improper closure of a door. Unlike larger aircraft with plug doors that open into the cabin and are pushed into the fuselage by cabin pressure, light aircraft doors generally open outward, away from the fuselage. The manufacturer has to devise a locking mechanism that is easy to use but strong enough to ensure the door will not open in flight. If someone incorrectly locks the door, it could blow out when the pressure differential increases. The potential for this problem, which is almost always caused by human error, is significant enough in the King Air 200 that when I worked for FlightSafety we used to instruct all crews never to permit passengers to lock the cabin door; it was to be locked only by a crewmember. This is good advice for all pressurized aircraft. If it isn't intuitively obvious, the reason that light aircraft doors open outward is simply because of the limited room inside the cabin.

Even if a door or window did burst open in flight, it isn't very likely that passengers of light aircraft are going to be sucked out of their seats and pulled through it. An analogy would be if you filled the airplane with water and punched a hole in the fuselage; the bigger the hole, the more the water would tend to pull you toward it. Again, this is predominantly high drama in films; however, when flying as a passenger I find myself, for some inexplicable reason, never choosing a seat next to a door!

There should be concern for people who have ear or sinus trouble, however, because instantaneous pressure changes can be painful. Cold, fear, and lack of oxygen present a far more serious problem than the rapid decompression itself. It feels as if someone has stepped on your chest as the air suddenly expands in your lungs, forcing its way out through your nose and mouth. You couldn't hold your breath if you tried, but it would never occur to you to try. The cabin develops a condensation cloud for a short time, making it difficult, if not impossible, to see within the cabin. This could be a short-duration problem for the pilot, as instruments could become difficult to see. Very quickly after decompression it gets incredibly cold, which becomes a major concern. Panic could be a problem for passengers with heart trouble.

Losing cabin pressure when flying above 10,000 feet probably will warrant immediate descent. Even with supplemental oxygen available, the cold can be deadly. The best