



It's Just Air, But It's Dangerous

An edited article by Dr. George C. Thosteson

Compressed air can be dangerous, even to the point of death. A blast of air at 40 pounds per square inch can rupture an eardrum at a distance of four inches; worse yet, it can cause brain hemorrhage and be fatal.

At 40 pounds, such an air jet can drive metal chips and other debris at speeds of 70 miles an hour. Such an air jet, directed into the mouth, can rupture lungs and intestines. Aimed at the eyes, it can cause blindness. An official warning from provincial authorities in Alberta estimates that as little as four pounds of pressure can rupture the bowel.

Directed against the skin, compressed air can damage the tissues so as to resemble a burn quite apart from any dirt, fragments, or chips that can be driven into the flesh. Safety goggles should always be worn when using compressed air, but the danger is to more than just the eyes.

Apart from the hazard of not using an air hose with due precaution, there are two other dangerous practices. One is using air for the wrong thing. There is a temptation; it seems, to use an air jet to blow dust and dirt out of the hair or clothing. Safety authorities warn flatly that this should never be done. Danger of ruining ears or eyes is obvious, but there is a further danger. If there is even a slight scratch or puncture of the skin, air can be driven into the flesh causing swelling and agonizing pain. And perhaps bubbles of air in blood vessels.

But perhaps the worst damage and certainly the most inexcusable, is horseplay. It is sheer stupidity for a so called prankster to turn an air hose onto a fellow worker or fellow student, but I have been told by more than one source that this happens, and has not only harmed but killed some victims. An industrial arts teacher writes, "I have always had trouble with my students, curious as they are, playing with the air gun. After reading your article, many of my students now realize how unsafe it is to play with compressed air".

Incidentally, I have been discussing air at 40 pounds pressure. The industrial arts shop in the above letter uses air pressure of 160 pounds! And from memoranda from other shops, I learn that lines at 70 to 80 pounds are not uncommon.

Yes, it's just air. But, air driven at high velocity. A tornado and typhoon are both "just air," but very DEADLY.