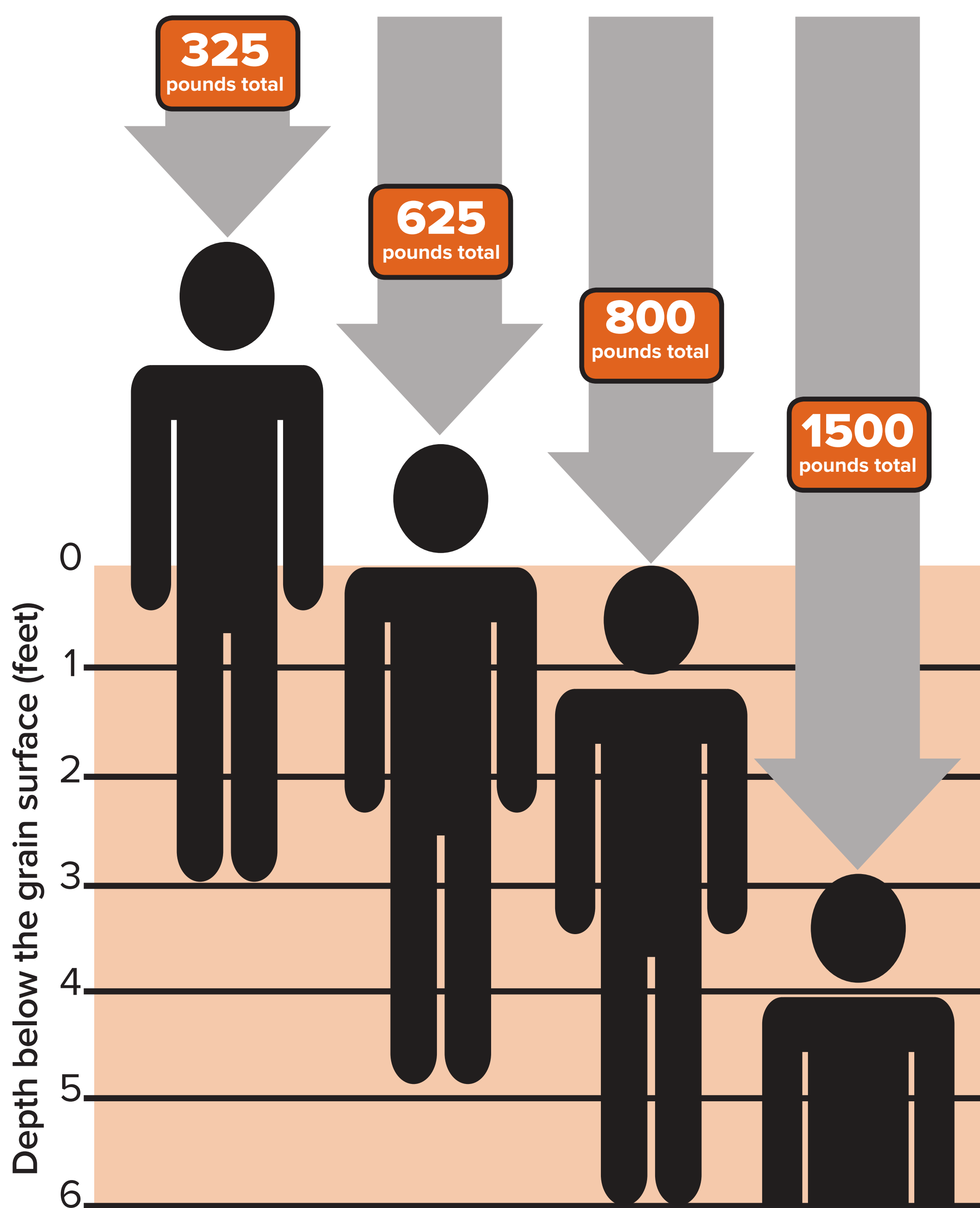


Pressures of Grain on the Body

How much strength do you need to rescue a 165-lb. adult in grain?



Features of the Grain C.A.R.T.

It is not easy to rescue a person entrapped in grain. The force needed to pull a person out will depend on how deep they are submerged. This demonstration allows participants to try their hand at pulling a small wooden disk out of two bushels of grain. The activity gives a good perspective of the difficulty required of a seemingly simple task. While it is not impossible to pull out the disk, it is a good example of the force needed by rescuers to save a life or relieve pressure from the human body.



Amount of Force Needed to Rescue a Victim

It is not easy to pull a person out of grain. The rescuer needs to be able to pull the weight of the victim, plus the force of the grain surrounding him or her.

As an example:

165 lb person buried to the shoulders + 460 lbs of grain pressure = 625 lbs of pull required

As grain encompasses the body, it exerts a force on the lungs and internal organs. When a person exhales, the grain fills in tighter around the chest. After each breath, a little more volume is displaced by the grain. Eventually the body cannot move the grain away to maintain the breathing rate.

Grain exerts a tremendous amount of weight on a submerged person

Simulating the force needed to pull an object from grain

Safety  **Live With It!**

