

Static friction

Without friction, your feet would slide across the floor as you tried to walk. Fortunately, this does not happen. When your foot is in contact with the floor it remains stationary, because the 'static' friction between the sole of your foot and the floor exactly balances the force trying to make your foot slide away.

As the force trying to make something slide increases, so does the force of static friction. Eventually, static friction reaches the maximum value for the surfaces and contact force, and the object slips. This is why the wheels of a car spin if a driver tries to accelerate too quickly.

The maximum value of the force of static friction is usually a little greater than the dynamic friction for the same surfaces.