Title: unique relation between human muscle's force and the muscle's weight.

Abstract: The force used by muscles to lift itself is smaller than the muscles weight in which small muscles force can lift its huge mass.An example is someone lifts his massive 60 kg body with weak feet and calfs muscles when trying to pick a fruit from a tree.

Author: Yahya A.Sharif

According to classical mechanics for a force to lift a mass it should be slightly greater than its weight, this example is lifting a body tied with a rope in its center of gravity.

My new discovery is that a human body muscle can lift itself by a force less than its weight.Muscles force doesn't change, it is the actual force measured by a scale.The human mass doesn't change which has specific gravity weight .What is unique is the interaction between the muscles and their masses that produce this phenomenon and this includes human body inertia in which inertia can be overcome by force smaller than usual

A person can lift himself with force less than his weight.I can raise my massive 60 kg body mass with only my feet and calf muscles when trying to pick a fruit from a tree.

I can move my body parts , stand, walk and run effortlessly this is much easier compared to the actual mass .We can compare someone lifting 60 kg rock and this person lifting his whole body mass of 60 kg by his arms during exercise. There will be a remarkable difference between the two.To lift the 60 kg rock will be extremely hard than to lift his own body of 60 kg.

There is also those who walk upside down walking on their hands and arms . Such people can walk lifting their massive body weights which imply that they use small force far less than their weight to lift their bodies.

The pressure on soles by a 60 kg human is remarkably small compared to what actually should . When a person lifts himself when trying to pick a fruit on a tree he raises his body with small force. He pushes the ground with his toes with small force and the ground pushes him with the same small force.The two small forces will give the small pressure

For the example mentioned let say the foot is 20 cm or 0.2 meters.

The weight for 60 kg will be 60*9.8=588 Newton's the foot lever in this case is class 3

The force of my feet is distributed along the feet , from both toes to both heels .Let's the muscles force of my feet and my calf's are focused on the heel which is the maximum force of muscles could be.

Class 3 is the fulcrum at the toes and both the weight of my body and the force of my feet will be exactly at the heel:

F: force of my weight

f: force of muscles strength

L: the distance of the weight from the heel to the toes.

l: distance of the muscles force from the heel to the toes.

f * l=FL

F=588 and L=l =0.2 m

f*0.2=588*0.2

f=588 Newton

The muscles force to lift 60 kg must be 588 Newton

The muscles force actually is far less than 588 Newton but it lifts the body