Tattoable Science

If over a period of time you eat a 1 kg of pasta, and then over a few days, your mass doesn't change, what's going on?
Since this doesn't violate the conservation of mass, where does the mass go?

Mass of pasta dish include includes water, fats, protein, carbohydrates , protein and minerals.

Cells constantly die. Some of the pasta's molecules replace those dead cells. But part of the reason your mass does not increase is because the wastes of the dead cells are excreted in urine and feces.

The pasta dish may be providing more protein, fat and minerals than you need to replace. When the unnecessary mass is neither stored in the body nor used for growth, these nutrients are also broken down and excreted. If part of food's water-content is not placed back in the blood to replace losses through sweating etc., it is expelled through urine and feces.

Respiration. When glucose from carbohydrates in food is broken down, energy is stored in ATP and later used. But glucose's **mass** ends up as CO_2 and H_2O. The former is mostly exhaled, and water's mass goes into the blood and excess is lost in breath, urine, feces and perspiration. (Of course if you eat more than your activity level requires, the mass of glucose molecules becomes that of fat and more water is retained.)