

So at equilibrium, at your normal weight, leptin is made and you're eating different types of food. Now let's imagine you were starving or you went on a diet, your fat mass would contract and you would make less leptin. This is now the state that led to less fat. So you've been eating less, now the response to low leptin is to eat more. A low leptin level is a very powerful stimulus to eat more, gain weight, and return your weight to the starting point. Now let's imagine instead you went on a binge of eating. You spent an extended period of time eating at wonderful restaurants. You would get fatter and make more leptin, which would then suppress your intake again until your weight returned to the starting point. Now by such a mechanism, again weight can be maintained within a range. I'll point out to you that if you diet, and your weight falls, leptin level will fall and this is a potent stimulus to regain weight.