



Muscle Metabolism Myth

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A common thought in the health and fitness industry is “gain muscle and increase your metabolism”. This is technically true, but the effect is minimal. It has been estimated that 1 POUND of muscle will have a DAILY energy expenditure (BMR) of about 5 CALORIES (Wolfe, R. 2006). Therefore, even if someone was to gain 10 pounds of muscle they would only increase their BMR by 50 calories. However, it is not common for most people to gain this amount of muscle. Additionally, for people who are trying to lose weight, it doesn’t really work out this way. The reason that it will not actually increase their metabolism is because they will also be losing fat. Their fat loss will decrease their metabolic rate because fat has a metabolic rate of about 2 CALORIES per POUND (Wang, Z. et al). For example, if someone was to lose 20 lbs (a common goal) then their metabolic rate would drop by 40 cal/day and if they gained 5 lbs of muscle (a significant gain for most people on a weight loss program), resulting in an increase in metabolism of 25 cal/day, the end results would still be a net LOSS of BMR of 15/cal per day. I think this demonstrates that the common assumption of building muscle and revving up one’s metabolism, for most people, is not true. The true benefit of doing resistance training seems to be its’ ability to maintain the amount of muscle mass a person has and to promote the preferential breakdown/utilization of adipose tissue during a weight loss (calorie restricted) program (Bryner, et al). Resistance training also has many other potential benefits (Pollack, et al), but that is for another day.

Bryner RW, Ullrich IH, Sauers J, Donley D, Hornsby G, Kolar M, Yeater R. (1999). Effects of resistance vs. aerobic training combined with an 800 calorie liquid diet on lean body mass and resting metabolic rate. *J Am Coll Nutr.* 18(2):115-21.

Pollack, M. & Vincent, K. (1999). Resistance training for health and disease. *Med & Sci in Sports & Exer.* Vol 31 (1): 10-45.

Wang, Z., Heshka, S., Ahang, K. Boozer, C.N., & Heymsfield, S.B. (2001). Resting energy expenditure: systematic organization and critique of prediction methods. *Obesity Research*, 9: 331-336.

Wolfe, R. (2006). The underappreciated role of muscle in health and disease. *Am J Clin Nutr*, 84: 475-482