Figure S10. SNS regulation of catabolism and anabolism in skeletal muscle in response to high-intensity exercise.

Each component of adrenergic signaling is regulated in biphasic manner, where a burst of activity is followed by attenuation back to initial levels. Catabolism of intramuscular lipids and carbohydrate reserves occurs when intracellular levels of cAMP are highest, triggering activation of protein kinase A. Post-exercise cAMP levels subside after the Crtc/Creb transcriptional complex is activated to induce the expression of genes that direct anabolic replenishment of energy reserves (capacitance) and that increase the potential to catabolize fatty acids and glucose during subsequent exercise (capacity).