

CHAPTER 10	Oxygen Debt Answer Key	BLM 10.1.11A
ANSWER KEY		

1. Rate and force of muscle contractions increase the moment the dash begins, but it takes many seconds for breathing rate and cardiac output to increase.
2. Oxygen debt is occurring as ATP is provided anaerobically from creatine phosphate and fermentation. In other words, creatine phosphate is being used up and lactate is accumulating.
3. When the dash is completed, the skeletal muscle activity returns to resting levels, as does the need for oxygen.
4. Actual oxygen consumption remains high because the rate of aerobic respiration is elevated. The resulting extra ATP is used to replenish creatine phosphate and eliminate lactate after it is transported to the liver.