

Bulletproof Coffee: Fact or Myth?

There is an emerging fad spreading across the U.S. called “bulletproof coffee” in which several ounces of butter and oils are blended into a cup of black coffee before being consumed. The reported benefit of these added triglycerides includes a more sustained energy boost without the jitters that come from consuming too much caffeine at one time. Answer the following questions regarding the physiology behind these supposed benefits.

- a. Start by diagramming the entire pathway of the digestion and absorption of fats by the digestive system. Include what is happening in each section of the gastrointestinal tract, as well as all pertinent digestive hormones, enzymes, and mechanisms controlling GI motility.
- b. Some caffeine is absorbed in the mouth and stomach, but most is absorbed in the small intestine. Using your knowledge drawn above, explain how adding fat to coffee could affect *how quickly* the caffeine is absorbed after consumption.

- c. Once absorbed into the body, caffeine has a half-life of approximately 2.5 – 4.5 hours. Explain how adding fat to coffee could affect *how long* the caffeine would remain in circulation relative to drinking just a normal, non-buttery cup of coffee.

- d. Based on your analysis above, is there any physiological support for Bulletproof coffee giving a more sustained energy boost without jitters? Briefly explain.

- e. Would you recommend Bulletproof coffee to someone who has had their gall bladder removed? Why?