"Tea Enhances Insulin Activity"

Fred Mike Halvachs
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Tea has a long history as a folk remedy for numerous illnesses, but it has only recently been studied by the scientific community in the past twenty years. In that short time span tea has been found to protect against oxidative damage and in antibacterial, antiviral, anticarcinogenic, and antimutagenic activities, specifically due to the polyphenols present in tea. Recently, it has been thought that these polyphenols also increase insulin activity. The purpose of this study was to determine the insulin-enhancing properties of tea by analyzing it in vitro in rat epididymal adipocytes followed by high-performance liquid chromatography fractionation to see which component was most responsible for insulin-enhancement. It was shown that black, green, and oolong teas increased insulin activity >15-fold in the fat cell assay. HPLC showed that epigallocatechin gallate caused the greatest insulin-enhancing activity in green and oolong teas, and for black tea epigallocatechin gallate, as well as tannins, theaflavins, and other unidentified compounds increased insulin activity. Addition of 2% milk, skim milk, soy milk, and nondairy creamers, greatly decreased insulin-enhancing activity while addition of lemon did not affect insulin enhancing activity. Tea and its components, specifically epigallocatechin gallate contain in vitro insulin-enhancing activity.

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