

Research studies that showed “Fructose leads to increased triglyceride levels”

Title	Content	Reference
Endocrine and Metabolic Effects of Consuming Fructose- and Glucose-Sweetened Beverages with Meals in Obese Men and Women: <i>Influence of Insulin Resistance on Plasma Triglyceride Responses.</i>	Consumption of fructose-sweetened beverages increases postprandial triglycerides in obese subjects compared to glucose-sweetened beverages.	Karen et. al, 2011
Consumption of Fructose and High Fructose Corn Syrup Increase Postprandial Triglycerides, LDL-Cholesterol, and Apolipoprotein-B in Young Men and Women.	Young adults who consumed fructose and high fructose corn syrups sweetened beverages for 2 weeks at 25% energy have higher postprandial triglycerides and LDL-Cholesterol, and apolipoprotein-B. Thus, risk factors for cardiovascular disease are higher in young men and women who consumed fructose or high fructose corn syrups compared to young adults who consumed glucose.	Stanhope et. al., 2011
Dietary Fructose Reduces Circulating Insulin and Leptin, Attenuates Postprandial Suppression of Ghrelin, and Increases Triglycerides in Women.	Study on 12 normal-weight women has shown that consumption of high fructose meals produced a rapid and prolonged elevation of plasma triglycerides, because high fructose meals decreased circulating insulin and leptin and increased ghrelin, which leads to increased caloric intake and ultimately lead to weight gain and obesity.	Karen et. al., 2009
Dietary Fructose and Glucose Differentially Affect Lipid and Glucose Homeostasis.	Diets containing $\geq 20\%$ energy as fructose are more likely to cause hypertriglyceridemia compared with diets containing $\geq 20\%$ energy as either glucose or starch.	Ernst et. al., 2009
Fructose Consumption: <i>Potential Mechanisms for Its Effects to Increase Visceral Adiposity and Induce Dyslipidemia and Insulin Resistance.</i>	The most likely mechanism for the postprandial hypertriglyceridemia is increased hepatic de-novo lipogenesis (DNL). Unlike glucose, liver is the main site of fructose metabolism. A high-fructose diet may induce a lipid oversupply within the liver via increased DNL, resulting in liver triglyceride deposition and increased VLDL assembly and secretion.	Stanhope & Havel, 2008

References

- Karen, L. T., Joanne, G., Raymond, R. T., Tamara, N. D., Ryan, W. G., Sean, H. A., Nancy, L. K., Bethany, P. C., Kimber, L. S., Peter, J. H. (2011). Endocrine and Metabolic Effects of Consuming Fructose- and Glucose-Sweetened Beverages with Meals in Obese Men and Women: Influence of Insulin Resistance on Plasma Triglyceride Responses. *The Journal of Clinical Endocrinology and Metabolism*. Doi: <http://dx.doi.org/10.1210/jc.2008-2192>.
- Stanhope, K. L., Bremer, A. A., Medici, V., Nakajima, K., Ito, Y., Nakano, T., Chen, G., Fong, T. H., Lee, V., Menorca, R. I., Keim, N. L., Havel, P. J. (2011). Consumption of Fructose and High Fructose Corn Syrup Increase Postprandial Triglycerides, LDL-Cholesterol, and Apolipoprotein-B in Young Men and Women. *The Journal of Clinical Endocrinology & Metabolism*. Doi: <http://dx.doi.org/10.1210/jc.2011-1251>.
- Karen, L. T., Sharon, S. E., Matthias, T., Timothy, J. K., Daniel, R., Mark, H., Raymond, R. T., Nancy, L. K., David, D., Peter, J. H. (2009). Dietary Fructose Reduces Circulating Insulin and Leptin, Attenuates Postprandial Suppression of Ghrelin, and Increases Triglycerides in Women. *The Journal of Clinical Endocrinology and Metabolism*. Doi: <http://dx.doi.org/10.1210/jc.2003-031855>.
- Ernst, J. S., Joi, A. G., Michael, L. D. (2009). Dietary Fructose and Glucose Differentially Affect Lipid and Glucose Homeostasis. *J. Nutr.* Doi: 10.3945/jn.108.098186.
- Stanhope, K. L. and Havel, P. J. (2008). Fructose Consumption: Potential Mechanisms for Its Effects to Increase Visceral Adiposity and Induce Dyslipidemia and Insulin Resistance. *Curr Opin Lipidol.* 2008 Feb; 19(1): 16–24. Doi: 10.1097/MOL.0b013e3282f2b24a.