

Animal Study Using Hamsters (*Seib and Woo, 1999*)

- Produces higher levels of beneficial short-chain fatty acids than a cellulose diet
- Lowers liver cholesterol and increases serum HDL (“Good”) cholesterol when compared to a cellulose diet
- Lowers food consumption and weight gain compared to a cellulose diet

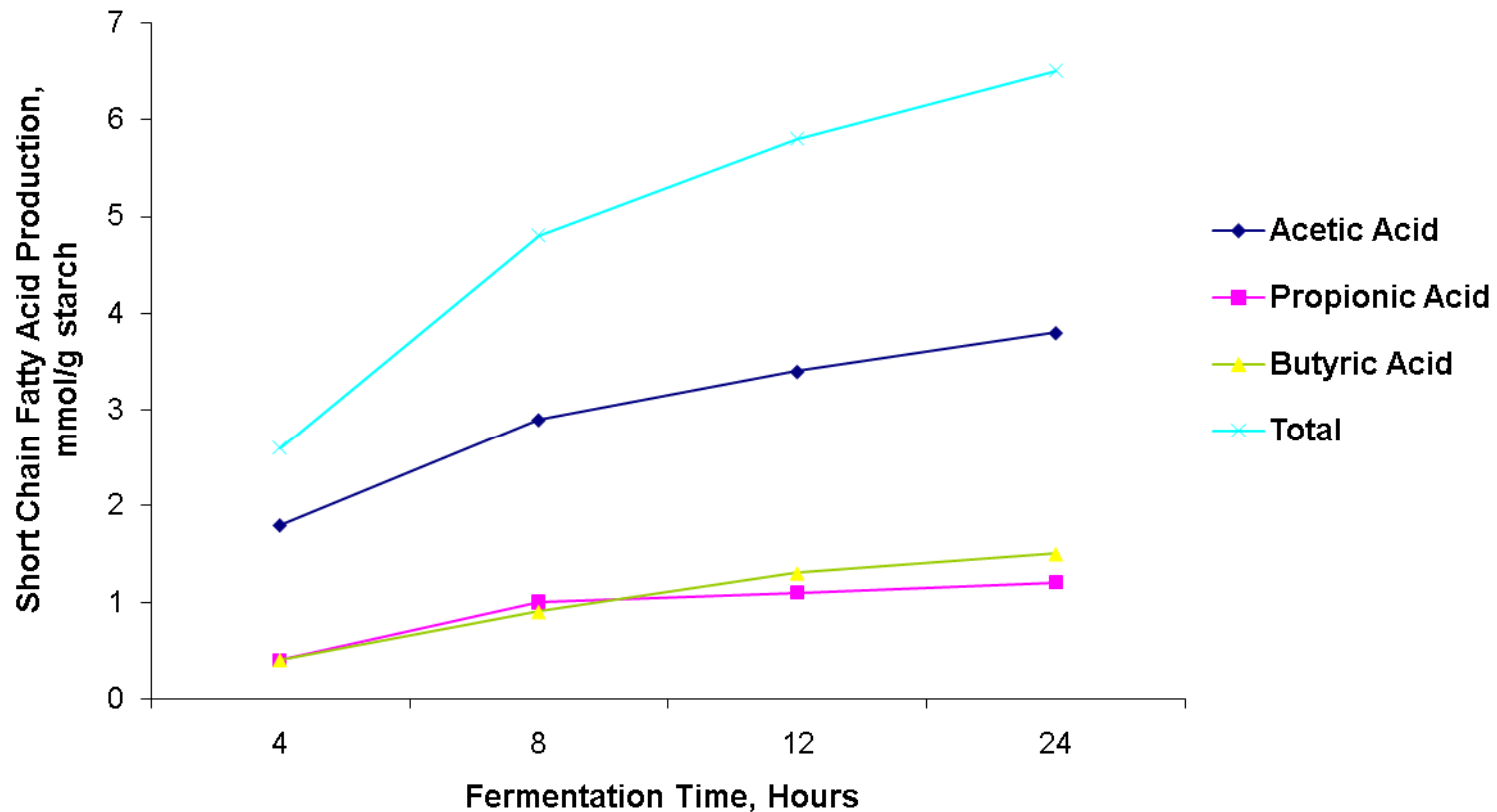
In Vitro Study (*Unpublished Study*)

- Fermented to beneficial short chain fatty acids over a 24-hour period during fermentation with human fecal inoculum

Human Study (*Al-Tamimi, 2007*)

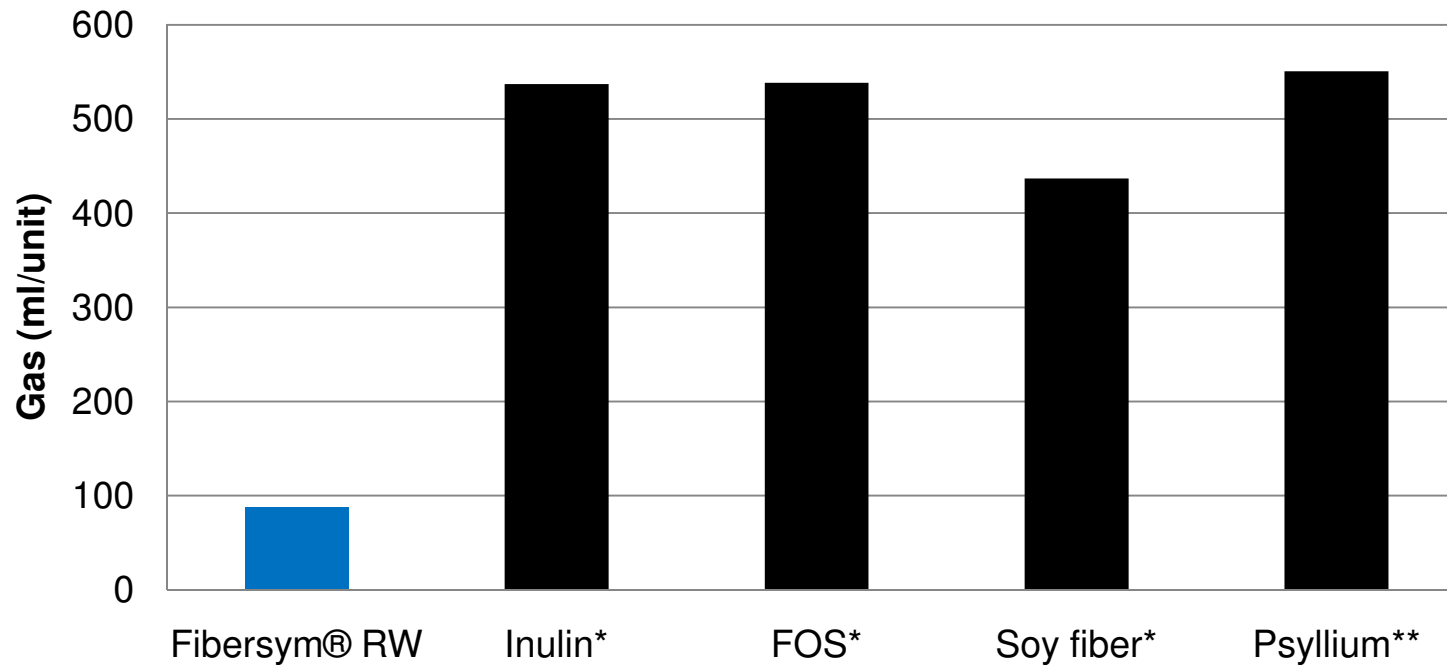
- Reduces postprandial glucose and insulin responses in healthy younger adults

Cumulative Short-Chain Fatty Acid Production After Fermentation of Dietary Fiber Residue from Fibersym® RW



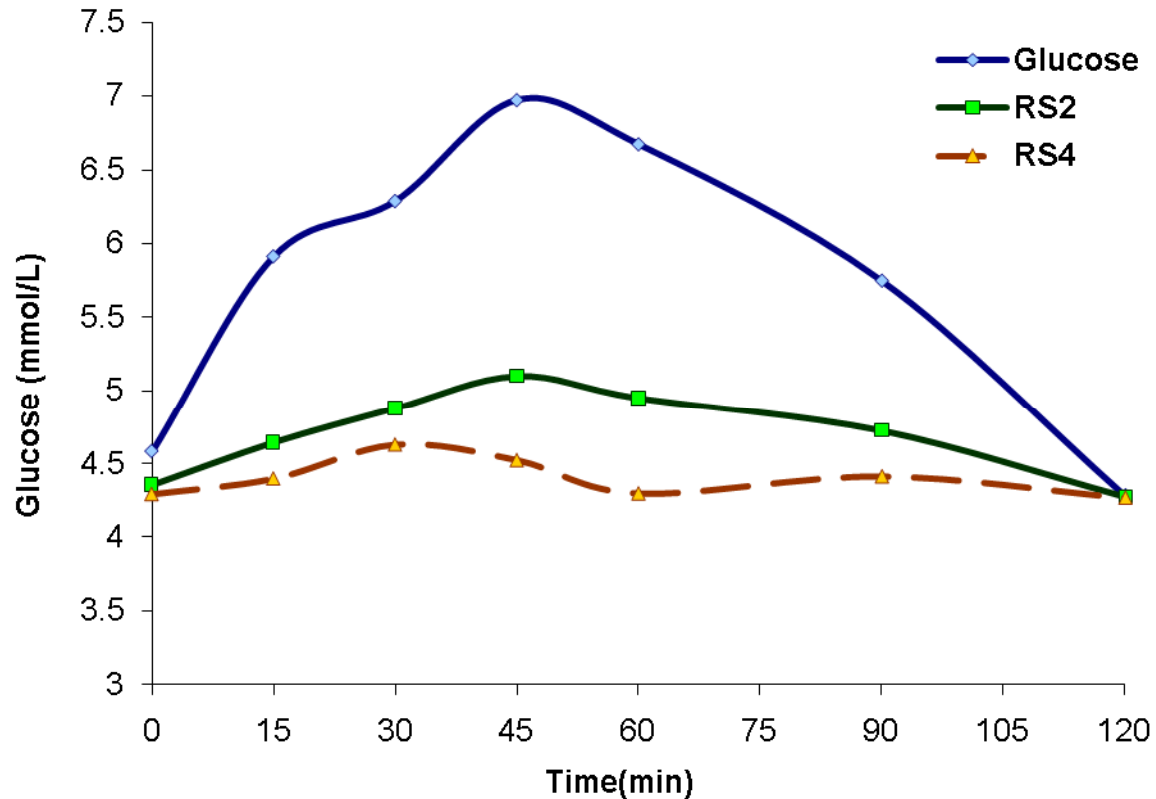
- The high level of dietary fiber residue in resistant wheat starch was fermented by human feces (colonic bacteria) to short-chain fatty acids for 24 hours (Fermentation by the method of *McBurney et al 1987*).

In Vitro Fermentation with Human Fecal Microbiota for 24 Hours



**Adapted from Van Hoeij et al 1997; **Adapted from McBurney et al 1989.*

Resistant Starch on Glycemia Comparison of RS4 Wheat (Fibersym® RW) vs. RS2 High-Am Corn

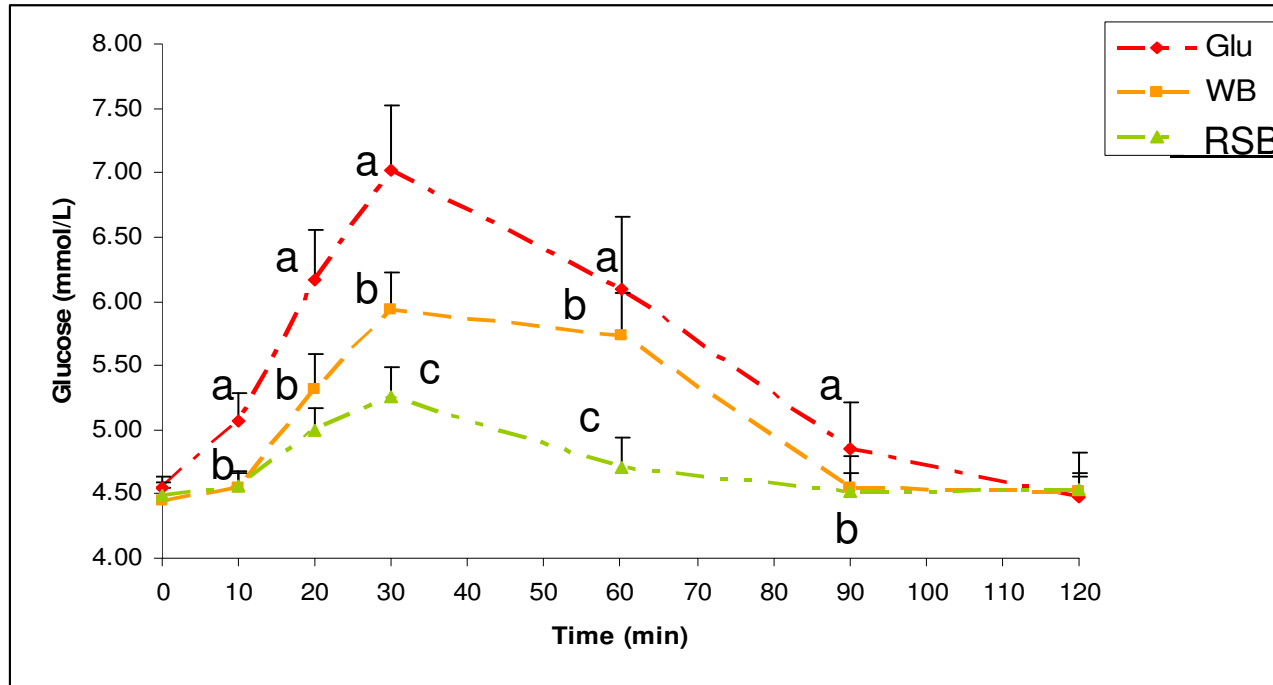


- 20g of RS2 and RS4 were mixed in equal amounts of water and capillary glucose were measured over 2 hours with standard GI method

Al-Tamimi et al. Unpublished data 2007

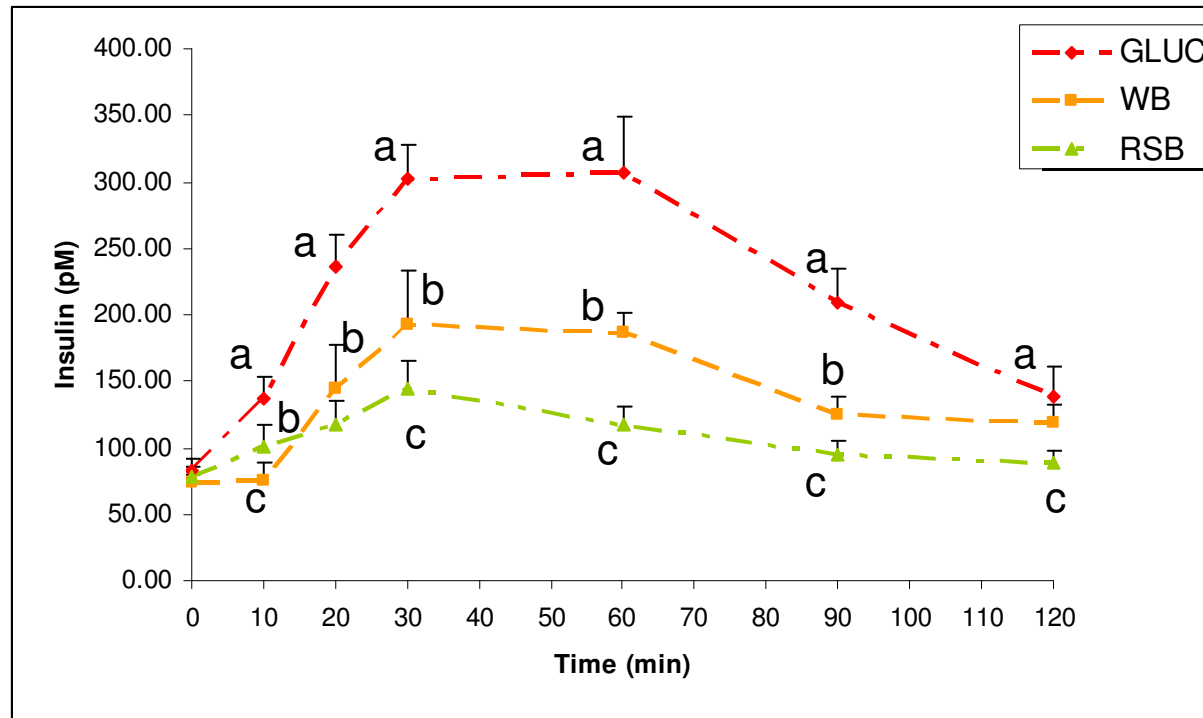
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Glycemic Response of Fibersym[®] RW in Healthy Younger Adults



MEAN \pm SEM blood glucose response for 13 healthy younger adults after consumption of Glucose Drink (\blacklozenge Glu), Puffed Wheat Bar (\blacksquare WB), and Resistant Wheat Starch (\blacktriangle RSB). Means of blood glucose at the same time with different letters differ significantly ($p < 0.05$).

Insulin Response of Fibersym[®] RW in Healthy Younger Adults



MEAN \pm SEM blood insulin response for 13 healthy younger adults after consumption of Glucose Drink (\blacklozenge GLUC), Puffed Wheat Bar (\blacksquare WB), and Resistant Wheat Starch (\blacktriangle RSB). Means of blood insulin at the same time with different letters differ significantly ($p < 0.05$).

Al-Tamimi, Ph.D. Dissertation 2007, Kansas State University

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