In a similar study, Spears et al. (2010) supplemented 0, 3, or 9 mg of chromium per day for 0, 0.47, 0.94 and 1.42 mg supplemental chromium per kilogram of diet dry matter to groups of multiparous Holstein cows. Chromium reduced serum insulin and insulin-glucose ratios for 15 minutes after glucose infusion, indicating greater insulin sensitivity.

**Intake, milk production**

Spears et al. (2010) reviewed the literature and concluded that most studies with supplemental chromium significantly increased or tended to increase milk production and intake. There are additional studies that supplemented chromium in an organic form other than chromium propionate. Researchers at the University of Wisconsin (Haydit et al., 2001) supplemented cows with 0, 0.03, 0.06 and 0.12 mg of chromium as chromium methionine and 0, 0.2 mg of chromium as glucose with 0, 0.28, 0.49 and 0.61 mg of dry matter intake for 28 days before and after calving. Insulin sensitivity was increased before calving, with those supplemented with 0.03 mg/kg of dry matter intake for 28 days before and after calving. There was an improvement in prepartum intake with chromium supplementation. However, supplementation had a quadratic effect on intake and milk production after calving, with those supplemented with 0.12 mg/kg of dry matter intake increasing prepartum intake with chromium supplementation had a quadratic effect on intake and milk production after calving, with those supplemented with 0.12 mg/kg of dry matter intake increasing prepartum intake with chromium supplementation. However, supplementation had a quadratic effect on intake and milk production after calving, with those supplemented with 0.12 mg/kg of dry matter intake increasing prepartum intake with chromium supplementation.