Type 2 diabetes (T2D) therapies should provide postprandial plasma glucose (PPG) control across all meals. As previously reported (LEAD-4), liraglutide 1.2 and 1.8 mg in combination with metformin and rosiglitazone significantly reduced PPG after breakfast versus placebo over 26 weeks. This post-hoc analysis further examined PPG effects of liraglutide. Subjects were treated with liraglutide 1.2 mg (n=178), 1.8 mg (n=178) and placebo (n=177), all combined with metformin plus rosiglitazone. Subjects (%) below ADA PPG target (10 mmol/L) 90 min after each meal and after all three meals combined was determined using 7-point self-measured plasma glucose SMPG profiles. Time below target was assessed using 15-hour post-dosing SMPG profiles. Treatment comparisons were performed using logistic regression (ITT, LOCF); linear regression was used to analyse proportion of time under target. Across all three meals, a greater proportion of subjects were below PPG target with liraglutide 1.2 (60%) and 1.8 mg (56%) versus placebo (26%); odds of achieving target across all three meals was greater for liraglutide 1.2 (4.29) and 1.8 mg (3.54) versus placebo (p<0.001). A greater proportion of liraglutide subjects were more likely to be below target after individual meals versus placebo (p≤0.001). Liraglutide subjects spent a greater proportion of time below target versus placebo (83%/85% versus 61%; p<0.001). In T2D patients treated with metformin and rosiglitazone, odds of being below ADA PPG target across all three meals increased with addition of liraglutide versus placebo. Improvements were also seen after individual meals versus placebo, and liraglutide subjects spent more time below target.