

Online-only appendix

Supplementary Table 1. One-year changes (95 % CI intervals) in body weight, fasting and 2-hour glucose and insulin values, HOMA-IR and HOMA-IS, and energy intake, by the randomization group (intervention vs. control) and the family history of type 2 diabetes in the DPS participants.

| Variable | | Intervention | Control | P-value for interaction [#] |
|----------------------------------|-----|---------------------|----------------------|--------------------------------------|
| Δ Body weight, kg | FH+ | -4.6 (-5.3 to -3.9) | -0.9 (-1.7 to -0.2) | 0.457 |
| | FH- | -3.6 (-4.5 to -2.7) | -0.5 (-1.4 to 0.3) | |
| Δ Fasting plasma glucose, mmol/l | FH+ | -0.2 (-0.3 to -0.1) | 0.1 (0.0 to 0.2) | 0.831 |
| | FH- | -0.2 (-0.3 to 0.0) | 0.2 (0.0 to 0.3) | |
| Δ 2-h plasma glucose, mmol/l | FH+ | -1.1 (-1.4 to -0.8) | -0.3 (-0.6 to 0.0) | 0.093 |
| | FH- | -0.4* (-0.8 to 0.0) | -0.2 (-0.6 to 0.2) | |
| Δ Fasting insulin, mU/l | FH+ | -2.2 (-3.3 to -1.0) | -0.4 (-1.6 to 0.8) | 0.486 |
| | FH- | -1.2 (-2.9 to 0.4) | -1.2 (-2.7 to 0.3) | |
| Δ 2-h insulin, mU/l | FH+ | -27 (-35 to -18) | -8 (-17 to 1) | 0.878 |
| | FH- | -29 (-42 to -17) | -13 (-24 to -1) | |
| Δ HOMA-IR | FH+ | -0.8 (-1.1 to -0.4) | -0.1 (-0.4 to 0.3) | 0.647 |
| | FH- | -0.5 (-1.0 to 0.0) | -0.2 (-0.6 to 0.2) | |
| Δ HOMA-IS | FH+ | -6.7 (-19.1 to 5.7) | -3.6 (-16.6 to 9.5) | 0.555 |
| | FH- | 2.3 (-15.4 to 20.0) | -16.0 (-32.4 to 0.5) | |
| Δ Energy intake, kcal/d | FH+ | -209 (-267 to -151) | -80 (-142 to -18) | 0.920 |
| | FH- | -196 (-274 to -118) | -74 (-148 to 0) | |

[#] interaction between FH and intervention

* $p < 0.05$ for within group comparison between FH+ and FH- groups. p -values for the interaction between the intervention/control group and family history of diabetes are presented. Analyses were adjusted for age, sex, baseline BMI, baseline level of the respective trait, and center (general linear model).

Supplementary Table 2. Incidence of diabetes by family history in the intervention and control groups during the 4-years of follow-up and during the whole follow-up period.

| | | <i>Kaplan-Meier</i> | | | <i>Cox regression*</i> | | |
|-------------------------------|-----|---------------------------------|---------------|---------|----------------------------|---------|-------------------|
| | | Mean time to diagnosis (95% CI) | | P-value | Effect of the intervention | | P for interaction |
| | | Intervention | Control | | HR (95% CI) | P-value | (intervention*FH) |
| Follow-up during intervention | FH- | 5.2 (4.8-5.5) | 5.1 (4.8-5.4) | 0.6140 | 0.61 (0.33-1.12) | 0.1135 | 0.1869 |
| | FH+ | 5.6 (5.5-5.8) | 4.9 (4.6-5.2) | 0.0002 | 0.42 (0.26-0.70) | 0.0008 | |
| Entire follow-up | FH- | 8.4 (7.6-9.2) | 7.8 (7.0-8.5) | 0.1348 | 0.51 (0.31-0.83) | 0.0064 | 0.9720 |
| | FH+ | 9.2 (8.8-9.7) | 7.2 (6.6-7.7) | 0.0004 | 0.55 (0.37-0.80) | 0.0020 | |

* adjusted for age, sex, BMI at baseline, fasting glucose at baseline, and center