for intent-to-treat (ITT) analysis. Using the Cox regression analysis the risk reduction was calculated for major subgroups. Reduction in microalbuminuria is an outcome of 2 type diabetes by the attack. The effect of type diabetes was the second year (at the time of the EASD data of the whole group will be available). In the intervention group, dietary advice was given every 3 months according to national guidelines healthy nutrition. Furthermore, a weight loss of 5-10 kg was aimed at. To increase physical activity an exercise program was designed, which included a prescription of daily physical activity in combination with supervised exercise sessions of moderate to high intensity. Control subjects received detailed information about the benefits of a healthy diet and increased physical activity; no visits were scheduled throughout the year. Annual glucose tolerance, body composition and maximal aerobic capacity were measured in both groups.

Results: As published elsewhere, after 1 year this intervention program induced beneficial changes in lifestyle, leading to an improved glucose tolerance (delta 2-hour glucose: INT -0.8 mmol/l, CON 0.2 mmol/l; P-value <0.05; n=102). Here we present the results of the first 55 subjects after 2 year follow-up (27 intervention/28 control). Baseline characteristics were comparable between groups (not shown). Changes after 2 year in body weight (INT -5.2±5.9 kg; CON: +0.9±6.6 kg), BMI (INT: -0.9±0.3 kg/m^2; CON: +0.3±0.2 kg/m^2) and waist (INT: -2.2±0.9 cm; CON: +0.4±0.8 cm) were significantly different between control and intervention group (all P<0.05). Changes in maximal aerobic capacity were seen after year 2 between two groups but values did not reach significance in this group of 55 subjects (INT: +0.4±0.4 L/min; CON: -0.0±0.4 L/min). Compared to the changes after 1 year a small increase in body weight, BMI, and waist and a small decrease in aerobic capacity was seen during the second year in the intervention group. Despite the small rebound in these variables during the second year, the decrease in 2-hour glucose in the intervention group seen after 2 year was of the same magnitude as the decrease seen after 1 year (-0.6±0.3 mmol/l after 1 year and -0.7±0.4 mmol/l after 2 year). No change was observed in the control group (+0.1±0.4 mmol/l after 1 year and 0.0±0.4 mmol/l after 2 year). As stated before, data of the whole group will be available at the time of the EASD.

Conclusion: SLIM showed that a lifestyle intervention program improves glucose tolerance after 1 year. First results after 2 year follow-up indicate that despite a small rebound in body-weight and aerobic capacity, glucose tolerance is improved to the same extent as after the first year. This gives rise to a reduction of the risk on progression to Type 2 diabetes mellitus.  

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The effect of diet and physical training in patients with impaired glucose tolerance: 2-year follow-up

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Aim: To investigate the influence of diet and physical training in patients with impaired glucose tolerance (IGT) on transformation from IGT to diabetes mellitus.

Patients and Methods: 451 patients with IGT (male/female -65/386) were included. Mean age was 61.7±10.5 yrs (range 30-83 yrs). In group 1 patients were randomly assigned to treatment (diet and physical training) or to control group. Diabetic patients and patients with impaired glucose tolerance (IGT) and normal glucose tolerance were included in each group. To compare results within group changes were calculated as difference between baseline and endpoint values. For changes between groups, analysis of covariance (ANCOVA) was used. Results: The study was stopped early due to an increase in the frequency of complications among the IGT patients in the intervention group compared to the control group. At 2 year follow-up the glucose tolerance test was performed and data from diaries were analyzed. According to treatment compliance patients were divided on 3 groups: keeping diet and performing physical training -40% (group 1), unsatisfied 60% (group 2) and refueled treatment -8% (group 3). Proportion of patients with diabetes mellitus, IGT and normal glucose tolerance were calculated for each group. To compare results within group changes were calculated as difference between baseline and endpoint values. For changes between groups, analysis of covariance (ANCOVA) was used. Results: The significant increase of proportion of patients with new-diagnosed DM from 1st to 3rd group was revealed: the incidence of DM in group 1 was 7.6%, in group 2~19.3%, in group 2~48.2% (p<0.05 between all groups). Improvement of glucose tolerance from IGT to normal test was detected in 61% of patients of 1st group, 37.3% in 2nd group and only in 6% in patients of 3rd group (p<0.05). In 31.4% of patients in 1st group the glucose tolerance was not changed. In this group this parameter was lower than in other two groups. There were no differences in the frequency of un- 

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Study on lifestyle-intervention and impaired glucose tolerance

Maastricht (SLIM); two-year results

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