



ARRESTING INSULIN RESISTANCE WITH AN INTEGRATIVE HEALTH INTERVENTION

Poster Contributions
Poster Hall, Hall C
Sunday, March 19, 2017, 9:45 a.m.-10:30 a.m.

Session Title: Diabetes and Other Issues in Cardiovascular Prevention
Abstract Category: 32. Prevention: Clinical
Presentation Number: 1277-049

Authors: *Mariam Kashani, Arn Eliasson, Claire Fuller, Elaine Walizer, Nancy Tschiltz, Ellen Turner, Marilyn Grunewald, Joy Halsey, Renata Engler, Todd Villines, Marina Vernalis, Walter Reed National Military Medical Center, Bethesda, MD, USA*

Background: Insulin resistance (IR) is the first signal of glucose dysmetabolism. IR precedes the development of prediabetes and eventually frank diabetes. Interventions which reverse this pathophysiology also benefit other risk factors of cardiovascular disease (CVD). We examined the effect of an integrative health intervention (beyond traditional approaches) on the CVD risk profile of subjects with IR characterized by elevated Homeostatic Model Assessment (HOMA).

Methods: Consecutive subjects of the Integrative Cardiac Health Project Registry, a 12-month CVD health intervention focusing on four pillars: nutrition, exercise, stress and sleep improvement, completed validated questionnaires and laboratory tests. Subjects were categorized for IR (HOMA ≥ 2.8). Differences were analyzed using t-test.

Results: Of 630 subjects, 70 had diabetes and were excluded from analysis, 207 subjects (33%) had IR by HOMA (63% women, mean age 55 ± 12 years, 56% White, 36% Black, 4% Hispanic). Of 207 IR subjects, 70 (34%) reverted to normal HOMA values upon completion of the intervention.

Risk Factor (n=207)	Baseline	12-month	p value
Fasting Glucose (mg/dL)	99.3 ± 11.5	96.4 ± 11.5	0.009
Fasting Insulin (uIU/mL)	19.4 ± 7.9	16.4 ± 9.3	0.0001
HOMA [(Glucose x Insulin)/405]	4.78 ± 2.21	3.96 ± 2.40	0.0001
Total Cholesterol (mg/dL)	181.1 ± 41.0	172.6 ± 38.1	0.03
Low Density Lipoprotein (mg/dL)	109.9 ± 35.0	103.2 ± 33.9	0.004
Triglyceride (mg/dL)	139 ± 109	117 ± 63	0.03
Body Mass Index (kg/m ²)	32.4 ± 4.8	31.6 ± 4.9	0.08
Rate Your Plate (78 points)	60.4 ± 7.4	66.1 ± 6.2	0.0001
Aerobic Exercise Time (min/week)	124 ± 127	191 ± 120	0.001
Perceived Stress Scale (56 points)	21.2 ± 8.7	17.6 ± 8.2	0.0001
Pittsburg Sleep Quality Index (21 points)	7.3 ± 4.0	5.7 ± 3.8	0.0001
Fatigue Score (10 points)	4.5 ± 2.3	3.4 ± 2.3	0.0001

Conclusions: As characterized by this population, a comprehensive approach to CVD risk reduction is warranted given the elevated risk facing middle-aged women. An integrative health intervention, beyond traditional measures, emphasizing combined improvements in nutrition, exercise, stress and sleep can arrest the pathophysiology of IR, preventing development of diabetes.