Abstract

Fasting serum C-peptide immunoreactivity was determined on Nauruans, a Micronesian population with a high prevalence of diabetes. In Micronesian subjects neither age nor gender had a significant effect on fasting serum C-peptide. In non-diabetic subjects, as has been shown previously for Caucasoid subjects, both obesity and fasting plasma glucose levels were determinants of fasting serum C-peptide. Obesity was the major determinant. Taken overall, mean fasting serum C-peptide increased then possibly fell in subjects grouped by increasing 2-h post-glucose plasma glucose levels. Mean fasting serum C-peptide in newly-diagnosed diabetic subjects was greater than that in non-diabetic subjects with a similar degree of obesity, supporting the concept that the transition to diabetes may be associated with an increase in insulin resistance. The data for non-diabetic subjects were compared with serum C-peptide measured in the same laboratory on samples from a Caucasoid population in Busselton, Western Australia. There was no difference in fasting serum C-peptide level between Micronesian and Caucasoid subjects approximately matched for obesity and fasting plasma glucose levels.