Diabetes Mellitus is a chronic disease which has been considered as a serious   health problem in the world because the complication of disease has effected to quality of life. The researcher studied the difference among diabetes mellitus group, high fasting blood sugar group and normal group with sample size of 342, or 114 for each group which were collected from the Survey of Ministry of Public Health in Banpong District, Ratchaburi Province during August - December 1991. Chi square test for the association between disease group and selected variables were done. The result showed that selected variables such as age , sex, marital status, occupation, area, body mass index and exercise behaviour were important variables. When Discriminant Analysis was applied to this data set; Age(Age), Marital Status(Maritals), Body Mass Index(BMI), Alcohol Consumption more than 187.5 c.c. per week(Grpalc1), Alcohol Consumption less than or equal 187.5 c.c. per week(Grpalc2),) and Exercise Behaviour(Exerscor) were simultaneously significant important variables in discriminate the three groups. The following equation was obtained: D = 0.073 Age + 0.076 BMI - 0.098 Exerscor - 0.256 Maritals +0.518 Grpalc1 +0.664 Grpalc2 - 4.957.

If D from function greater than 0.603,then it was determined to be diabetes mellitus group. If D from function was in between -0.327 and 0.603, then it was determined to be high fasting blood sugar group. The rest of the group which had D less than -0.327 were in normal group. The agreement on prediction of diabetes mellitus group, high fasting blood sugar group and normal group was 65.2 percent. The accuracies of prediction to actual group of diabetes mellitus group, high fasting blood sugar group and normal group were 61.4, 59.6 and 74.6 percent respectively.