Aim of this study was to verify whether obesity and overweight in pregnancy are risk factors for preterm delivery. Study design: we examined data from 271 patients delivering singleton preterm neonates (25-36.6 weeks) between 1st January 2010 and 31st December 2011 at the Hospital Buccheri - La Ferla in Palermo, Italy (total n. of deliveries in the same period: 4,384). We considered the following parameters: maternal age, parity, pre-pregnancy BMI, educational level, gestational age at birth. Preterm births (PTB) were classified as early and late PTB. Obesity in pregnancy was classified according to the parameters set by the WHO as: Normal Weight (NW), Underweight (UW), Overweight (OW), Obese (OB). Results: The overall prevalence of PTB was similar in OW women compared to NW women (5.2% vs 6.0%, p-value 0.38). On the contrary, PTB was more common in OB women, compared to NW+OW (8.7% vs 5.8%, p = 0.022). OB women also presented with a slightly higher prevalence of early PTB (2.5% vs 1.3%, p-value 0.052). GA was slightly but significantly related to maternal age (with GA decreasing as maternal age increases) (p-value = 3.758e-06). Educational levels were significantly different in different BMI classes, with OB women having the lowest rates of high education. The most interesting pattern was the reduction of early PTB with increasing education level.