Objective The aim of this study was to determine the dynamic between periodontitis and stress and the incidence of preterm birth (PTB), low birth weight (LBW) and preterm low birth weight (PLBW) in pregnant women from Pasto, Nariño, Colombia. Methods Forty-six women who attended to "Hospital Local Civil" localized in the city were involved. Periodontal clinical evaluation, pregnancy outcome variables and a stress scale were collected. Data were analyzed using descriptive and analytic statistics. Results The incidence of PTB was 13 %, of LBW was 4.3 %, and the occurrence of PLBW was 21.7 %. Our findings showed that the presence of periodontitis and stress all together increase the risk of LBW babies (OR=4.6; 95 % CI: 0.2-86.6). Regarding, periodontitis and stress interaction, the risk of PTB (OR=0.9; 95 % CI: 0.08-9.6) and PLBW (OR=1.1; 95 % CI: 0.1-7.1) decreased in the presence of these two variables, although their values were higher in the absent of stress (PTB, OR=2.3; 95 % CI: 0.3-14.7 and PLBW, OR=10.3; 95 % CI:1.1-93.2). Conclusions The periodontal disease in this study was associated with PTB, LBW and PLBW. However, their risk depends on the physiological changes produced by stress.

Keywords
Pregnancy, periodontal diseases, psychological stress, physiological stress, preterm birth, infant low birth weight.