Low birth weight is a major public health problem worldwide, contributing significant risk for infant mortality and childhood handicap. In the last 15 years, new information has suggested that subclinical reproductive tract infection or infection at distant sites, such as periodontitis, may be an important cause of premature labor and low birth weight infants. Campylobacter species such as C. jejuni, have emerged as important enteric and reproductive human pathogens and have been associated with septicemia and occasionally with abortion, premature labor and severe perinatal infection. Recent evidence has suggested that oral pathogens in periodontal infection are associated with pre-maturity. **Objective:** We sought to determine whether oral strains of C. rectus were abortofacient or inducing intrauterine fetal death and growth restriction in the pregnant mouse model. **Methods:** On gestation day (gd) 7.5, pregnant mice were challenged with live C. rectus at concentrations of 0, 10^7 or 10^9 CFU/ml. Pregnant mice were sacrificed on gd 16.5 and fetuses evaluated for viability, weight, and crown rump length. Maternal liver and spleen as well as placenta were also collected. **Results:** Dams receiving C. rectus had more resorptions (27.7% and 33.1% for 10^7 and 10^9 CFU/ml groups, respectively) than controls (10.1%). Increases in the number of growth-restricted fetuses (as measured by weight) were also observed in the challenged groups (43%) as compared to controls (2.1%). Fetuses from the 10^9 CFU/ml challenged group weighed significantly less (0.49±0.05g) and had crown rump lengths that were shorter (14.69±0.56mm) than the controls (0.53±0.04g; 15.51±0.72mm). In addition, C. rectus DNA was detected in both the liver and placental tissues from treated groups based on polymerase chain reaction (PCR) methods. **Conclusion:** Treatment of pregnant dams with C. rectus increases fetal resorptions and growth restrictions.