

Poultry Processing Work And Respiratory Health Of Latino Men And Women In North Carolina

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Rationale: Poultry processing workers encounter numerous inhalation hazards on the job, but little is known about the respiratory health status of this workforce. We conducted this study to evaluate the association between poultry processing work and respiratory health among working Latino men and women in North Carolina.

Methods: We conducted a cross-sectional study among adults living in communities surrounding three poultry processing plants. Between May 2009 and November 2010, 402 poultry processing workers and 339 workers in a comparison population employed in other manual jobs completed interviewer-administered questionnaires to provide information about their work activities and respiratory symptoms. Of these participants, 279 (69%) poultry processing workers and 222 (65%) workers in the comparison population also completed spirometry testing to provide measurements of forced expiratory volume in one second (FEV₁) and forced vital capacity (FVC).

Associations of poultry work, including specific poultry processing job activities, with nasal symptoms, current asthma, and measurements of lung function were evaluated using general estimating equations (GEE) to accommodate non-independence of observations resulting from our recruitment of participants within housing units and recruitment sites.

Results: Among the 402 poultry processing workers, packing (26%) and cutting (22%) poultry were the most frequently reported poultry processing activities. Nasal symptoms were reported by 25% of poultry processing workers and 29% of the comparison population. Current asthma was reported by 9% of the poultry processing population and 10% of the comparison population. Neither nasal symptoms (adjusted odds ratio [AOR]: 0.91, 95% confidence interval [CI]: 0.59, 1.40) nor asthma (AOR: 0.96, 95% CI: 0.57, 1.62) were associated with poultry processing overall or with specific poultry processing job activities. Relative to the comparison population, adjusted mean FEV₁ and FVC were lower in the poultry processing population, particularly among men (FEV₁: -89 mL, 95% CI: -203, 25; FVC: -84 mL, 95% CI: -220, 53) and men who reported sanitation job activities (FEV₁: -192 mL, 95% CI: -353, -31; FVC: -206 mL, 95% CI: -421, 9).

Conclusions: In this large observational study, poultry processing work was not associated with self-reported respiratory symptoms. Lower measurements of lung function suggest that despite the low prevalence of respiratory symptoms reported, poultry processing work may affect lung function.

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