The Detection of Peanut Protein on Eating Surfaces in Monterey County Public Schools and on Commercial Passenger Airliners

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Peanut allergy is common. Avoidance of peanut is the mainstay of treatment, although accidental exposure frequently occurs. Public schools and commercial airliners have initiated “peanut-free” policies, but it is unknown if these policies eliminate the presence of peanut protein. Samples were obtained from eating surfaces at public schools in Monterey County, CA, and from airplane tray tables on domestic commercial airliners. If a school had a “peanut free” eating area, swabs were obtained from “peanut free” areas and areas allowing peanuts. Peanut protein detection was performed using an antibody mediated lateral flow assay. Levels of peanut protein were determined semi-quantitatively and categorized as absent, light, moderate or heavy. Samples were obtained from 5 different schools. Airliner samples were obtained from 4 domestic airlines. However, “peanut free” areas had lower amounts of detectable peanut protein when compared to areas allowing peanuts. Of the airline samples, 33% of peanut serving airlines contained detectable peanut protein; 30% of non-peanut serving airlines showed detectable peanut protein. Peanut protein is a ubiquitous contaminant on eating surfaces in public schools, regardless of a “peanut free” policy being in place. However, “peanut free” areas within schools did appear to have lower levels of peanut protein compared to areas allowing peanuts. Commercial airliners were found to have peanut protein contamination on tray tables approximately 30% of the time, regardless of peanuts being served on the airline. Peanut allergic individuals need to be aware that peanut protein is present on eating surfaces in public schools and on some commercial airliners, regardless of “peanut-free” policies.

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