# The Effect of Antibiotic Usage on the Prevalence of Bacterial Enteric Pathogens

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OBJECTIVE : To determine if there is a relationship between consumption of antibiotics, prevalence of diarrhea, and infection with multi-resistant toxigenic *E. coli*.

BACKGROUND : Previous studies have shown that many entero-toxigenic *E. coli* in the Far East are resistant to multiple antibiotics (1). Furthermore, the plasmid(s) coding for enterotoxin can occasionally hybridize with plasmids coding for antibiotic resistance (2). To determine how frequently this occurs in nature, the rectal flora of a population known to be frequent consumers of antibiotic was compared to that of a control population.

METHODS : In May 1979, 1090 prostitutes in Angeles City, Republic of the Philippines, were interviewed and urine and rectal cultures were collected. Six hundred and one food handlers were also interviewed and urine and stool specimens were collected.

Specimens were transported to Bangkok in Cary-Blair transport media. These specimens are in the process of being screened for enteric pathogens including $tox^+$ *E. coli*. Twenty per cent of the intestinal flora of each group is being tested for antibiotic resistance.

RESULTS : 28.6 per cent of the prostitute population vs 2.2 per cent of the food handlers have a history of taking antibiotics within the week prior to culture. Ten per cent of the prostitute population vs < 1 per cent of the food handlers had antibiotics detectable in their urine. 7.4 per cent of the prostitutes admitted to having had diarrhea in the preceding week vs 1.8 per cent of the food handlers. The bacteriological results are still not complete.

REFERENCES ;

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