

Acute Gastroenteritis and Recreational Water: Highest Burden Among Young US Children

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ABSTRACT

Objectives. To provide summary estimates of gastroenteritis risks and illness burden associated with recreational water exposure and determine whether children have higher risks and burden.

Methods. We combined individual participant data from 13 prospective cohorts at marine and freshwater beaches throughout the United States (n = 84 411). We measured incident outcomes within 10 days of exposure: diarrhea, gastrointestinal illness, missed daily activity (work, school, vacation), and medical visits. We estimated the relationship between outcomes and 2 exposures: body immersion swimming and *Enterococcus* spp. fecal indicator bacteria levels in the water. We also estimated the population-attributable risk associated with these exposures.

Results. Water exposure accounted for 21% of diarrhea episodes and 9% of missed daily activities but was unassociated with gastroenteritis leading to medical consultation. Children aged 0 to 4 and 5 to 10 years had the most water exposure, exhibited stronger associations between levels of water quality and illness, and accounted for the largest attributable illness burden.

Conclusions. The higher gastroenteritis risk and associated burden in young children presents important new information to inform future recreational water quality guidelines designed to protect public health

Full Text

http://ftp.sccwrp.org/pub/download/DOCUMENTS/JournalArticles/937_AcuteGastroenteritisAmongYoungUSChildren.pdf