

SP-004

Ambient Temperature and Mortality in Korea: The Effect of Pm10 in Elderly

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Extreme ambient temperature has been associated with increased daily mortality across the world. We describe the ambient temperature-mortality association adjusting PM10 for three cities in Korea, Seoul, Daegu and Busan, and identify a threshold temperature and the percent increase in mortality. We observed that threshold temperatures vary by the age and cities. We adapted generalized linear modeling with natural cubic splines to examine the association between daily mean temperature and total mortality in a threshold model. We also conducted a time-series analysis adjusting for day of the week, humidity, influenza and long-term time trend. The threshold temperature for all age was estimated to be 25.2°C – 28.6°C, during study period 2000-2007. For the daily mean temperature increase of 1°C above the thresholds estimated percentage increases in total mortality were 2.39 – 9.16 for all age group and 2.4-12.8 for elderly group. The threshold temperature for elderly (age above 65) was estimated to be 25°C – 28.7°C. We found higher percent increases for elderly rather than all age group. This study identified increased mortality due to exposure to elevated ambient temperature adjusting PM10. The importance of effects of daily mean temperature and age-specific threshold temperatures suggests that analyses of the impact of climate change should take special susceptibility of elderly to environmental risks into consideration.

SP-005

A Conceptual Framework for the Provision of Non-Local Based Emergency Medical Relief Service During Acute Emergency Phase Post Natural Disaster in Low & Middle Income Countries

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Background: Whilst an array of international/non-local health actors might be supporting medical relief actions and health system recovery during acute emergency phase post natural disaster in low/middle income countries, limited analysis has been conducted to examine the role of these non-local actors might have played in emergency medical service delivery. The goal of this paper is to review existing literature and evidence so as to conceptualize how these non-local attempts might have addressed population health needs and potentially assisted in the recovery of the disrupted health systems.

Methods: Literature review was performed by keyword search in PUBMED, MEDLINE and ELDIS during April-May 2009.

Results: Search results indicated a major gap in documented evidences and discussions to conceptualize

issues around non-local health/medical relief activities during post natural disasters in low & middle income countries. Based on study findings, three different post disaster medical/health service delivery models were proposed to characterize the role of non-local health/medical actors and actions during acute phase post disaster.

Conclusion: Findings may assist policymakers and emergency response planners to maximize efficiency in natural disaster medical responses. It might also provide a decision making framework for non-local based health relief actors to evaluation their participations during early health sector recovery post natural disaster in middle/low income settings.

SP-006

The Effects of Virgin Coconut Oil in the Embryological Development of ICR Mice (*Mus Musculus*)

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Virgin coconut oil (VCO), a natural oil mechanically extracted from fresh coconut meat, boasts of various proposed health benefits. The study aims to determine the teratogenic effects of VCO on ICR mice and the anti-teratogenic effects of VCO on urethane-treated ICR mice. Forty nulligravid mice were synchronized of their estrus cycles. After which, they were randomly allocated to ten clusters of four mice each, with one male mouse for mating in each cluster. Random allocation to one of the four treatment groups: a negative control group treated with only water, a positive control group treated with only urethane, a VCO-treated group, and a group treated with both VCO and urethane, was done after copulation. VCO was administered through oral gavage daily from day 0 to 18 of gestation, at a dosage of 4.6g VCO/kg body weight. Urethane, was administered subcutaneously only on the 10th day of gestation, at a dosage of 1mg urethane/g body weight. On the 19th day of gestation, mice were sacrificed and hysterectomy was performed. Number of resorbed and developed fetuses was counted for each group. Only developed fetuses were analyzed for mean weight and observed for presence of developmental malformations. Results indicate that VCO is non-teratogenic in ICR mice as frequency of structural aberrations in VCO-treated fetuses was statistically comparable to fetuses of the negative control. VCO treatment significantly reduced urethane-induced cleft palate incidences and fetal