Results Semen assessments were obtained for 502 men. This group was representative of the general population regarding social class, education and geography. The median sperm concentration of samples was $48 \times 10^6$ /ml, but after adjustment to a mean abstinence of 4 days, $64 \times 10^6$ /ml. In these adjusted data, “low” sperm counts (below $20 \times 10^6$ /ml) were found in 18% of men (95% CI 15% to 21%). However, the prevalence of “low” sperm counts showed no trend across the 10-year range of birth years.

Conclusion This first report of sperm concentration in a random sample of a general population shows that nearly a fifth of men had poor semen quality. Further work is required to clarify the fertility relevance of a single low sperm concentration when there is no imposition of abstinence prior to sample, and to understand cause of the fertility deficit found in many survey participants.

Background Environmental toxic metal exposure may adversely affect children’s development and behaviour. Data are lacking about heavy metal exposure in children in UAE and Gulf countries.

Objectives To determine blood concentrations of 12 heavy metals in school-age children in Al Ain City, UAE.

Methods It was a cross sectional study. One hundred and forty seven subjects were selected from nine elementary schools. The mean age was 8.4 years (SD ±2 years). ICP-MS instrument was used to determine the metal concentration. Data analysis was performed using the SPSS.

Results The (mean±SD) blood level for study children (n=146) of lead was 25.86±15.06 ppb, cadmium 0.51±0.25 ppb, arsenic 10.74±4.71 ppb, mercury 1.59±1.16 ppb, manganese 1.85±1.09 ppb, nickel 9.18±8.23 ppb, zinc 37.81±17.52 ppb, chromium 2.10±1.53 ppb, cobalt 0.65±0.40 ppb, copper 1064±403 ppb, molybdenum 1.59±1.25 ppb, and antimony 0.60±0.65 ppb.

Conclusions Reference values for the trace metals vary markedly, especially due to sampling, age, diet, exposure differences and analytical techniques used. In this study, the mean blood lead was below the CDC’s recommended level of concern (>10 µg/dl) and with cadmium, mercury and chromium were comparable with similar studies elsewhere; manganese and zinc were slightly lower; copper and molybdenum were slightly higher while arsenic and cobalt much higher. Blood screening and surveillance linked to appropriate public health interventions is strongly recommended for UAE.

Results There were no interactions between maternal age and cohort year. After adjustment for confounding, the pooled ORs for infant death were 1.08 (95% CI 0.42 to 2.78) for mothers younger than 16 years, 1.48 (1.03 to 2.12) for 16–19-year-olds, and 1.45 (1.01 to 2.07) for those aged 12–19, compared to a 20–29-year-old mothers. The excess risk was due to post-neonatal deaths.

Conclusion The slightly increased risk of post-neonatal mortality among the offspring of adolescent mothers suggests that social and environmental factors may be more important than maternal biologic immaturity. The possibility of residual confounding cannot be ruled out.