
Children's Environmental Health Research Findings
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Topic: lead exposure

Title: Lead-based paint on playground equipment in public children's parks in Johannesburg, Tshwane and Ekurhuleni.

Conclusion: In South Africa, lead paint is widely used in public playgrounds..

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Context: Johannesburg, South Africa

Abstract: OBJECTIVE: To determine the use of lead-based paint in public playgrounds in the municipalities of Johannesburg, Tshwane and Ekurhuleni. METHODS: Forty-nine public parks were selected from the municipalities of Johannesburg, Tshwane and Ekurhuleni. Lead levels in paint on playground equipment were measured in situ using a hand-held Thermo Scientific NITON XLP 700 Series X-ray fluorescence (XRF) analyser. RESULTS: Playground lead levels ranged from 'too low to detect' to 10.4 mg/cm². The mean and median lead concentrations were 1.9 mg/cm² and 0.9 mg/cm² respectively. Forty-eight per cent of lead paint measurements exceeded the internationally accepted reference level of 1 mg/cm². CONCLUSION: The study shows that lead-based paint is widely used in public playgrounds in the three study municipalities, and most likely throughout South Africa. We suggest key actions to ensure that children's playgrounds in South Africa are lead-free zones, and that childhood lead exposure in these settings is prevented.

Policy Implications: Use of lead-based paint should be discontinued.

Keywords: lead, paint