16. Comparative hazards of chrysotile asbestos and its substitutes: a European perspective

Introduction

Asian context
These efforts for development of asbestos substitutes will encourage Asian countries to take into account a ban of asbestos. Especially this article explains basic principles to select asbestos substitutes. Diameter is a key determinant of the intrinsic hazard of a fiber, the propensity of a material to release fibers into the air is also important.

Critical appraisal
The authors conclude that chrysotile asbestos is intrinsically more hazardous than p-aramid, PVA, or cellulose fibers and that its continued use in asbestos-cement products and friction materials is not justifiable in the face of available technically adequate substitutes. This paper focuses only on health impacts and does not attempt a cost-benefit analysis.

Abstract
Background: Chrysotile asbestos remains in use in a number of widely used products, notably asbestos cement and friction linings in vehicle brakes and clutches. A ban on chrysotile throughout the European Union for these remaining applications is currently under consideration, but this requires confidence in the safety of substitute materials.

Objective: This paper evaluated comparative hazards of chrysotile asbestos and its substitutes. The paper specifically addresses p-aramid, polyvinyl alcohol (PVA), and cellulose, which are currently being exploited in the United Kingdom as substitutes for remaining uses of chrysotile asbestos. The paper does not cover substitute materials already widely used for thermal and sound insulation, such as glass and other man-made mineral fibers.
## Annotation

| Fact 1 | Annotation is not provided for this factsheet. |
| Fact 2 |   |
| Fact 3 |   |
| Fact 4 |   |
| Fact 5 |   |

## References