

ABSTRACT

Building construction workers are occupationally exposed to harmful substances from construction sites. These harmful substances are administered into the body through inhalation, skin contacts or digestion and have been found to cause adverse effects to human health. Harmful substances used in building construction are Portland cement, volatile organic compounds, asbestos and timber which are known to cause cytotoxicity in cells.

The purpose of this article review was to study the cytotoxic effects of building materials on the oral mucosal cell death of the building construction workers. The journals reviewed were obtained from NCBI-PMC, Pubmed and GoogleScholar. The journals reviewed were taken from the year 2000 to 2020 and must be written in English.

Oral mucosal cells are commonly used as biomarker to observe early cytotoxic events. Cytotoxic building materials have different cytotoxicity mechanisms such as destruction of cell membranes, prevention of protein synthesis, irreversible binding to receptors and many other negative effects. Cytotoxicity is linked with cell death which is indicated by the formation of pyknotic, karyorrhectic and karyolytic cells in the oral mucosa. It was concluded that occupational exposure to building materials which are cytotoxic results in oral mucosal cell death in building construction workers.

Keywords : Cell death, oral mucosa, building materials