

The manufacture of gloves from natural rubber latex

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Abstract Gloves that will provide a barrier of protection from infectious organisms are an essential feature of medical practice for the protection of both patients and medical personnel. Natural rubber latex has consistently been the most satisfactory raw material for the manufacture of gloves. Certain latex proteins, carried over into the finished product by inadequate manufacturing processes, may pose a risk of provoking allergic reactions in some patients and medical workers. As with any allergy, the risk depends on the route of exposure and dose. Hence, the method of manufacture, including the means used to coat gloves to make donning easy, can influence the eventual exposure of sensitive people to latex allergens. In this article, we describe the several processes in use and their effects on latex protein.

Notes This paper also describes the types of natural rubber products derived from latex, and their manufacturing processes, which influence the status of residual proteins of the final products. Different commercially available methods for effective protein reduction were presented, and the allergenic potential of products in relation to skin-prick testing (SPT) on latex sensitive individuals as well as allergen content of extracts using the latex allergen specific ELISA-inhibition assay were discussed. While latex sensitive subjects tested invariably showed positive SPT responses to extracts with high content of residual extractable proteins, little or no such reaction was observed with very low-protein contents, regardless of the presence/absence of powder as in the case of gloves.

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