



## Malaysian Rubber Export Promotion Council

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### Studies Show New Generation of Latex Gloves Greatly Reduces Protein Allergy Risk

Recent hospital studies in the U.S., Canada and Europe demonstrate that wearing low-protein, low- or non-powdered natural rubber latex gloves greatly diminishes the risk of allergic reactions and the likelihood of healthcare workers developing latex sensitivity.

A number of studies, seven of which are cited here<sup>1-7</sup>, show that it is possible for many latex-sensitive individuals wearing synthetic gloves to work alongside colleagues wearing low-protein latex gloves without suffering allergy symptoms. At least one study shows that many latex-allergic health care workers under study were able to work safely wearing low-allergen powdered gloves while performing their work assignments. Only a few who had experienced previous anaphylactic reactions needed non-latex gloves, and the study also reported that even these workers did not experience symptoms from low-allergen latex gloves worn by co-workers.

Through the adoption of advanced manufacturing technologies, the protein content of latex gloves can be vastly reduced from about 2,000 micrograms/gm to 50 micrograms or less, especially for powder-free latex gloves (as estimated by the Modified Lowry Test).

"The availability of these improved latex gloves makes it possible for majority of the health care personnel who are not latex sensitive to continue to rely on the proven barrier protection of natural rubber latex gloves without heightened allergy concern," says Dr Esah S. Yip, a research scientist and chemist, who is director of the Malaysian Rubber Export Promotion Council in the U.S. Malaysia is the largest exporter of medical gloves to the United States.

The use of low-protein/low-allergen latex gloves is consistent. With recommendations by the US National Institute for Occupational Safety and Health (NIOSH) and the Occupational Safety and Health Administration (OSHA). Both of these agencies urge the, use of appropriate barrier protection when handling infectious materials, and recommend that those who use natural rubber latex gloves choose gloves with low-protein, powder-free content. The American College of Allergy, Asthma and Immunology (ACAAI) and the American

Nurses Association (ANA) likewise urge the use of low-allergen and/or powder-free options when latex gloves are used.

Dr. Yip points out that workers who must wear synthetic alternatives should take care as to which gloves they choose because synthetics vary greatly in barrier performance, depending on the type of material used.

For example, 12 scientific studies published between 1989 and 2002 found vinyl gloves, the most commonly used synthetic, to be significantly inferior in barrier protection against viral transmission compared to latex gloves. Nitrile gloves, the second most used substitute, demonstrated comparable barrier performance to latex. But nitrile gloves are more expensive than either vinyl or latex.

Latex allergy became an issue for health professionals with the start of the AIDS epidemic, when high-powder, high-protein medical gloves flooded the market. The naturally occurring proteins in the latex often adhered to the powder used to make the gloves easier to put on and could be dispersed into the air. About 1 percent of the general population and between 3 and 16 percent of health care workers are estimated to be allergic to latex proteins or have latex sensitivity<sup>8</sup>. Although modern technology now makes it possible to minimize such protein uptake by powder and vastly reduce aeroallergenicity, many health care workers are not aware that today's improved gloves are safer.

Concerns about latex allergies prompted the Rubber Research Institute of Malaysia to develop a new standard for low protein, low powder and powder free latex examination gloves. Formulated in consultation with the U.S. Food and Drug Administration and other relevant authorities, the new Standard Malaysian Glove (SMG) is intended to help consumers in their glove selection. For gloves to bear the SMG seal, they must meet stringent barrier and tensile strength specifications as well as rigorous standards for protein and powder content. SMG gloves are available in the United States. More information is available at [www.mrepc.com](http://www.mrepc.com) and [www.smg-online.biz](http://www.smg-online.biz).

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