



Title	Jet Injectors in the Administration of Medicines and Vaccines: A Rapid Review
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Reference	FinOHTA Rapid review 1/2007. Pasternack I, Saijonkari M, Mäkelä M. ISBN 978-951-33-1174-2. Full text in Finnish available at http://finohta.stakes.fi

Aim

To summarize the published scientific evidence relating to the clinical effectiveness and safety of jet injectors and to describe the current practice, potential target groups, and estimated costs of the technology in Finland.

Conclusions and results

No benefits can be achieved by using jet injectors instead of needles and syringes in routine use, eg, in vaccination programs or in self-administration of insulin. The reviewed literature indicates that the absorption of growth hormone, insulin, and vaccines after a jet injection is equivalent to or better than absorption after needle injection. Jet injection is not less painful than the needle injection. There are more adverse effects (eg, minor tissue reactions) in jet injector users than in needle users. The direct costs (equipment and needle waste disposal) of the jet injections are approximately 10 times higher, compared to needle injections.

Recommendations

The jet injector can be an option for patients with fear of needles.

Methods

The assessment was based on a British review, published by the National Horizon Scanning Centre in July 2001. In addition, Cochrane Library and MEDLINE were searched from January 2000 to June 2006. We restricted our search to studies on vaccines, local anesthesia, insulin, and growth hormone administration only. We included controlled trials for effectiveness assessment, and other study types that reported harms and user preferences. A Finnish trader and two suppliers of consumables were consulted for cost information.