Percutaneous absorption and biologic effects of octamethylcyclotetrasiloxane (D4) in normal human volunteers.

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Abstract
D4, a cyclosiloxane, is present in many personal care products used by millions of consumers daily. To determine whether there was percutaneous absorption of D4, normal volunteers (N = 13) were exposed by epicutaneous application to each of the following chemicals at separate test sites: absolute ethanol (EtOH), 5% (wgt./vol.) sodium lauryl sulfate (SLS), or 100% D4 solution or 50% D4 solution (vol./vol.) in EtOH for 48 hours under Finn chambers for occlusion. Clinical skin changes were assessed, skin blood flow was recorded using a spectrophotometer, and skin biopsy specimens were obtained from the test sites for histologic study and for extraction of D4 from the tissue specimens. After extraction using tetrahydrofuran, D4 tissue content was assayed using gas chromatography/mass spectroscopy. There was no significant D4 detected at the EtOH (control) sites. For 100% D4, the absorption range...
These findings are consistent with the presumed dependence potential of these compounds, and demonstrate the validity of this experimental paradigm for assessing the reinforcing effects of anorectics in normal human volunteers. Log in using your username and password. Username *. Password *. Forgot your user name or password? Pay Per Article - You may access this article (from the computer you are currently using) for 1 day for US$35.00. Regain Access - You can regain access to a recent Pay per Article purchase if your access period has not yet expired.