Studies

Fluorescence in Wood-light:
Current applications in dermatologic diagnosis, therapy
follow-up and prevention.
Wigger-Alberti W, Elsner P:
Hautarzt 1997; 48(8): 523-7.

Fluorescence with Wood's light. Current applications in dermatologic diagnosis, therapy follow-up and prevention

The invisible long-wave ultraviolet radiation (340-450 nm, max.365 nm) produced by a Wood lamp can help to diagnose dermatoses with a characteristic fluorescence (tinea capitis, erythrasma, tinea versicolor, Pseudomonas infections, porphyrians, and pigmentary alterations). It is also used in the detection of medications that are taken systemically (tetracycline) or that are applied to the skin. Recently, a fluorescence technique with Wood light has been used as a preventive measure to monitor and quantify skin protection at the workplace and to teach workers in high-risk occupations the proper use of protective creams.

Training workers at risk for occupational contact
dermatitis in the application of protective creams:
efficacy of a fluorescence.
Wigger-Alberti W, Maraffio B, Wernli M, Elsner P:
Dermatology 1997; 195(2): 129-33.

Training workers at risk for occupational contact dermatitis in the application of protective creams: efficacy of a fluorescence technique.

BACKGROUND: In spite of promising experimental data demonstrating the efficacy of protective creams (PC), their practical value is still viewed with scepticism. Lack of protection could be caused simply by uneven or spotty application of these products. How precisely workers apply PC at the workplace can be monitored and quantified by a recently developed fluorescence technique.
OBJECTIVE: The goal of the present study was to use this technique to teach workers in high-risk occupations the proper use of PCs and to compare the benefit of this method with the use of an instructive videotape.
METHODS: Fifty healthy metal workers were recruited to self-apply a fluorescent preparation 6 weeks after being taught either by a fluorescence test or by a 20-min videotape. The application was evaluated under Wood's light examination.
RESULTS: The performance of the fluorescence group had improved significantly over the initial test($p < 0.001$) and was significantly better than that of the videotape group ($p < 0.001$).
CONCLUSION: Our results indicate that this method may become a useful adjunct to improve the daily application of PC as a preventive measure.

Self-application of a protective cream.
Pitfalls of occupational skin protection.
HWigger-Alberti W, Maraffio B, Wernli M, Elsner P:
Arch Dermatol 1997; 133(7): 861-4.

Self-application of a protective cream.
Pitfalls of occupational skin protection.

OBJECTIVES: To determine if a protective cream (PC) is adequately applied to the hands by workers in several occupations and to quantify what areas are covered or missed.
DESIGN: Prospective diagnostic study.
SETTINGS: Metalworking factory, construction sites, and university hospital.
PARTICIPANTS: One hundred fifty healthy volunteers (50 from each setting) were recruited for a questionnaire interview and typical self-application of a PC.
INTERVENTION: None.
MAIN OUTCOME MEASURE: Percentage of sufficient cover with PC as assessed with fluorescence under Wood light.
RESULTS: Many areas were skipped when viewed under Wood light. The application of PC was incomplete, especially on the dorsal aspects of the hands.
CONCLUSION: Individuals should be made aware of the most commonly missed regions to ensure complete skin protection. This simple method is a useful adjunct to quantify self-application and in worker education.

Use of skin protective agents by patients with
occupational dermatoses: need for improved preventive
behavior.
Wigger-Alberti W, Maraffio B, Elsner P:
Schweiz Med Wochenschr 1997; 127(21): 899-904.

Use of skin protective agents by patients with occupational dermatoses: need for improved preventive behavior

QUESTIONS UNDER STUDY: In high-risk workplaces, primary and secondary measures to prevent occupational dermatoses are necessary. Therefore, protective creams as useful tools in prevention have to be applied adequate. The purpose of the present study was to determine whether a protective cream is adequately applied to the hands by patients with occupational dermatoses after self-application, and to quantify what areas are covered or missed.
METHODS: 50 patients of the Department of Dermatology of the University Hospital, Zurich, suffering from job-related skin diseases were recruited for a questionnaire and self-application of a cream as they would typically apply it. The cream contained 1% vitamin A acetate in order to fluoresce bright yellow when irradiated with Wood's light.
RESULTS: 84% believed that their symptoms were occupationally-related. However, only 44% were occasional or regular users of protective creams and only 36% had previously been informed about skin protection at the workplace. Self-application of a fluorescent preparation resulted in many areas shown as skipped when viewed under Wood's lamp. Only 60% applied the test preparation sufficiently and the application was incomplete, especially in the dorsal aspects of the hands.
CONCLUSIONS: Our results underline the necessity of educational efforts in the prevention of occupational dermatoses and present an effective approach to teaching patients the proper use of protective creams.