Factors that Diminish the Stability of Dermatologic Drugs

A new report indicates that a number of dermatology drugs may be sensitive to light, temperature, or moisture.

1 **Light.** In an article published online at Skin Therapy Letter (Vol. 14, www.skintherapyletter.com), researchers remind that when some drug compounds are exposed to light, degradation reactions may occur that minimize the potency of the active ingredients. Numerous popular oral antibiotics and antifungal agents are photosensitive, as is isotretinoin, according to the report. Advise patients to preserve these drugs in closed, opaque containers. Oral ketoconazole reportedly has been shown to photodegrade in just 24 hours after exposure to UV light

2 **Photosensitivity.** In addition to the effect of light on the chemical compound before ingestion, photoexposure may produce in vivo effects, Langner and Maibach note. Photosensitivity reactions experienced by some patients who take certain drugs could result from photoactive metabolites activated by light exposure.

3 **Moisture.** In addition to light, exposure to moisture is known to degrade certain drugs. Among common dermatologic treatments, oral acyclovir, erythromycin, itraconazole, and ketoconazole are all sensitive to moisture.

4 **Temperature.** The third environmental factor shown to degrade drug compounds is temperature, whether it be too high or too low. Few dermatologic therapies currently prescribed require refrigeration. It may be wise to caution patients not to leave medications in cars during winter or summer months and to avoid storing medications near hot stoves or other heat sources. Most oral anti-infectives are temperature sensitive.

5 **Time.** Finally, expiration dates alert physicians and patients to a respective drug's degredation and loss of efficacy over time. With time, some agents become unsuitable for consumption. Perhaps surprisingly, many patients seem to disregard drug expiration dates. Advise patients to complete therapy as directed, discard unused medication, and avoid using expired products. ■