

# Neurotic Excoriations

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**Neurotic excoriations are self-inflicted skin lesions produced by repetitive scratching. Because there is no known physical problem of the skin, this is a physical manifestation of an emotional problem. The classic lesions are characterized by clean, linear erosions, scabs and scars that can be hypopigmented or hyperpigmented. The lesions are usually similar in size and shape, and are grouped on easily accessible and exposed body sites, such as extensor surfaces of the extremities, face and upper back. Psychotropic medications and appropriate counseling can be effective treatments. (Am Fam Physician 2001;64:1981-4. Copyright© 2001 American Academy of Family Physicians.)**

► A patient information handout on neurotic excoriations, written by the authors of this article, is provided on the AFP Web site.

**N**eurotic excoriations are skin lesions produced by the patient through repetitive scratching, without an underlying physical pathology. The patient often has a comorbid mental illness (usually anxiety or a mood disorder).<sup>1-3</sup> Unlike other self-inflicted dermatoses (e.g., dermatitis artefacta and malingering), the patient with neurotic excoriations acknowledges the self-inflicted nature of the lesions. The quantity of lesions varies, ranging from a few to several hundred, and the lesions are located in easily accessible places on the body.<sup>4</sup>

Although it has not been reported in the primary care literature, the incidence and prevalence of neurotic excoriations is thought to be common and underreported. There is a 2 percent incidence of neurotic excoriations among dermatology clinic patients<sup>5</sup> and a 9 percent prevalence of neurotic excoriations in patients with pruritus.<sup>6</sup> The condition primarily affects female patients (52 to 92 percent in various studies).<sup>1,7,8</sup> Most studies<sup>1,7</sup> report a mean onset between ages 30 and 45 years.

## Dermatologic Features

Neurotic excoriations are characterized as clean, linear erosions, scabs and scars that are frequently hypopigmented or hyperpig-

mented. All lesions are usually of similar size and shape. Patients "dig" at their skin to relieve itching or to extract imaginary objects that they believe are imbedded or extruding from their skin. The lesions are grouped at sites of the body that are easily accessible and usually exposed, such as the extensor surfaces of the extremities, face and upper back (Figure 1). The excoriations present in various stages: dug-out ulcers, ulcers covered with crusts and surrounded by erythema, and areas receding into depressed scars<sup>9</sup> (Figure 2). The number of excoriations can vary from a few to several

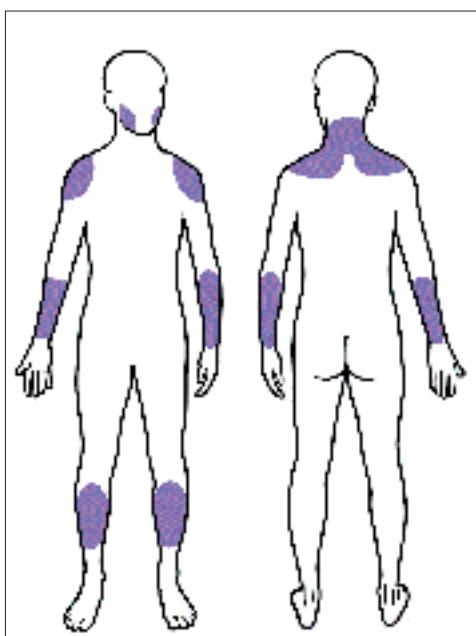


FIGURE 1. Typical locations of neurotic excoriations.

*The lesions of neurotic excoriations are characterized as clean, linear erosions, scabs and scars that can be hypopigmented or hyperpigmented.*

**TABLE 1**  
**Medical Causes of Self-Inflicted Skin Lesions**

Hepatic disease	Malignant lymphoma
Pregnancy	Other malignancies
Uremia	Carcinoid
Delirium	Myeloma
Polycythemia vera	Diabetes mellitus
Hypothyroidism	Iron deficiency anemia
Hyperthyroidism	Xerosis
Urticaria	Intestinal parasitosis

hundred, and they often exhibit delayed healing because of recurrent picking.

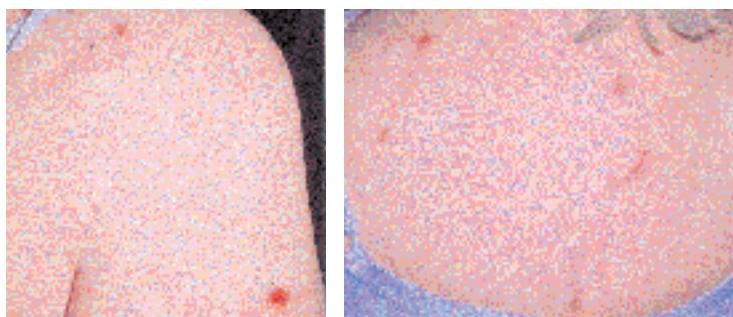
The self-excoriation is often initiated by a disturbing sensation in the skin (i.e., pruritic),<sup>1</sup> or because of an urge to excoriate a benign irregularity of the skin.<sup>10</sup> This generates the "itch-scratch" cycle which, in some patients, develops into chronic dermatitis.<sup>8</sup>

### Differential Diagnosis

The differential diagnosis of self-inflicted skin lesions can be separated between purely medical etiologies (*Table 1*), purely psychiatric etiologies (*Table 2*) and a combination of both.<sup>11</sup>

A patient's history may suggest some obvious reasons for itching, such as atopic dermatitis, contact dermatitis or food allergies. The following tests should be performed to eliminate any medical causes of generalized itching: complete blood count with differential chemistry profile, determination of thyroid-stimulating hormone levels and fasting plasma glucose level. The appropriate work-up for malignancy should be performed if indicated by the patient's history.

Xerosis, or generalized dry, flaky skin, is the most common cause of pruritus in the elderly population.<sup>12</sup> The elderly lack fatty acids in the skin that augment hydration and barrier function, leading to the development of xerosis. The generalized itching that results can lead to anxiety or depression, and, subsequently, progression to neurotic excoriations.



**FIGURE 2.** Excoriations in various stages: ulcers that have been dug out, ulcers covered with crusts and areas receding into depressed scars along the shoulder (*left*) and upper back (*right*).

Depression, anxiety and obsessive-compulsive disorder (OCD) are the psychiatric diagnoses most commonly associated with patients who have neurotic excoriations. Another frequent association in these patients is many social stressors, particularly those related to family and work.<sup>2</sup> Some of the psychiatric disorders and social stressors may be well hidden because of shame or a delusional belief system. Psychodynamic issues may center on suppression or repression of aggression relating to unmet emotional needs. These may arise from past or current situations and be difficult to resolve directly. Some associated traits include: low self confidence, generalized apprehension, meticulousness, depressive mood and hypersensitivity to perceived negativity toward themselves.<sup>13</sup> Some physicians propose that certain cases of neurotic excoriations are actually a subtype of OCD.

Concurrent symptoms of headache or menstrual disorders are common in these patients. Usually the history, presentation and physical examination will quickly narrow the diagnostic choices.

### Treatment Approaches

#### PHARMACOLOGIC

Several studies<sup>14-16</sup> have shown that the serotonergic effect of selective serotonin reuptake inhibitors (SSRIs) consistently produces the strongest antipruritic response in patients with neurotic excoriations. These studies also found that the relief of pruritus was unrelated to changes in the patient's mood and occurred sooner than would be expected for antidepressant effects. This finding, combined with reports<sup>17</sup> of a similar effect using the serotonin type 3 receptor antagonist ondansetron (Zofran), suggests that serotonin sites other

than the 5-HT<sub>1a</sub> receptor may be key in the treatment of pruritus. There may also be an association with the reportedly effective treatment of neuropathic pain by SSRIs, implying a possible central, as well as peripheral, action on the pain/itch fibers.

OCD may be an underlying component in some cases, but the patient may deny or minimize it.<sup>6,10,18</sup> Often, a lower dosage of an SSRI is required to lift symptoms of depression compared with improving symptoms of OCD. It is important to increase the dosages whenever lower dosages produce a partial response, initial response or nonresponse. If the patient is unresponsive to a specific SSRI, another SSRI should be tried, increasing the dosage by gradual increments.

The "itch-scratch" cycle induces mast cell degranulation and cytokines that may respond to antihistamines. Doxepin (Sinequan) is an antidepressant with antihistaminic properties. Doxepin is highly sedating—10 to 30 mg at bedtime is usually sufficient.

Other published reports<sup>15</sup> support trials of tricyclic antidepressants, antihistamines and naloxone (Narcan) in some cases, but these agents have more side effects and less consistent efficacy.

A dermatologic approach to neurotic excoriations may include the use of antibiotics, topical steroids or lubricants:

- If there is significant crusting and secondary bacterial infection of the erosions, antibiotic therapy (e.g., erythromycin or a first-generation cephalosporin) is indicated.

- Steroids applied twice daily can be effective. Low-potency (group 5) topical steroids should be tried first, gradually progressing to high-potency steroids (group 1) if there is little or no response.<sup>9</sup>

- Patients can also try substituting ritualistic application of lubricants for the ritual of digging. It is helpful to recommend using only mild soaps and decreasing the frequency of washing.

Collaborative care is an important consideration, because many patients need active counseling in addition to medication.

*Topical steroids can be an effective treatment, starting with the low-potency (group 5) agents.*

## COUNSELING

Initially, counseling should be supportive and empathic but open to other approaches as issues emerge. Cognitive-behavioral approaches may focus on helping the patient understand the illness through education and finding alternative responses to the pruritic sensations (i.e., changes in assumptions and automatic thoughts about the symptoms themselves, the substitution of a healthy ritual such as an oatmeal soak or distraction with other activities). The most difficult time for many patients is at night, when itching occurs while the patient is in the near-sleep state.

A close working relationship with a therapist will alert the physician to increasing stress in the patient's life that may present as new somatic concerns. The possibility of other psychiatric diagnoses emerging with therapy may also necessitate alterations in the treatment approach, including medications. Treatment aimed at a primary psychiatric diagnosis is usually fundamental for effective treatment of these patients.<sup>19</sup>

## COMPLEMENTARY/ALTERNATIVE MEDICINE

Other approaches may include hypnosis<sup>20</sup> for direct intervention in the itch-scratch

TABLE 2  
**Psychiatric Causes of Self-Inflicted Skin Lesions**

Depression	Trichotillomania
Anxiety	Tic disorder
Obsessive-compulsive disorder	Body dysmorphic disorder
Somatoform disorders (facial dermatitis, somatization, hypochondriasis)	Borderline personality (self-mutilation)
Delusions of parasitosis (may be part of a larger diagnostic group, such as schizophrenia)	

cycle, acupuncture<sup>21</sup> and supportive and family therapy to reduce underlying stressors.

### Role of the Family Physician

Researchers have shown that emotionally distressed Americans are more apt to seek help from a general physician than from a mental health professional.<sup>22</sup> In the United States, primary care physicians diagnose and treat two thirds of patients with skin disorders.<sup>23</sup> Neurotic excoriations are skin manifestations of an emotional problem requiring a biopsychosocial spiritual approach. The family physician is well equipped to help patients with this difficult problem.

### REFERENCES

1. Arnold LM, McElroy SL, Mutusim DF, Dwight MM, Lamerson CL, Morris EM. Characteristics of 34 adults with psychogenic excoriations. *J Clin Psychiatry* 1998;59:509-14.
2. Krupp NE. Self-caused skin ulcers. *Psychosomatics* 1997;38:15-9.
3. Bhatia MS, Gautam RK, Bedi GK. Psychiatric profile of patients with neurodermatitis. *J Indian Med Assoc* 1996;94:445-6, 454.
4. Gupta MA, Gupta AK, Haberman HF. Neurotic excoriations: a review and some new perspectives. *Compr Psychiatry* 1986;27:381-6.
5. Griesemer RD. Emotionally triggered disease in a dermatologic practice. *Psychiatr Ann* 1978;8:49-56.
6. Rajka G. Investigation of patients suffering from generalized pruritus, with special references to systemic diseases. *Acta Derm Venereol* 1966; 46:190-4.
7. Freunsgaard K. Neurotic excoriations. A controlled psychiatric examination. *Acta Psychiatr Scand Suppl* 1984;312:1-52.
8. Gupta MA, Gupta AK, Haberman HF. The self-inflicted dermatoses: a critical review. *Gen Hosp Psychiatry* 1987;9:45-52.
9. Habif TP. *Clinical dermatology: a color guide to diagnosis and therapy*. 3d ed. St. Louis: Mosby, 1996.
10. O'Sullivan RL, Phillips KA, Keuthen NJ, Wilhelm S. Near-fatal skin picking from delusional body dysmorphic disorder responsive to fluvoxamine. *Psychosomatics* 1999;40:79-81.
11. Koo J, Gambla C, Fried R. Pseudopsychodermatologic disease. *Dermatol Clin* 1996;14:525-30.
12. Levine N. Which came first: the itch or the rash? Patient's scratching may be unrelated to a primary skin disease. *Geriatrics* 1996;51:24.
13. Ko SM. Under-diagnosed psychiatric syndrome. II. Pathologic skin picking. *Ann Acad Med Singapore* 1999;28:557-9.
14. Arnold LM, Mutusim DF, Dwight MM, Lamerson CL, Morris EM, McElroy SL. An open clinical trial of fluvoxamine treatment of psychogenic excoriation. *J Clin Psychopharmacol* 1999;19:15-8.
15. Zylitz Z, Smits C, Krajnik M. Paroxetine for pruritus in advanced cancer. *J Pain Symptom Manage* 1998;16:121-4.
16. Gupta MA, Gupta AK. Fluoxetine is an effective treatment for neurotic excoriations: case report. *Cutis* 1993;51:386-7.
17. Schwörer H, Ramadori G. Treatment of pruritus: a new indication for serotonin type 3 receptor antagonists. *Clin Investig* 1993;71:659-62.
18. Hatch ML, Paradis C, Friedman S, Popkin M, Shalita AR. Obsessive-compulsive disorder in patients with chronic pruritic conditions: case studies and discussion. *J Am Acad Dermatol* 1992;26:549-51.
19. Woodruff PW, Higgins EM, du Vivier AW, Wessely S. Psychiatric illness in patients referred to a dermatology-psychiatry clinic. *Gen Hosp Psychiatry* 1997;19:29-35.
20. Rucklidge JJ, Saunders D. Hypnosis in a case of long-standing idiopathic itch. *Psychosom Med* 1999;61:355-8.
21. Yang Q. Acupuncture treatment of 139 cases of neurodermatitis. *J Tradit Chin Med* 1997;17:57-8.
22. Neighbors HW. The help-seeking behavior of black Americans. A summary of findings from the National Survey of Black Americans. *J Natl Med Assoc* 1988;80:1009-12.
23. Krasner M, O'Sullivan V, Ramsay DL, Weary PE. The need for dermatologic care: theory and application. In: Ramsay DL, Weary PE, Krasner M, eds. *Manpower for dermatologic care: an assessment of supply, demand, and distribution: report of the Dermatology Manpower Study*. Department of Dermatology, New York Medical Center. Evanston, Ill.: American Academy of Dermatology, 1977:37-70.

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