Patient Education to Enhance Contact Dermatitis Evaluation and Testing

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KEYWORDS

• Patient education • Patch testing • Allergen avoidance
• Contact dermatitis

Patients presenting for evaluation of possible allergic contact dermatitis (ACD) have many educational needs. They come with preconceived notions of what is causing their rash, often have seen many other health care professionals, and may be frustrated. Their condition may have caused interruption of sleep, stress on personal relationships, or jeopardized their jobs. Health care professionals face the limitations of time because of the limited number of specialists in this area, and quality patient education for patch test patients becomes a challenge.

BACKGROUND OF PATIENT EDUCATION

Florence Nightingale emphasized teaching Civil War soldiers the importance of fresh air, nutrition, exercise, and personal hygiene to improve well-being. In 1993, the Joint Commission on Accreditation of Health care Organizations (JCAHO) came out with standards that identified the need for health care professionals to educate patients to "enhance their knowledge, skills, and those behaviors necessary to fully benefit from the health care interventions provided by the organizations."[1] In 1996, JCAHO added additional standards to include that patient education must be provided by an interdisciplinary healthcare team, with consideration given to the client's literacy level, educational level, and language. This education must be understandable and "culturally appropriate" to the patient and/or significant other.[1]

Often in contact dermatitis clinics, the immunologic basis of ACD, avoidance of allergens, and the proper use and side affects of corticosteroids need to be explained to patients. Nurses can play a vital role in assessing, planning, and implementing patient education to empower patients with ACD.

However, learning more about a disease process does not necessarily bring about change in behavior. Knowledge that sunburns were associated with skin cancer did not improve adolescent sun protection behavior.[2] Educational programs in elementary schools did not sustain impact on sun protective behavior.[3] However, college students showed improved intention to practice sun protective behaviors when shown photographs depicting underlying sun damage to skin.[4]

If simply providing information about the disease process does not automatically change behavior, then where should patient education focus? "Stages of Change Model" was introduced by Prochaska and DiClemente,[5] who originally looked at the stages cigarette smokers went through as they were trying to quit. The theory has been adapted for use with stroke patients,[6] smoking cessation programs,[7,8] weight reduction programs,[9] and other lifestyle changes.[10] Being aware of the patient's stage of change, building on existing knowledge, and collaboration with other healthcare providers are found to be significant factors in empowering patients to make healthy choices.

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So with limited time and resources, what can healthcare professionals do to affect ACD patients' behaviors to reach healthy outcomes? According to Prochaska and DiClemente,[5] patients trying to quit smoking went through 5 stages of change. These stages could be seen in ACD patients also:

1. The first stage, the precontemplation stage, identifies individuals who are not aware of the health implications for their actions. For ACD patients, this translates into lack of knowledge regarding the exposure that leads to their dermatitis.
2. The second stage, the contemplative stage, is when the patient starts to seriously think about changing behavior, but no action is taken. This stage often takes place for ACD patients when the final reading is done and when they learn about avoiding their allergens. Together with the healthcare professional, they identify which allergens are relevant, and what items or products need to be avoided for a cure.
3. The third stage is labeled as the preparation stage; it is when the individual is orienting to or attempting the target behavior. This stage may include experimenting with small changes. This stage often starts when the patient with ACD is at the drugstore and is selecting personal care products that do not contain their allergen. Then they "try" different products to see if their condition improves. One study in 2007 reports that patients with fragrance allergies smelled the products as a strategy for determining safe products.[11]
4. The fourth stage is the action stage, when the action is taken. An example of this stage would involve using products from the allergy-free list generated from the Computerized Allergen Replacement Database (CARD) for 1 month to test for relevance. It is during this stage that patients develop health beliefs about their treatment. In the 2007 study mentioned earlier, Noiesen and colleagues[11] found that almost half of the study population did not trust the labels of ingredients, with one explanation being that patients experienced eczema eruptions even when they attempted avoidance of allergens by reading the labels.
5. The fifth stage is known as the maintenance stage and is reached when the individual has performed the behavior for 6 months. In this model, patients can progress, regress, or remain in any stage for a period of time. Six months after patch testing could be a good time for a follow-up visit or phone call. With the ACD patients, a "flare" is often seen about 1 year after patch testing. They have been rash free for a while and "forget" to check the labels on products.

ASSESSING LEARNING NEEDS

Some simple questions can be efficient and provide valuable clues to the patient education needs (**Table 1**). When rooming patients for the consultation, nurses can ask, "What do you think is causing your rash?" Depending on their answer, explaining the delayed reaction to contact allergens that a dermatologist patch tests for as compared with the immediate type I response to the allergens that an allergist tests with scratch testing can be beneficial to the patient. The concept that what touches their skin today can cause a rash that starts in 2 to 7 days and lasts a month, helps patients include a more complete exposure history to include products they may use infrequently or that feel good on application.

Table 1
Questions to ask to facilitate patient education

When to Ask Questions	Questions to Ask
Before consultation	Would you like us to send you information about contact dermatitis?
At consultation visit intake	What do you think is causing your rash? What do you hope comes from patch testing? How familiar are you with contact dermatitis?
At the final reading, after avoidance education	What did the doctor tell you? How confident are you that you can avoid your allergens?
One-month follow up	What advice would you give to a patient who just found out they are allergic to your allergens?

When patch testing is scheduled, nurses can also ask, ''What do you hope comes from patch testing?'' Depending on their answer, nurses might stress the need to avoid contact allergens for a month before seeing improvement. And immediately following the dermatologist's discussion of the patient's patch test results and avoidance instructions, the nurse can ask, ''What did your patch testing show?'' It provides a great way to evaluate the patient's understanding of what they just heard. Some patients reply that they are allergic to A, B, and C, and now they have to use their list to go shopping, whereas others reply that they are allergic to chemicals that have such long names that they cannot pronounce them, and they ''don't know what to do''!

Each patient comes to the clinic with different health literacy abilities, different support systems, and different allergens. Low educational levels attributed to increased difficulty reading cosmetic labels. In one qualitative study, participants with hand eczema and at least one nonoccupational contact allergen were interviewed to examine their strategies for selecting personal care products. Those in the higher social status were able to read and pronounce ingredients. Participants in the middle social status could not pronounce the chemical names of the allergens, so strategies such as comparing the first syllable of the allergen with the first syllable of the ingredients on the label were used. This group doubted their ''decoding'' ability. The lowest social position rarely read the ingredients on the labels, but their strategies included counting the number of letters in the allergen to compare with the number of letters on the ingredient list or asking sales personnel for help counting or reading.[11]

INITIATING PATIENT EDUCATION

Who do you teach? In a clinic situation, you usually teach the ones in the examination room. When a family member or friend answers many of the questions during intake interview or a teaching session, it can be an indication that they can play an important role in managing the patient's care. When an elderly man's initial reading indicates a positive patch test to textile resins, inviting a daughter or spouse to the final reading is a good idea. The ''shopper'' of the personal care products and clothing is often the relative or friend who is the driver for appointments and sitting in the waiting room; with the patient's permission, this person can be a great support at the final reading.

When do you teach? Teaching should start before the first consult visit. Information can be mailed to the home or a telephone call can be made before the appointment, informing the patient to bring in a shopping bag filled with their personal care products. By listening to the patient's questions and providing answers about the consult visit or even directions to the office, the nurse can begin to develop a teaching relationship. A handout can be given to the patient in the waiting room, informing them of the delayed onset of symptoms following the exposure to allergens. This can facilitate the intake interview. During the patch test application, there is an opportunity to discuss expectations of resolution of the rash that follows prolonged avoidance and to answer patient's questions. Many patients are more relaxed with the nurse and reveal their questions and misconceptions.

At the one-month follow-up visit, reinforcement of allergen avoidance is usually needed. Identifying the areas that have cleared and linking this to the patient's avoidance behaviors is an important element in empowering patients. The nurse should acknowledge what they did to improve their condition and stress the need to maintain 100% avoidance to remain clear. Sometimes all the avoidance information given at the final reading needs to be repeated. This is especially true for patients who take a month to stop itching and get some sleep, restoring cognitive function and concentration.

What should be taught? That depends on the patient, their readiness to learn, their allergens, and other conditions. For example, because of the multifactorial nature of hand dermatitis, skin care for the underlying diagnosis of irritant dermatitis may also be important for the patient to understand. The distinction between minimizing irritant exposure to prevent hand dermatitis from getting worse and 100% avoidance of an allergen to prevent an allergic reaction is very important for patients with hand dermatitis to understand (**Table 2**).

For example, a hand dermatitis patient, who is the mother of young children, who patch tests positive to cocamidapropyl betaine should be instructed to use the CARD printout to choose shampoos and soaps that are free of this surfactant, for her personal use and for use when shampooing her children. It should be stressed that 100% avoidance is needed for approximately 1 month before significant improvement of her current dermatitis is expected. Patient education for this patient at risk for irritant dermatitis should also include instruction on using alcohol-based hand sanitizers, to decrease the number of wet-to-dry cycles when possible, to use mild soaps when needed, and to apply moisturizers to hands immediately after each washing, while skin

Table 2
Irritant versus contact dermatitis

	Irritant Dermatitis	Allergic Contact Dermatitis
Onset	Few hours	2–7 d
Duration	Few hours to few days	4–6 wk
Exposure	Strong soaps or frequent hand washing	Allergens like nickel, fragrance, preservatives
Occupation	Mother of small children Health care workers	Hairdressers, mechanics, assemblers
Atopy	History of asthma, hay fever, or childhood eczema	No history of childhood eczema

is still damp. Also, wearing cotton gloves under vinyl or rubber gloves when doing wet work or using irritating household cleaners serves to avoid contact with the irritating chemicals and to decrease the number of wet-to-dry cycles when cotton gloves absorb any perspiration and are changed to a dry pair when needed.

EMPOWERING PATIENTS FOR HEALTHY OUTCOMES

By giving patients the knowledge, tools, confidence, and support they need to engage in healthy behaviors, the health care provider empowers patients to become active participants in their health care. For ACD patients, at the final patch test reading, relevant allergens need to be discussed, and their avoidance needs to be outlined. Often, the amount of information that needs to be transferred to the patient and family is challenging.

How should the information be taught? Handouts, discussion, and return demonstrations can all be used to make information available. Handouts can be effective transfers of valuable information. They can be referred to at a later date or shared with family members. Handouts used in patient education should be written at a sixth grade reading level or below. Many of the allergens that are included in patch testing handouts have complex chemical names and quickly elevate reading levels.

The American Contact Dermatitis Society has a Web site, www.contactderm.org, where CARD can provide a list of personal care products that do not contain the identified allergens and education handouts available to its members. These handouts are specific to many allergens.[12] Discussion that highlights the allergens that are relevant to the individual and ends with a summary with a 2- or 3-point action plan can be very helpful. For example, a hand dermatitis patient with multiple allergens might be given a glove order form, handouts for each of their allergens, and a CARD printout. A discussion of the relevance of each allergen, and proper use of the CARD printout could be summarized with a plan to:

(1) Purchase 1 product from each category on the CARD list and use until they return for their one-month follow-up,
(2) Avoid allergens 100% of the time by bringing "own soap" in travel bottle for use at work or in a public restrooms, and
(3) Purchase cotton gloves for use under vinyl gloves as directed.

Return demonstrations can also enhance patient education by providing immediate individual guidance.[1] The nurse can demonstrate the health behavior and then ask the patient to do the same. It provides an opportunity for the patient to practice and for the nurse to evaluate the patient's understanding of the patient education that was done. For example, various samples of the hand cream, daily facial cleanser, body lotion, and gentle skin care soap made by the same manufacturer can be lined up on the counter in the examination room to offer the nurse a chance to demonstrate how he could use the CARD list to select products free from their allergens. Patients are then asked to use their CARD printout to select the products in front of them that would be safe for them to use. This return demonstration can simulate the patient's upcoming experience at the drug store and prepare them for selection of their allergen-free personal care products. Reinforcing what they do right, identifying what they need help with, and offering suggestions for conquering obstacles, are important.

One patient, when given his CARD list and a lineup of samples was asked if this was the selection at the drugstore, "which products would you pick?" He stated that he would probably just pick the one that was on sale. After repeating how using

products containing his allergens could cause his rash to return, he was able to identify the 2 appropriate products from his CARD list. Another man who was asked for the same demonstration, admitted that he was feeling overwhelmed with trying to make the selection. He was given a wallet card that listed his allergens and samples of the soap, shampoo, and cream that he could use for 1 month, which were highlighted on his CARD list. He was instructed to inform his pharmacist that because of allergies, he needed help with obtaining these exact products.

DOCUMENTING AND EVALUATING PATIENT EDUCATION

Patient education is an important aspect of patient care in the contact dermatitis clinic, but often underdocumented. At the final patch test reading and the one-month follow-up visit, specific patient teaching should be documented. Ideally, time spent on teaching, handouts given, questions answered, and return demonstrations done should be included.

Finally, patient education needs to be continuously evaluated. The nurse should verify what the patient understood and what more they need to learn. The one-month follow-up appointment is a great time to ask what worked for the patient and what questions they still have. Also ask, ''What helped you avoid your allergens?'' or ''What advice would you give someone who just found out that they are allergic to the same allergens that you are?''

As patients are empowered, they can teach practitioners how to better teach future patients. Patients help to help others by informing what products are no longer offered, updating contact lists, and offering solutions to problems that present to individuals with contact dermatitis.

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