

# ‘Just Breathe Normally’: Word Choices that Trigger Nocebo Responses in Patients

*Six language traps and how to avoid them.*



Illustration by Nancy Meyers

**Overview:** Negative reactions to placebo medications—sometimes called “nocebo effects”—are well documented. Similar responses can be induced in suggestible patients when providers use language that tends to increase patients’ stress and negative expectations. Several common “language traps” are examined and alternative ways to communicate with patients are suggested.

Whenever I go to a health care appointment, I look forward in playful anticipation to the moment when, in the course of taking my vital signs, the nurse will tell me to do the impossible: “Just try to breathe normally.” Even though I’ve studied the effects of language for nearly three decades and have years of training in hypnosis, I know I will be unable to comply with her seemingly simple request. Try it for yourself. For the next 10 seconds, just try to breathe normally.

This sentence contains three “language traps,” ways of speaking that can have unintended and, sometimes, negative consequences for patients. Patients’ negative responses to these language traps can be understood as

instances of the “nocebo effect,” the opposite of the more familiar placebo effect.

### NOCEBO EFFECT

Like placebo effects, nocebo effects are “clinical outcomes [that] are not attributable to the actual pharmacological or physiotherapeutic intervention and are susceptible to attention, expectation, suggestion, and conditioning.”<sup>1</sup> They were originally used to describe adverse effects from inert “medications” given to subjects in drug trials and were eventually applied to other negative responses in various medical and therapeutic situations (nocebo is derived from the Latin verb *nocere*, “to harm”).

Spiegel has described three different ways in which the nocebo effect can be triggered: by a health care provider sending a negative message; by a patient or her or his social milieu generating a negative message; and by the patient receiving “secondary gain”—an advantage or benefit that results from an illness or its symptoms, such as sympathy and attention.<sup>2</sup> The language traps discussed in this article are instances of the first kind of trigger.

Both placebo and nocebo effects attest to the power of patients’ expectations on health outcomes. Studies have shown that expectations can be strongly influenced by the physical setting in which health care is delivered, and that some settings, particularly urgent or critical care settings, are especially likely to elicit undesirable responses in patients.<sup>2-6</sup> The stress induced by such settings increases the likelihood that patients will process information in unexpected ways. Decades of clinical research on hypnotic states offer further confirmation of the extraordinary power of the mind in determining physical responses to external stimuli.<sup>5, 7-10</sup> For example, consider this clinical anecdote from Spiegel:

In one experiment on controlled imagination, I hypnotized an army corporal and gave him the instruction that he would be touched on his forearm with a hot iron. When I touched him with a pencil point, he reported pain and within a few minutes a blister formed. Several days later the scab that had formed fell off. This experiment was repeated four times during the following month with the same response. However, the fifth time this experiment was repeated, it was in the presence of a high-ranking officer who voiced doubts about the genuineness of the experiment. After being belittled and humiliated by this author-

ity figure, this subject never again responded to the hypnotic suggestion.<sup>2</sup>

Next, notice the power of the spoken word when the provider’s expectation and the patient’s suggestibility interact, despite the absence of formal hypnotic induction. In a literature review on treatment of angina pectoris, Benson reported outcome measures for various drugs and surgical procedures, all of which had been subsequently shown to be without physiologic or pharmacologic basis.

When the physicians administering these therapies believed in them, the therapies were 70–90% effective in relieving the pain the patient experienced, and actual electrocardiographic changes and changes during exercise tolerance tests were noted. However, when it was proven to the physicians that these treatments had no worth, their effectiveness dropped by 30–40%.<sup>4</sup>

*Some settings, particularly urgent or critical care settings, are especially likely to elicit undesirable responses in patients.*

Other studies have similarly demonstrated this correlation between a provider’s or patient’s expectation and outcomes. Lang and colleagues found that warning patients about pain or other undesirable experiences resulted in greater pain and anxiety. Sympathizing with the patient after a painful event did not increase reported pain, but did result in greater anxiety.<sup>1</sup> Reilly noted that patients’ responses to medication in both single-blind and double-blind studies varied as a function of the physicians’ expectations: “Alter the expectation of carers and you may activate different outcomes, for harm as well as good. Patients pick up on these signals, making them ‘active ingredients.’ Think through implications of this for your practice.”<sup>11</sup>

In a review of the literature on the use of hypnosis with surgical patients, Blankfield noted, “Oftentimes a negative suggestion such as ‘You will feel no pain’ will have the unintended and seem-

ingly paradoxical effect of reinforcing the pain. Positive suggestions are preferable in most instances.”<sup>12</sup> Barsky and colleagues reviewed the literature on adverse, nonspecific effects of active medications and found many studies that showed that patients who expected distressing unintended effects before taking a medication were more likely to develop them.<sup>3</sup> The strengthening of the association between negative expectations and distressing unintended effects tended to have a further negative effect on patients’ expectations about subsequent medications, treatments, and treatment facilities. Essentially, this is a form of conditioning. For example, several studies found that “conditioned nausea is seen in as many as 33% of chemotherapy patients who become profoundly nauseated when encountering a previously neutral stimulus that has now become associated with the chemotherapy.” (Examples of this kind of state-dependent emotional trigger included experiencing nausea when “meeting the infusion nurse outside the hospital or entering a room painted the same color as the infusion room.”<sup>3</sup>)

*When a provider tells a patient to try to comply with a treatment recommendation, it may convey that the provider doesn't really expect the patient to succeed.*

Because health care providers have no control over the genetic and personality characteristics of their patients and, often, little control over the physical treatment setting, it’s especially important to be in command of those aspects of treatment that they *can* influence, including the choice of words, tone of voice, and body language. There are six different language traps that, in my experience, reliably elicit a nocebo response. For each language trap, there are simple, specific ways to avoid inducing a nocebo response and enhance the likelihood of a positive outcome.

#### TRAP 1: JUST

As in the example I began with, a health care provider might use this word to signal that the instructions she’s about to give should be easy to follow: “Just breathe normally.” However, *just*, like *only*, can also be used—and understood—in a

restrictive way. For example, if you tell a patient, “Just remember to avoid eating grapefruit when you take this medication,” the patient may interpret this in a way that is very different from what you intended, such as “You don’t have to remember any of the other instructions I have given you. Remember *only* this one.”

Consider another example: “Just stay away from saturated fats.” As Allen and Munich have noted, the use of *just* in this way “minimizes a difficulty or feeling, making it that much harder to understand clearly the extent of the problem one must address.”<sup>13</sup> In other words, the patient may hear: “There’s no need to reduce your intake of anything but saturated fats. Eat all the sugary, high-calorie food you want.” The patient may well relegate anything, indeed, *everything* else that’s relevant to the issue to a position of insignificance.

To avoid this language trap, omit the word *just* from the beginning of this type of sentence:

- “Remember to avoid eating grapefruit when you take this medication.” (Consider adding “It’s okay to eat other fruit.”)
- “Stay away from saturated fats.” (Consider adding a comment about what types of food are more healthful.)

#### TRAP 2: NORMALLY

Let’s look again at the instruction “Just breathe normally.” Normally, breathing is controlled by the autonomic nervous system and occurs without input or interference from the conscious mind. Any conscious attention that you give to breathing will alter it; therefore, it’s impossible to breathe “normally” while thinking about breathing. If I want you to breathe normally, your breathing is the last thing I want you to focus on!

If you want to get an accurate measurement of a physical function, such as the respiratory rate, that is normally regulated by the autonomic nervous system,

- avoid talking about that function.
- ask the patient to focus her or his attention on something that’s fairly neutral emotionally, such as imagining going for a pleasant walk. As an alternative, you can suggest that the patient count backward from 100 or silently read a card printed with an easy-to-read text (for example, an interesting anecdote or bit of trivia).

#### TRAP 3: TRY

Consider the following dialogue:

Jane: Are you going to be at the staff meeting tomorrow?

Bill: I’ll try to get there.

How likely do you suppose it is that Bill will be at the meeting? I find that many people say they

will “try” to do something when they feel uncomfortable admitting they don’t want to do it. When Bill said he would *try* to get to the meeting, he avoided having to explain why he didn’t plan to be there. Socially, it’s a polite way of saying “no.”

Likewise, when a provider tells a patient to *try* to comply with a treatment recommendation—as in “Try to get more rest” or “Try to take this medication at the same time each day”—it may convey that the provider doesn’t really expect the patient to succeed.

Instead of telling your patient to *try to* do something, either eliminate those two words or replace them with phrases such as:

- “Please get more rest.”
- “It’s important to take this medication at the same time each day.”
- “Get in the habit of flossing your teeth every night.”
- “Experiment with different hobbies.”
- “Work at . . .”
- “Play with . . .”

#### TRAPS 4 AND 5: DON’T WORRY, BUT...

Imagine hearing the following phrase from your gynecologist: “The results of your Pap test are back. *Don’t worry, but...*” This familiar three-word phrase contains two language traps.

The first trap is beginning with the word “don’t.” Many imperative sentences that begin with “don’t” typically produce exactly the opposite result from the one seemingly intended. The classic example is “Don’t think of an elephant for the next 10 seconds.” Before you can think about anything else, the speaker has made it impossible for you to comply with her or his instruction by focusing your attention on the very thing you’ve been asked to avoid imagining.

It’s better to phrase what you say in the affirmative, as seen in the examples in Table 1 (above).

The second trap lies in using the word “but,” which often conveys a sense that what will follow in the remainder of the sentence is different from what preceded it. “Red and blue are colors, but apples and grapes are fruits.” When used in conversation, *but* often has the effect of discounting, devaluing, or dismissing the importance of what preceded it; for example, “I know you’ve been kept waiting a long time, but we had some equipment problems.” The subtle message to the listener is that the second half of the sentence is more important than the first half—in this case, as if the speaker intends to invalidate the patient’s right to feel annoyed about having had to wait.

I once worked with a client whose job included calling patients to reschedule appointments. Under-

**Table 1. Choose Affirmative Phrasing**

Don’t	Do
“Don’t forget to call to schedule your follow-up appointment.”	“Remember to call to schedule your follow-up appointment.”
“Don’t tense your arm muscle.”	“Let your arm be very limp.”
“Don’t lose the prep sheet.”	“Where can you keep this prep sheet so you’ll find it easily when you need it?”

standably, there were times when the patient on the other end of the phone was quite annoyed at having to delay a scheduled appointment. I suggested that my client make one small change when she spoke with these patients: substitute the word “and” for the word “but.” Notice the difference between the following two sentences when you say them out loud:

- “I know this is the second time we’ve had to change your appointment with Dr. Smith, and I don’t blame you for feeling quite annoyed, but he won’t be back until Monday.”
- “I know this is the second time we’ve had to change your appointment with Dr. Smith, and I don’t blame you for feeling quite annoyed, and I wonder whether a morning or afternoon appointment would work better for you next Monday.”

The second example (when “but” is replaced with “and”) maintains the idea of a “yes set”—a series of statements that are likely to elicit agreement, followed by a suggestion or request to which agreement is also desired. In this case, the patient is in agreement with the first two statements; the third statement doesn’t invalidate the truth of the first two statements and also offers the patient a choice and a degree of control over the future. When the clerk returned the following week, she was amazed at how well this simple substitution had defused tension in this kind of phone call. Put simply, her patients felt that they had been *heard*. Compromise is much easier once the other person feels that her or his position has been heard and valued.

#### TRAP 6: THE EXPERT ASSERTION OR DIRECTIVE

This trap can take several forms. The common element among them is that patients in distress are prone to take literally what they hear from some-

**Table 2. Expert Assertions and Directives**

Language incorporating a negative suggestion	Language incorporating a positive suggestion
"Here's your <i>pain</i> medicine."	"Here's some medicine to <i>help you get comfortable</i> ."
"You have an infection. You need to take all of this medicine or <i>you'll stay sick</i> ."	"Here's a medication to help clear up the infection. My guess is that <i>you'll begin to feel better within hours of taking it</i> ."
" <i>You're finished!</i> "	"The surgery is complete; <i>healing has already begun</i> ."
[Heard on a pediatrics ward] "Let's give it a <i>shot</i> ."	"Let's see <i>how well</i> this works."
[Heard after a tooth extraction] " <i>While</i> you bite on this pad, you won't bleed."	"Use your teeth to apply gentle pressure to the pad so the bleeding will stop even more quickly".
"You can <i>expect to have</i> [symptom—for example, pain, swelling, bleeding]."	"After that sort of treatment I have had an occasional patient who experienced [symptom], but I'm sure if you look after that healing area as we have instructed, <i>you will be pleased at how quickly it heals</i> ." [Notice the intentional use of "but" in this sentence.]

one they consider to be an expert. The distress helps induce its own trancelike state without any formal hypnotic induction on the part of the provider.

Several of my colleagues in the American Society of Clinical Hypnosis provided anecdotes that included examples of different types of expert assertions or directives, along with language that might be better to use in those circumstances (see Table 2, above).

Notice the different messages conveyed by the italicized words in each example in Table 2. The first example puts the focus on the awareness of pain rather than the expectation of becoming more comfortable. The second example includes a statement that could be interpreted as an unintended directive—"you'll stay sick"—if the patient doesn't clearly link it to the use of the conditional "or." The alternative version conveys the expectation of a positive outcome that begins "within hours." Notice that the provider could also add a final comment about the importance of taking *all* of the medication; for example, "I want you to remember to take all of the medication so that you'll get completely well."

The third and fourth examples demonstrate how figures of speech can easily lead to unexpected messages; for example, "You're finished" can carry a negative connotation, as in "You're done for!" Children are especially prone to literal interpretation—or misinterpretation—because their cognitive development is still at the stage of concrete thinking. Thus a child is likely to understand the reference to giving a "shot" as meaning that she or he is about to get an injection. Another colleague sent

*The more anxious or distressed a patient is, the more likely she or he is to misinterpret figures of speech.*

this example: "When my daughter was five, she had to have her appendix removed. As the nurse was starting her iv she said, 'You're going to feel a little stick.' My daughter said that she thought the nurse was going to hit her with a stick."

The more anxious or distressed a patient is, the more likely she or he is to misinterpret figures of speech, hearing their literal meaning. The solution is to use figures of speech only very cautiously when talking with patients who may be in emotional distress. It is safer to say what you mean—literally—than to use figurative language. Children aren't the only ones who may take an expert's directive or assertion literally. Here are four more examples that I received from colleagues working with adult patients. In each case, I've italicized the expert assertion to call attention to its unintended effect.

I was working with a fellow in his 20s who had been badly injured in a motor vehicle accident, including fracturing his right arm

and both legs. His friend, the driver, was killed. In an orthopedic surgery review with the patient, the surgeon told him, “*You’re screwed for life.*” My patient decompensated and cried like a child. What the surgeon had intended to say was that those screws would remain in place permanently.

Here’s another expert’s comment with a powerful unintended message about life and death: “A woman who had been hospitalized several times for high fevers and low blood counts that required massive transfusions was asked by her physician, ‘*Are you sure you want to go on living like this?*’ She got so angry she decided to get better in spite of the physician, and she continues to wage a good fight.”

Sometimes a problem with an expert’s assertion stems from the provider refusing to believe what she or he sees when confronted with laboratory results:

A woman I am seeing has multiple sclerosis. She is very hypnotizable. Despite her fairly advanced disease, she shows almost no symptoms. She went to the neurologist for her yearly MRI and he told her, “*There is no way you can be feeling this good with an MRI like this.*” The client called me in a panic. It took us weeks to repair the damage. She fired the neurologist promptly.

Betty Alice Erickson, MS, the daughter of the late Milton Erickson, who was well known for his work in the field of hypnosis, passed along this anecdote as a lovely example of an unintended expert assertion:

I still remember when I was delivering my first child. I had been in labor for a couple of hours when I looked at the clock, which said 6:50 AM, and asked the nurse if I could be done by 10. She glanced at the clock and said, “*Oh, no, dear. You’ll still be right here when I come back for my 3 PM shift.*” Now, I’m pretty good at hypnosis, but her assertion shook me. I used a self-hypnotic suggestion to counter her matter-of-fact assertion, yet it seemed like it took me quite a while to get back on track in my head. David was born at 10:10 AM. Later, when I told my father the story, he said, “*It only took you 10 minutes to get back on track.*” He was right.

Had Ms. Erickson not been so well trained in hypnosis, she might well have taken the nurse’s comment as fact, translating the nurse’s expectation into a much longer labor.

As you try—*oops*—as you experiment with making these simple language changes, don’t be too hard on—*oops*—be gentle with yourself. As with other bad habits, it requires persistence to success-

## Suggested Reading

Schenk PW. *Great ways to sabotage a good conversation.* Atlanta: Paul W. Schenk; 2002.

fully replace bad linguistic habits with ones that promote better communication. The first step is to train your ear to listen for these language traps. Television sitcoms provide an easy opportunity to practice: they’re usually full of things you “shouldn’t” say, and you can listen without having to respond. It helps to start slowly. Select one language trap and work with it for a while before tackling another. If it takes more practice than you expected before you succeed, you might play with one of my favorite sentences: “*I give myself permission to be a work in progress.*” ▼

*Paul W. Schenk is a clinical psychologist in private practice in Tucker, GA. Contact author: drpaulschenk@earthlink.net.*

*The author wishes to acknowledge Dael Waxman, MD, James M. Auld, BDS, Betty Alice Erickson, MS, Debby Hammond, MA, LPC, Carol B. Low, PsyD, and Mitzie Eisen, PhD, for anecdotes discussed in this article. The author also wrote and received royalties from sales of a book cited in the article.*

## REFERENCES

1. Lang EV, et al. Can words hurt? Patient-provider interactions during invasive procedures. *Pain* 2005;114(1-2):303-9.
2. Spiegel H. Nocebo: the power of suggestibility. *Prev Med* 1997;26(5 Pt 1):616-21.
3. Barsky AJ, et al. Nonspecific medication side effects and the nocebo phenomenon. *JAMA* 2002;287(5):622-7.
4. Benson H. The nocebo effect: history and physiology. *Prev Med* 1997;26(5 Pt 1):612-5.
5. Gruzelier J. Unwanted effects of hypnosis: a review of the evidence and its implications. *Contemporary Hypnosis* 2000;17(4):163-93.
6. Merton RK. The unanticipated consequences of purposive social action. *Am Sociol Rev* 1936;1(6):894-904.
7. Erickson MH. *The collected papers of Milton H. Erickson on hypnosis.* Rossi EL, editor. New York: Irvington; 1980. 4 vols.
8. Hammond DC, editor. *Handbook of hypnotic suggestions and metaphors.* New York: W.W. Norton; 1990.
9. Rossi EL, Cheek DB. *Mind-body therapy: ideodynamic healing in hypnosis.* New York: W.W. Norton; 1988.
10. Rossi EL. *The psychobiology of mind-body healing: new concepts of therapeutic hypnosis.* Rev. ed. New York: W.W. Norton; 1993.
11. Reilly D. Creative consulting: what modifies a healing response? *studentBMJ* 2002;10(1):12-3. <http://student.bmj.com/issues/02/02/education/12.php>.
12. Blankfield RP. Suggestion, relaxation, and hypnosis as adjuncts in the care of surgery patients: a review of the literature. *Am J Clin Hypn* 1991;33(3):172-86.
13. Allen J, Munich R. The j-word: when a word is an attitude. *Meminger Perspect* 2006;36(2):2.