Chapter 3

How words hurt

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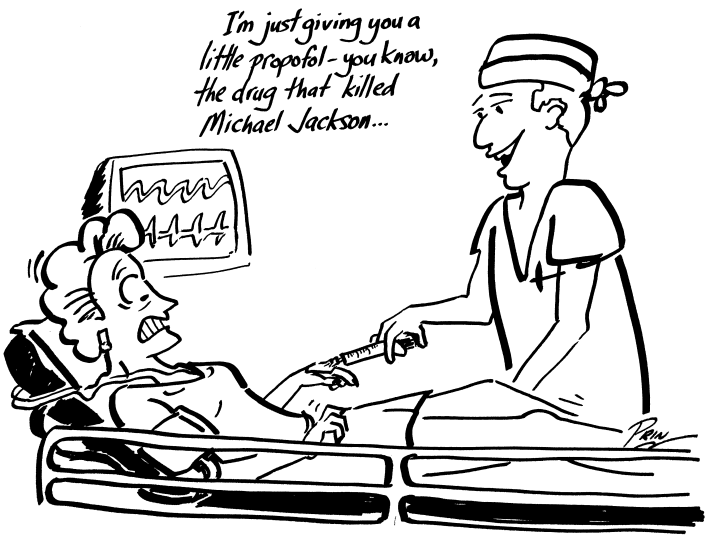
'If you assume there is no hope, you guarantee there will be no hope'.
Noam Chomsky



What this chapter is about

Negative suggestions and how to look out for them

Suggestions are statements that evoke an image in the listener's mind. They may be positive, evoking an image of peace and hope or a desirable mood and behaviour, or they may be negative, eliciting thoughts of pain and doom.

Once mentioned, the suggestion is front and centre: '*You probably even didn't think of an endotracheal tube before we mentioned it right now—even if we had instructed you not to do so or just reminded you that there is absolutely no need to think of it right now*'.

When anaesthetists tell patients that a procedure such as intravenous or arterial line placement '*will hurt*', the communication itself increases the likelihood of this possibility, and the perception referred to becomes more likely to be experienced as pain[1–3].

Fortunately, suggestibility can also be used in a positive way[4]—for example, telling patients that there are ways to improve their comfort such as coughing during IV cannulation[5] or that breathing exercises after abdominal surgery[6] can make things more comfortable. Also just not mentioning words with negative connotations significantly reduces pain and anxiety associated with potentially painful stimuli such as injection of local anaesthetic[1,7]. Remaining factual '*I will give you the local anaesthetic now*' or '*the numbing medicine*' as some prefer, will suffice.

In times of stress, patients assume a focus of attention that leads to a hypnotic frame of mind that is highly suggestible to communications from the anaesthetist, whether the communications are negative or positive[8]. Hence an important step is to avoid wording with negative connotations.

Often, however, even well-meaning comments are misunderstood. Many words have double meanings, and in this setting patients will cling to the more pessimistic interpretation[9]. '*I will put you to sleep*' may conjure images of the veterinarian euthanizing a pet. Also interpretations are highly individual. We (EL) had one patient who objected to being made '*numb*' since '*numb*' meant '*dumb*' for him.

Placebo and nocebo effects

The effects of suggestion become all too evident when considering the widely recognized phenomenon of placebo. Placebo analgesia represents a situation where the

administration of a substance known to be non-analgesic produces an analgesic response when the subject is told that it will make him or her comfortable. Interestingly, the type of suggestion-concordant response can be analgesic or antalgesic. When the suggestion elicits a negative response the phenomenon is usually called the nocebo effect[10]. Such effects follow negative suggestions where verbal or non-verbal cues lead to negative patient responses in terms of their perceptions, mood (affect) or behaviour. For example, offering the patient a sick bowl (emesis basin) in case of nausea can result in the patient feeling nauseous or even vomiting. More than two-thirds of an unselected sample of 34 college students reported mild headaches when told that a non-existent electric current was passing through their heads. Reports such as these are consistent with a view that clinical focusing on pain may of itself be a cause of pain[11]. Suggestion, intentional or not, must be taken into consideration when considering both placebo and nocebo effects[12].

In patients undergoing interventional procedures for lumbar facet joint pain, 'placebo' effects were found in 13–15% of patients[13]. This is highly relevant in the practice of anaesthesia where successful doctor–patient relationships can mitigate nocebo responses. Negative beliefs are probably the single most important factor generating the nocebo effect, which is increasingly being recognized as both important and a major challenge to modern medicine[14]. Negative reactions to placebo medications (drugs without an active ingredient) are well documented, and similar responses can be induced in patients presenting for anaesthesia care where the use of negative language tends to increase patients' stress, negative expectations and perceptions. Several common 'language traps' have been examined with a view to formulating alternative ways to communicate with patients[15].

Anaesthetists are in a position to enhance or sabotage the pharmacological effects of their drug administrations. For example, the side effects of propofol can be exaggerated if patients are advised during the injection that the propofol '*will sting*' or '*hurt*' as it is injected. Alternative communications could be that propofol gives, '*a warm or a cool feeling*' during its administration. We have heard of anaesthetists suggesting that the propofol '*sparkles*' as it is experienced—a sensation frequently appreciated by patients in a pleasant way as they are being induced. If one is concerned about whether anaesthetists could honestly describe the perception of propofol in a positive way, a more neutral alternative could be that it is: '*a powerful anaesthetic that may or may not be experienced or noticed as it begins to have an effect*'. Even more neutral could be '*I am starting the propofol now*', and leaving the patient the right to his or her own experience and description. Some anaesthetists may feel that they need to warn everyone regarding injection pain and propofol despite the fact that the incidence of pain is under 40%[16]. If the types of communications given prior to injection are not controlled for, it is likely that the very act of suggesting pain may have an effect on the results of research in this topic[7].

Minimizing words and negating words

Minimizing words such as, '*a bit*', '*a little*', '*tiny*', '*just*' or '*only*' have no effect on mitigating the patient's response to negative suggestion. The image is already created in

the mind, and modifiers do not displace its adverse effects. For example '*Just a tiny **sting** that will only **hurt** for a bit*' already sets the stage for stinging and hurting[7,17,18].

Negating words—when, '*don't worry*' means, there is '*something to worry about!*'. Negating words also fail to mitigate the effects of negatively valued words. Saying '*this won't hurt*' is double jeopardy. The suggestion in itself brings attention to hurting and if it then indeed hurts the anaesthetist has lost credibility. Similarly when asking a patient '*not to move*', rather than '*stay still like a statue*', will probably lead to a subconscious response '*to move*'.

Try—the failure word

'Try' is a word that suggests anticipated failure of what is being asked. For example, '*Try to ignore the sound of the drill*' is likely to focus the patient's attention on the drill—just as being asked as the reader to '*Try not to think of an ampoule of propofol*!' (see also Chapters 4 and 20).

Therapeutic communication

Communications by the anaesthetist can provide information to the patient regarding the reason behind what otherwise might be perceived as an uncomfortable experience. Such therapeutic alternative communications could be, '*This local anaesthetic will **numb** the skin*', rather than '***sting***', or '*The anaesthetist is there to ensure your comfort and safety during the surgery and until you wake up in recovery*' rather than '*… put you to sleep*'. It is implied that comfort is one possible way to interpret a sensation. Similarly patients are reassured that they will be anaesthetized throughout the procedure, and that they will wake up at the end! Alternatively the anaesthetist could say, '*We will keep you under general anaesthesia for as long as necessary, so that you can awake refreshed*', or '*modern anaesthetics really allow us to tailor the effects to your needs whatever they might turn out to be*'. Such suggestions allow patients to experience procedures in a way that facilitates a neutral or positive behavioural responses[19].

Case study 1 Negative suggestions have no effect?

An 8-year-old boy was asked in the pre-anaesthetic consultation 2 hours prior to surgery whether he wanted an intravenous (IV) or inhalational induction. His father stated that he should have the gas as this would help him vomit less. The boy insisted that he didn't want a mask and that he wanted '*the needle*' to go to sleep. The anaesthetist asked the parent whether it would be OK to go along with the boy's wishes as there was no evidence that an IV induction would adversely affect the risk of post-operative nausea and vomiting (PONV). The father reluctantly agreed but stated to the boy, '*As long as you know that you will vomit in recovery, when you wake up, if you have the needle*'. The boy had a smooth induction and an uneventful procedure but woke up in recovery crying and vomiting. His first words were, '*I should have listened to my dad!*'

Children are more suggestible than adults, particularly when stressed[20]. Parents are powerful authority figures and this parent had made a powerful suggestion for the child to vomit in recovery.

Case study 2 Negative suggestions have no effect?

A surgeon walked over to a 21-year-old patient during face mask pre-oxygenation and IV propofol induction. He then began talking to the patient who was scheduled for a circumcision and said that it would; '*hurt like hell in recovery*'. When the anaesthetist asked the surgeon why he had said that to the patient, the response was that, '*It always does hurt*'. Despite a penile nerve block and IV fentanyl, the patient woke up distressed, in pain and needing a prolonged stay in recovery while an analgesia protocol regime was administered.

Surgeons are powerful authority figures and there is a high response rate among patients to their expectations and suggestions. Over the last ten years the same surgeon now regularly tells patients that they '*can wake up comfortably as the wound heals and everything gets better*', and they frequently do.

Case study 3 Negative suggestions have no effect?

Antacid was administered prior to a caesarean section; '*You need to take this. It tastes disgusting and will probably make you feel sick*'. Interestingly the woman hesitated for a moment and then drank the antacid only to grimace and exclaim '*My god! That tastes disgusting!*' A few minutes later she proceeded to vomit on the way to theatre.

The patient actually used the same words as the anaesthetist administering the antacid where the negative suggestion was then perceived as a negative experience which subsequently led to the behavioural response of vomiting as she was transferred to the operating room. An alternative communication could have been used such as, '*You may want to take this. It is an antacid which pleasantly coats the stomach and helps you stay safe if you need a sleeping anaesthetic*'.

Interestingly, our anecdotal experience suggests that when women are provided with an explanation of why they are being asked to drink the antacid rather than suggesting how bad it tastes, they frequently make no comment on the taste. This is the subject of future research. If there are still any doubters out there of the effects of negative suggestion, excerpts from a verbatim transcript of a taped recording of one of the author's (EV) colleagues injecting local anaesthetic prior to a procedure[18] illustrates the point most effectively. (Reprinted with permission.)

AQ: Should this text be here?

Case study 4 Negative suggestions have no effect?

The patient is draped and the doctor is about to inject local anaesthetic prior to large core breast biopsy.

Dr A: '*OK, you are going to feel a* ***pinch*** *and a lot of* ***burning*** *and* ***stinging****. This is a* ***pinch****…* ***a pinch****…OK?* ***Burning*** *and* ***stinging****. How are you doing? Doing OK?* ***Pinch*** *and* ***sting****, Do you feel that? More* ***stinging***'.

Patient: '*I can still feel a needle in there*'.

Dr A: '*You feel a* ***needle*** *but do you feel any sharp* ***pain****?*'

Patient: '*I am OK, I just feel a needle*'.

Dr A: '*You feel a something moving but nothing* ***pain****ful, nothing* ***sharp*** *right?*'

Patient: '*Oh. … I feel prickly…Yeah*'.

Dr A: '*What was that?* ***Sharp****? …****Sorry***'.

Patient: '*That hurts!*'
Dr A: '***Sorry***'
[The doctor removes the needle].
Patient: '*That kills, it hurts, …it hurts, it hurts*'.
Dr A: '*There is nothing there*'.
[The doctor places a gauze on the puncture site]
Dr A: '*Does it **sting**?*'
Patient: '*It didn't sting before…weren't you doing it before?*'
Patient: '*Wait, wait, wait. What did you just do? The last three times you injected me it didn't hurt. It stung a little but this time it feels like you are cutting the flesh out of my chest*'.
Dr A: '*Sorry about that, is it **burning** now?*'

The ethics of communication

It is just as inadvisable to say something '*will hurt*' as it is to say it '*will be comfortable*' when there is a possibility that it will do neither. One is then left wondering what to say when the patient asks, '*Will this hurt?*' Since the patients' response to stimulation cannot be known upfront there really is no honest truthful answer. If the anaesthetist responds by saying, '*It is quite variable. Some people experience discomfort, others tell me how surprised they are to feel more comfortable than they thought they would be*', this is entirely consistent with honesty with the added benefit of giving an indirect positive suggestion[19].

Similarly, if a patient asks, '*Will I have much pain after my operation?*' the anaesthetist can and should always respond honestly, and yet avoid the use of negative suggestions wherever possible. Adding a measure of control is also helpful, thus a response might take the form of, '*The healing response is highly individual. Some patients may experience **discomfort*** (instead of 'pain'), *while some people are surprised that the sensation of the wound healing is more comforting than they had thought. And if there should be some discomfort, there is no need to fight it, just to admit it, and most importantly to let us know right away. You can have as much medication as you wish within the limits of safety, to recover as quickly and comfortably as possible*'.

Choosing the word '*discomfort*' rather than '*pain*' and reframing '*pain*' as '*a healing sensation*' changes the meaning of the sensation from one of disability, to one of recovery. Addressing the patient's concerns is always paramount and these need to be dealt with. Note the use of the indirect suggestion '*some people…*' This implies indirectly that the patient too may feel more comfortable than expected. There sometimes is concern regarding the ethics of not telling patients something will hurt when the anaesthetist thinks that it might do. However, the best available evidence suggests that, the patient's and the anaesthetist's expectations, in some part, determine the experience[2].

The patient may hear you even if you don't think so! (see also Chapter 15)

Some patients under general anaesthesia may hear, although not necessarily recall, what was being said about them in the surgical theatre, particularly when rude remarks

have been made. This has the potential for adverse effects during the post-operative course[21].

Clinical researchers have traditionally tended to talk of positive and negative suggestion in terms of placebo and nocebo effects. There is an increasing recognition that patients who believe they will get better tend to realize this self-fulfilling prophecy, while the nocebo effect serves to make patients feel worse[22]. Anaesthetists are in the privileged position of influencing their patients' perceptions, mood and behaviours in powerful and subtle ways. Awareness is increasing of words and phrases that can lead to adverse patient responses such as increased anxiety and pain. Negatively framed language can nearly always be reframed in a way that can lead to a therapeutic rather than an adverse patient response. Research in the radiology setting of invasive procedures[23] and various anaesthetic settings has found that an understanding of how communications function as suggestions can minimize sabotage and harm caused by inadvertent negative language. Communications can then function as a valuable additional tool for the anaesthetist's armamentarium in selected patients.

Key points

1. Negative suggestions are ubiquitous in hospital practice in general, and in anaesthesia in particular.
2. There is now clear evidence from both observational and randomized controlled studies that negative suggestions increase pain perception and anxiety.
3. Try is a failure word and should be used with caution.
4. Using positive language and suggestion can help generate positive outcomes.
5. Anaesthetists need to be aware of nocebo effects on outcomes such as pain, anxiety and PONV.

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