

# Preparation for treatment

# 11

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After reading this chapter you should be able to:

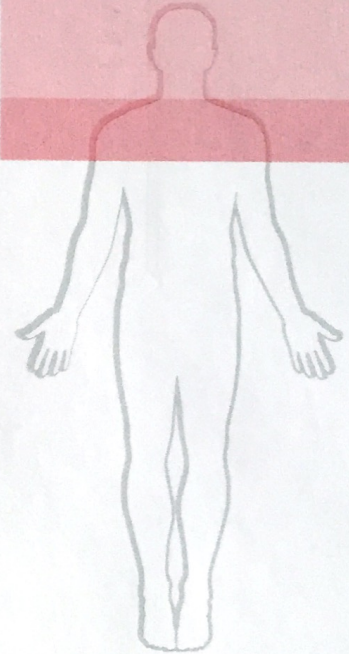
- state two absolute contraindications to acupuncture
- state one contraindication to indwelling needles
- state four relative contraindications to acupuncture
- state four conditions requiring special precautions
- state the diameter and length of a standard needle.

## Introduction

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Acupuncture is in some senses a straightforward matter of inserting a few needles, but for treatment to be safe and effective, some preparation is necessary. It is particularly important for beginners to establish good habits and routines as soon as they start practice. Safety, just as much as effectiveness, must become second nature when treating patients.

As well as ensuring that they have the best training and continued education, acupuncturists should apply the standards expected of all healthcare professionals: they should conduct themselves at all times in a suitable manner. An example of appropriate behaviour and ethical standards is given in the



various documents that make up the General Medical Council's *Good Medical Practice*.

One aspect of good patient care is that there is appropriate communication between all the practitioners involved in the patient's care. Acupuncturists who work independently should try to ensure (with the patient's permission), that the patient's GP knows that they are seeing the patient, both for clinical and for ethical reasons.

Practitioners must have a realistic and honest approach to what the acupuncture can achieve. Claims that acupuncture can treat anything and everything are false, deceive patients, and bring the therapy into disrepute. Claims for magical cures are short-sighted: acupuncture is a form of therapy with successes and failures, like most treatments.

This chapter describes the thinking processes behind safe and effective acupuncture, up to the moment of inserting the needles. This is the preparation for the treatment itself, which is described in the following chapter. This chapter has not been designed to be used as the basis for formal guidelines for providing services, and readers who need to develop guidelines could base them on an example written for palliative care (Filshie & Hester 2006).

## Patients suitable for acupuncture

Patients for acupuncture should be screened for possible contraindications and for the need for special precautions.

### Contraindications

The patient must be willing to receive acupuncture. There are two main reasons why the patient might not be willing:

1. Needle phobia
2. Personal belief: occasionally, patients believe that acupuncture, because it is associated with ideas of energy and meridians, can have an adverse spiritual influence, so they want nothing to do with it. It is tempting to try to circumvent these beliefs by using some phrase like 'dry needling', but probably not sensible. We prefer to mention the word 'acupuncture', and let the patient decide.

A tiny proportion of the population can react to an invasive medical technique by having a convulsion; the mechanism is not clear, but may involve a sudden strong vagal stimulus to the heart. The significance of this reaction is that it cannot necessarily be avoided by treatment with the patient lying flat. This should not be confused with the sort of mild anoxic convulsion that can occur if a patient faints and cannot immediately be lain down flat. If there is a history of an unexplained convulsion prior to a patient presenting for acupuncture, it is wise to avoid acupuncture treatment. Inevitably, some patients with this reaction will receive acupuncture as their first medical intervention, in which case such events should be regarded as unavoidable.

**BOX 11.1****Contraindications for acupuncture****ABSOLUTE CONTRAINDICATIONS TO ACUPUNCTURE**

- Patient unwilling
- Spontaneous bleeding or bruising (unless fully assessed).

**ABSOLUTE CONTRAINDICATIONS TO A PARTICULAR TECHNIQUE**

- Valvular heart disease: avoid indwelling needles
- Demand-type pacemaker, or intracardiac defibrillator: avoid electroacupuncture across the chest.

**RELATIVE CONTRAINDICATIONS**

- Severe bleeding tendency, e.g. anticoagulant therapy, thrombocytopenia
- Psychologically disturbed patients (may have unpredictable reactions)
- Compromised immune system
- Previous seizure induced by an invasive medical procedure
- Marked previous reaction to acupuncture.

Patients who bruise spontaneously should not be treated until their clotting function has been checked and is satisfactory.

These contraindications are listed in Box 11.1.

**Absolute contraindications to particular techniques**

- Indwelling needles are a potential source for bacteraemia, which can infect a damaged heart causing subacute bacterial endocarditis. (High risk: previous endocarditis, previous cardiac surgery including valve prosthesis and congenital valvular disease, such as Marfan's syndrome; low risk: rheumatic heart disease, calcified aortic valve and floppy mitral valve.)
- Electrical stimulation may possibly affect the sensing mechanism of a pacemaker or intracardiac defibrillator.

**Relative contraindications: balancing risk and benefit**

A patient may have a 'relative' contraindication to acupuncture. In this case, it is the practitioner's responsibility to work with the patient in striking a balance between the benefits and risks of treatment. For example, faced with a patient with a bleeding disorder due to anticoagulant drugs, you may decide not to use deep needling for treating ankylosing spondylitis: the expectation of benefit is small, and deep needling runs a significant risk of causing haemorrhage. On the other hand, you might use superficial needling, which could be safe and effective for a patient with tension headache. Take the patient's

that a previous physical treatment – massage or manipulation for example – produced an unpleasant reaction. In that case it is best to assume that acupuncture will do the same.

Fortunately, strong *reactors* are also usually good *responders*. These patients have a strong therapeutic response, so treatment can be light: in the most sensitive patients, as little as 30 seconds' needling may be enough.

Similarly, children in general are likely to be strong reactors and the needle should be removed within a few seconds. However, unlike adults, this does not mean that all children are good responders.

### Patients with cancer

Acupuncture can be very helpful for the palliation of symptoms in cancer patients, but special precautions are required for many reasons, including the facts that these patients may have significant side effects of their treatment and even multi-organ disease. There is a risk of masking symptoms, and a need to recognize that a patient who fails to respond to treatment in the usual way may have an increased tumour load. A fuller discussion of these issues is available for anyone who wishes to treat these patients (Filshie 2001).

## Information and informed consent

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Patients must be given adequate information about the benefits and risks of acupuncture to allow them to make a fully informed decision about treatment. The difficulty is in knowing what is meant by 'adequate' information, but it should include an offer of:

- realistic information about the possible expected benefits of acupuncture
- information about the known risks of acupuncture relevant to the case
- other available treatments for the condition, if relevant.

It is obviously important to strike a balance between, on the one hand, not concealing risks that are real and relevant and, on the other hand, officiously listing every adverse event that has ever been associated with acupuncture. This could frighten patients away from using a treatment that might benefit them.

All information about risk must be given in plain language that is appropriate for the individual patient; and you should judge (and ideally justify) when individual patients have gained the information they need and want. Patients should also be offered information about the risks and benefits of any other treatment available. It would be unethical to recommend acupuncture for a condition when there is no convincing evidence that it is effective, but when some other treatment is known to be effective. Patients must be informed and then make their own decision.

Normally, verbal consent to treatment is enough. Some hospital trusts or other employers of acupuncturists may insist on providing written information and sometimes obtaining signed consent. The patient information leaflet reproduced here (Box 11.4) was developed by consent between several UK

## BOX 11.4

**Patient information sheet and consent form**

Please read this information carefully, and ask your practitioner if there is anything that you do not understand.

**WHAT IS ACUPUNCTURE?**

Acupuncture is a form of therapy in which fine needles are inserted into specific points on the body.

**IS ACUPUNCTURE SAFE?**

Acupuncture is generally very safe. Serious side effects are very rare – less than one per 10 000 treatments.

**DOES ACUPUNCTURE HAVE SIDE EFFECTS?**

You need to be aware that:

- drowsiness occurs after treatment in a small number of patients, and, if affected, you are advised not to drive
- minor bleeding or bruising occurs after acupuncture in about 3% of treatments
- pain during treatment occurs in about 1% of treatments
- symptoms can get worse after treatment (less than 3% of patients). You should tell your acupuncturist about this, but it is usually a good sign
- fainting can occur in certain patients, particularly at the first treatment.

In addition, if there are particular risks that apply in your case, your practitioner will discuss these with you.

**IS THERE ANYTHING YOUR PRACTITIONER NEEDS TO KNOW?**

Apart from the usual medical details, it is important that you let your practitioner know:

- if you have ever experienced a fit, faint or funny turn
- if you have a pacemaker or any other electrical implants
- if you have a bleeding disorder
- if you are taking anticoagulants or any other medication
- if you have damaged heart valves or have any other particular risk of infection.

**Single-use, sterile, disposable needles are used in the clinic.**

**STATEMENT OF CONSENT**

I confirm that I have read and understood the above information, and I consent to having acupuncture treatment. I understand that I can refuse treatment at any time.

Signature

Print name in full

Date

If the expectations of both the patient and the practitioner are positive, then success seems more likely – though acupuncture can certainly be effective in patients who seem to have very low expectations of it helping. It is important for practitioners' expectations for acupuncture to be realistic and to make sure that patients who have unrealistic ones can be gently disabused without having their hopes completely dashed.

## Acupuncture equipment

### Standard needles

Acupuncture needles consist of a shaft and a handle. The shaft is generally stainless steel sometimes coated in silicone; and handles may be of metals or plastic, as shown in Plate 1. The various features of the needles are listed in Table 11.2.

There have been reports that silicone fragments may break off the surface coating and (theoretically) provoke foreign body reactions, but this is a risk common to all silicone-coated hypodermic needles and surgical instruments, not just acupuncture needles.

The needle tip does not simply taper to a point like a pencil, but has a rounded profile (traditionally likened to a pine cone) shown in Figure 11.1. This is supposed to be less traumatic – pushing tissue fibres apart rather cutting them – but it can still damage blood vessels, nerves and other structures if the needle or the patient moves. The modern needle is manufactured to a high standard, but occasionally the point is blunt or hooked, or the handle not firmly attached to the shaft. Such needles should be rejected as soon as the problem is discovered.

The typical diameter and length (which refers to the exposed part of the shaft, not including the handle) of acupuncture needles commonly used are shown in Table 11.3.

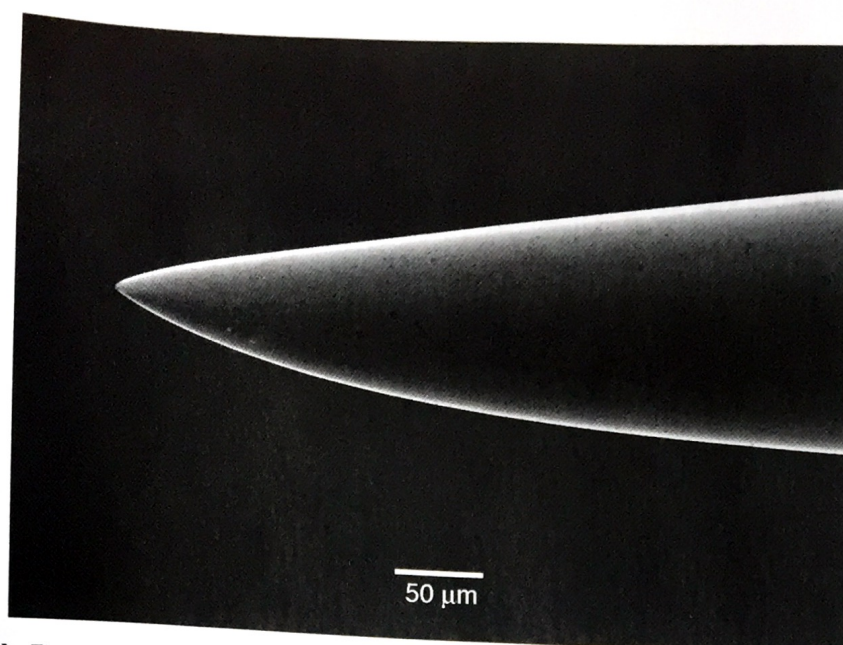
Only purchase single-use disposable needles.

TABLE 11.2

Variations in needle manufacture

Part	Variations	Advantages/disadvantages
Shaft (stainless steel)	Unpolished	Standard: 'gripped' by the tissues to produce <i>de qi</i> Patient comfort, but less grip on tissues so <i>de qi</i> may be more difficult to elicit
	Polished	
	Silicon-coated	
Handle	Wound metal (steel, copper)	Easy to manipulate Less easy to manipulate Lightweight <sup>a</sup> but non-conductive
	Solid metal	
	Plastic	

<sup>a</sup>In some positions, a needle that is lying superficially will be more likely to fall out if the handle is heavy steel, in which case lightweight plastic can be an advantage.



**Figure 11.1** Electronmicrograph of acupuncture needle tip (courtesy of Plymouth University).

**TABLE 11.3**

Variations in dimensions of needles commonly available

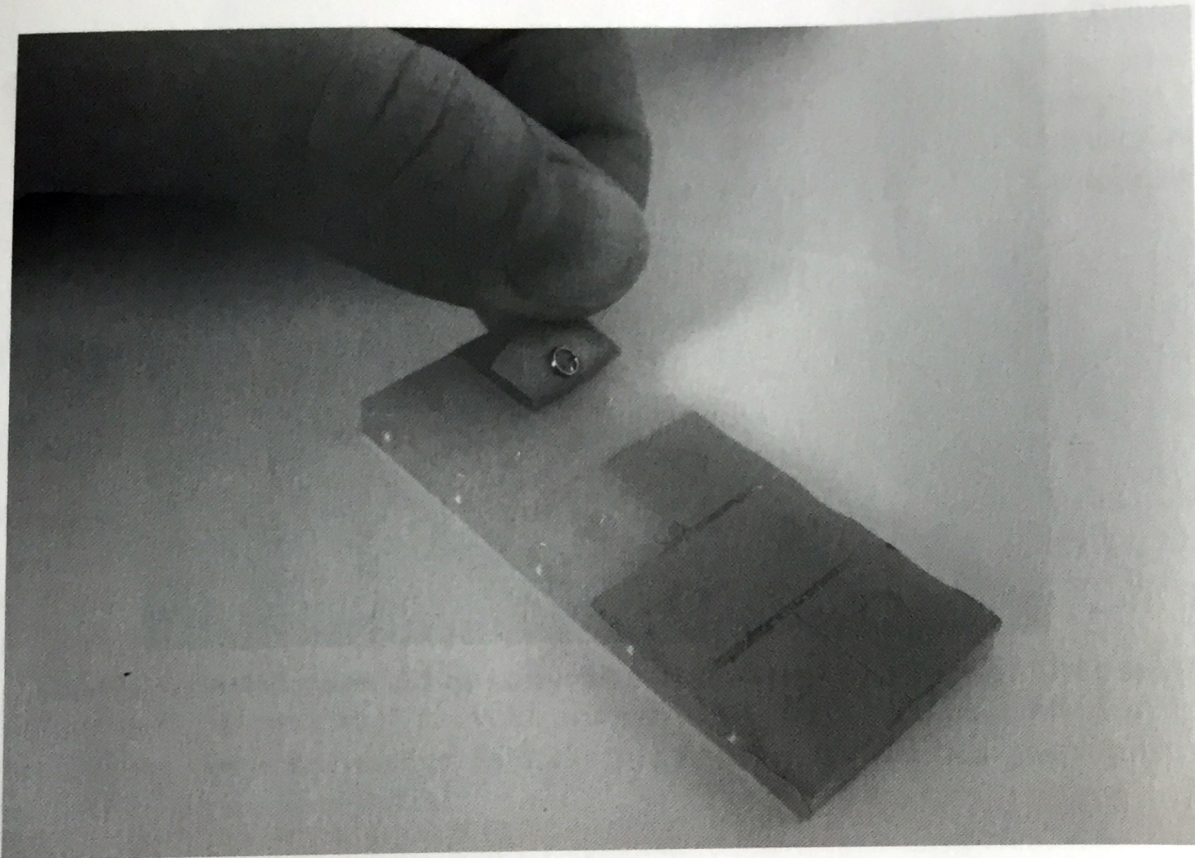
	<b>Range</b>	<b>Standard</b>	<b>Special purposes</b>
Diameter	0.12–0.35 mm	0.25 or 0.30 mm	Longer needles should be thicker, for strength; typically 0.30 or 0.35 mm
Length	7–125 mm	25 or 40 mm	Longer lengths up to 75 mm are used for deep points, e.g. in the gluteal muscles Shorter lengths, 15 mm, are used in the face and ear

## Guide tubes

Traditionally, needles were inserted directly using a deft flick-and-twist action, but now most needles are available with plastic guide tubes, and these are recommended for beginners. The needle is about 2 mm longer than the tube, enough to allow it to be inserted through the skin by tapping the end. Single needles are usually held in the guide tube with a wedge or plug. After freeing the needle, tip the guide tube so the handle appears, and hold it between finger and thumb to stop it falling out.

## Other types of needle

Indwelling needles are sometimes used to continue the effect of treatment between attendances at clinic. There are special contraindications and precautions for using them, which we discuss in Chapter 13. The most common form of indwelling needle is like a tiny drawing pin with a 2 mm projection



**Figure 11.2** Photograph of indwelling needle with integral adhesive dressing.

(Plate 9). They are made in various diameters, and sometimes have an integral adhesive dressing (Fig. 11.2). They are sometimes used for auricular acupuncture (when they may be called 'press studs'), but we discuss the potential dangers of this below. They may also be used at other sites and need to be fixed securely with an adhesive dressing (Plate 10).

Auricular acupuncture can be applied using stainless steel balls or, more traditionally, seeds of the *Vaccaria* plant, as shown in Plate 11.

### **Electroacupuncture equipment**

While some practitioners never use electroacupuncture (EA) in the whole course of their professional career and, presumably, their patients are pleased with the results, most find that, before long, they want to be able to use EA particularly for patients with chronic pain.

Choosing EA equipment is not straightforward: cheap stimulators are available that are sometimes effective, but apparatus that is really flexible and reliable enough costs several hundred pounds. It is worth buying the best you can afford. Some of the most important criteria for a quality machine are suggested below (see Box 11.5). Some of the older models that are still available do not perform as described and might not meet current standard quality criteria; in Europe, standards are set by the International Electrotechnical Committee (CEI), but there are, as yet, no specific standards for EA machines. Modern apparatus is made to high standards (Plate 2) and have a maximum



**BOX 11.5****Suggested features of optimal electroacupuncture apparatus**

- Low-voltage operation, preferably battery powered
- Master on/off switch
- Square wave output with waves of alternating polarity
- Low- and high-frequency outputs (e.g. 2–4 Hz and 80–100 Hz), with automatic switching between them
- Separate adjustment for the intensities of low-frequency and high-frequency outputs
- At least three pairs of output leads, each with its own intensity control
- Each intensity control placed in line with its output socket, for easy identification.

current of about 12 mA, which produces about one-tenth the maximum transthoracic electrical charge recommended by the US Food and Drug Administration (John Thompson, personal communication). Some employers insist that all new equipment should be checked by a hospital physics department or similar laboratory.

**Ancillary equipment**

It is essential to have the following close at hand when treating patients:

- Facilities to wash and dry the hands before treating each patient; alcohol gel is an acceptable alternative
- Couch and pillows to support the patient in the correct position
- Cotton wool swabs to press on the point after removing the needle
- Safe disposal boxes for used needles and swabs
- Facilities for keeping records.

Practitioners who use a separate side room for acupuncture, so they can leave patients relaxing during treatment, should have an intercom or call system for the patient, and a method of reminding themselves that there is a patient in the examination room.

**Re-sterilizing needles**

In certain circumstances where it is impossible to use single-use disposable acupuncture needles for one reason or another, the only way to deliver acupuncture may be to reuse needles after sterilizing them. Full, hospital-standard sterilization is absolutely essential in order to avoid transferring infection, e.g. hepatitis virus, between patients. Needles rapidly become blunt when repeatedly heated up during the sterilization process, and are then painful for patients.

## The setting for acupuncture

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Now that health clinics and hospitals in the West routinely meet high standards, it is easy to forget the relevance of the treatment setting to safe practice. In two cases reported in the literature, patients who were severely debilitated by chronic illness were given acupuncture at their own home in filthy conditions. They developed septicaemia, which ultimately contributed to their death.

The setting for acupuncture practice must offer the following facilities:

- For adequate examination: good light and good access
- For adequate treatment: anatomical landmarks must be identifiable, e.g. to establish the surface anatomy of the pleura; patient adequately supported on a firm surface so depth of insertion can be monitored (sometimes difficult in the patient's home, which constitutes a real hazard).

Other aspects of the setting that are relevant for safety include having adequate *time* to carefully conduct the procedure and having sufficient *active support* from other staff and colleagues.

## Preparation of the practitioner

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This is a checklist of items that practitioners should reflect on before starting treatment, to ensure that they:

- have the knowledge and skill – both in medicine and in acupuncture – to treat the patient safely and appropriately
- have formed (or been informed of) a diagnosis and treatment plan
- in collaboration with the patient, judge that the potential benefits of using acupuncture in this patient's circumstances outweigh the risks
- have considered the possible effects of acupuncture on any other condition present
- have checked that the setting and equipment are satisfactory
- know the anatomical relationships of all the points they plan to treat
- can cope with all likely adverse events that might arise
- have indemnity insurance in place.

Finally, practitioners should ensure their hepatitis B immunization is up to date, not only to protect themselves, but also to protect their patients. One small cluster of hepatitis B infections was attributed to spread from the practitioner who was himself antigen positive. This virus is highly infectious in minute doses.

## Summary

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This chapter is the first of three that are essential reading before using acupuncture in clinical practice: it describes and lists the conditions that must be present for you to make the decision to use acupuncture.

Acupuncture is contraindicated if the patient has a needle phobia or is not willing, and if the patient bruises spontaneously and has not had their clotting function checked. Particular acupuncture techniques are also contraindicated in certain situations: indwelling needles in patients with valvular heart disease, electroacupuncture when an intracardiac defibrillator is fitted. Relative contraindications require the practitioner and patient to balance the potential benefit and risk: severe bleeding tendency, significant psychological disturbance, compromised immune system, history of major seizure induced by a medical procedure and a marked previous reaction to acupuncture.

Special precautions need to be taken for particular patients such as those with bleeding disorders, epilepsy or immunosuppression. Pregnancy is not a contraindication, though certain techniques are best avoided. Patients without a clear diagnosis, or with any distorted anatomy, need careful consideration, as do patients who must drive after treatment. Strong reactors experience aggravation of their symptoms and other adverse effects after normal strength treatment and need to be treated lightly. It is difficult to predict reliably which patients will be strong reactors.

Patients must give their informed consent to treatment, which depends on being given adequate information tailored to their needs and abilities to understand. Consent is generally implied by the fact that patients make themselves ready for treatment, but signed consent may be required in particular circumstances.

Conditions that are suitable for acupuncture include many musculoskeletal conditions, particularly myofascial pain, but not systemic (inflammatory) arthritis. Also, soft-tissue injuries that are slow to heal may clear quickly with acupuncture. Some medical conditions may be mimicked by myofascial trigger point pain. Nociceptive pain generally responds better than neurogenic pain. Expectation may improve the outcome in painful and some non-painful conditions, but it is inappropriate to raise expectations excessively.

Non-painful conditions that may respond include nausea, allergies such as rhinitis, xerostomia and menopausal hot flushes.

Basic acupuncture equipment includes single-use disposable needles of various sizes. Vital ancillary equipment includes washing facilities, couch, cotton-wool swabs and sharps disposal box. Other specialized supplies may include electroacupuncture apparatus and auricular acupuncture needles.

The setting in which acupuncture is provided should be clean and conducive, permitting careful examination and treatment and providing necessary support and time.

Practitioners who give acupuncture are responsible for developing appropriate skills, knowledge and attitudes for safe and effective practice.