

Why is all this important?

New Zealand has a very good track record for electrical accidents and incidents and one of the reasons is that we follow well tested and recognised standards.

The requirements for medical locations are more stringent than for other general workplaces because patients are more susceptible to the effects of electric shock. This is because they may be unable to move away from the source of the electricity, they can be frail or unwell, and they may have lowered skin resistance due to sweating, the application of agents such as ECG or ultrasound gel, or the use of needles and surgical instruments.

For some years now it has been a legal requirement that all medical electrical appliances and the buildings in which they are used are periodically tested and certified. As with many such laws, it is the responsibility of the building or business owner to ensure this is done. It is not a requirement that is actively policed, but in the event of an incident or a complaint from a patient, member of the public, or even a staff member, the Energy Safety team from the Ministry of Business, Innovation and Employment will swing into action. They may also be joined by their colleagues from Worksafe NZ (OSH). The penalties can potentially be severe. It is important to realise that the person who uses medical electrical equipment is also liable, not just the business or practice owner.



For more information

Check out our website at: www.meditest.co.nz

The technical and legal stuff can be found by referring to:

The Health and Safety in Employment Act 1992

The Electricity (Safety) Regulations 2010

And these standards:

AS/NZS2500 Guide to the safe use of electricity in patient care

AS/NZS3003 Electrical installations - patient areas

AS/NZS3551 Management programs for medical equipment

Information given in this flyer is provided for educational purposes. Please always refer to current legislation and standards for a definitive explanation. © Meditest Ltd. 2014

THE SAFE USE OF ELECTRICITY IN PATIENT CARE

This training guide was written for patient care staff working in hospitals, general practice medical centres, physiotherapy and dental clinics, elderly care facilities and radiology centres. It will help you to safely use medical electrical appliances in your work.

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Medical Electrical Appliances

A medical electrical appliance is defined as any item of electrical equipment used to treat, diagnose or monitor a patient. Think of electrocardiograph (ECG), nebuliser, diathermy, ultrasound and even examination lamps. Where such appliances are mains powered some special requirements need to be observed:

- The operator should be familiar with the correct operation of the equipment
- The equipment must be routinely inspected for electrical safety
- The equipment should be checked before each use
- The equipment must only be used in a Body Protected Area

Let's look at each of these in turn...

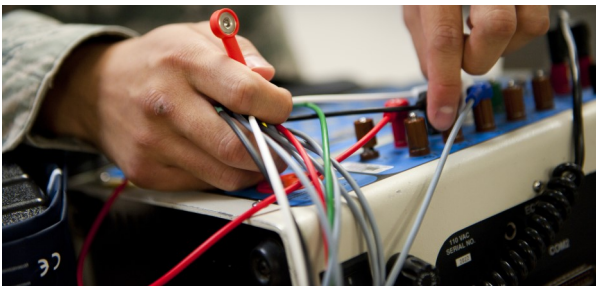
Know your equipment

Being familiar with the equipment you need to use will help you to get the best out of it. Take some time to read the user manual and you might discover some useful features you didn't know about. If there are any special requirements for safe use of the equipment the manufacturer should have identified them. If you can't find the user manual, ask another staff member who may be familiar with it, or contact the supplier.



Have your appliances tested

New Zealand law requires that mains powered medical appliances must be periodically tested for electrical safety. Just like driving without a warrant of fitness for your car, you can be fined for using a medical appliance that does not have a current test certification.



When tested appliances are marked with a sticker on the appliance itself, or a tag on the cord (and sometimes with both if the cord is removable). The sticker will give the expiry date for the test and for most appliances this certification is for a period of 12 months.

Check before use

Before using a medical electrical appliance you should give it a careful check over.

- ✓ Make sure that its safety test hasn't expired (check the sticker or tag)
- ✓ Make sure the appliance does not have a fault tag or label on it. Never remove such a tag until the appliance has been repaired, and never use an appliance that has been marked as unsafe even if it looks OK.
- ✓ Make sure that there hasn't been any damage to the appliance. Check for cut or chafed cords, damaged plugs, broken switches or controls. If you notice anything of concern, don't use the appliance and never attempt to repair an electrical problem yourself. Just like engineers and electricians can't prescribe drugs, medical professionals are not allowed to do electrical repairs. If anything goes wrong, you will be held liable.
- ✓ Ensure that you are familiar with how the appliance works. If not, read the manual or ask a colleague. Maybe practice on yourself or a colleague before using the appliance on a patient.
- ✓ If the appliance is powered from a plug-pack power supply, make sure you have the correct one.
- ✓ Always use the appliance in accordance with the manufacturer's instructions.



If it plugs in and is used on patients, it needs to be tested!

Have your building checked and certified

It is a requirement that medical electrical appliances are only used in an area where the electricity supply has special protections against electric shock. Such an area is known as a Body Protected Area and is marked by a green label on the wall. The protection is provided by a safety switch known as a Residual Current Device (RCD). If anything goes wrong, this switch will trip out and interrupt the power. Body Protected Areas are required to be tested and certified every 12 months, and this will be marked on the green label.

