



Dr Graeme
health products
Serious Massagers for Professional Results

How to get great results and huge benefits from your DrGraeme massager

We provide serious massagers that give professional results, whether you are a practitioner who wants to be more efficient and effective in clinic, or a patient who wants to use one on themselves at home. This booklet gives basic usage instructions and a summary of the research based potential uses and benefits. We are continually adding to this so for further information please see www.drgraeme.com

The DrGraeme General Purpose Massager

This is our newer more powerful machine. It is extremely easy to use and capable of a wide variety of tasks, ranging from relaxation massage through to specific deep work. For a little extra it is the perfect choice.

Ergonomic Handle

- Easy reach to all parts of your body
- Massage for a long time without getting fatigued

Three Metre Cable

- Greater length provides ease of reach
- Heavy duty - long lasting and resists twisting

Speed Control

- Sliding variable speed control
- Relaxing to high penetration
- Easy to use with your thumb

Powerful Motor

- Powerful commercial grade motor custom built to run at the best speed for massage while delivering 15% more "grunt"

Strong Hammer Mechanism

- Quality bearings and screw in head ensures an extremely strong machine that is able to penetrate deeply



Ball at Handle's End

- Provides comfortable, non-slip grip
- Easy to hold and is less tiring to use

Three Specialised Heads

- Rubberised head for comfort
- One for high penetration over larger areas
- Smaller head for localised massage

Thick Plastic Casing

- Specialised thick yet light casing
- Reduces vibration
- Increases machine's strength

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Basic usage instructions

Controls

The **General Purpose Massager** has an on/off button underneath and a sliding variable speed control on top. The **Deep Tissue Massager** has a sliding three position switch on top (off-slow-fast). The "button" underneath is non-functional (a provision for a switch if needed).

The basic massage technique

Just as using a chainsaw requires different techniques to that of an axe, the use of a vibration massager requires different techniques to those used for manual massage. There is no need to press in or rub. Simply, you sit the head of the massager on the part that needs massaging, let the vibrations penetrate and do the work, then move the massager to the next part that needs massaging.



Sit the head flat and let the vibrations penetrate

Pain or discomfort

Whereas manual (eg. by hand) massage sometimes requires painful pressure to get to a deep spot, vibration massagers use vibration to penetrate. There is no need to press in or cause pain. In fact pain can cause muscles to tense which can work against massage. If you experience pain or discomfort we recommend you either slow the massager to a comfortable level or cease.

The massager contact

To get the maximum penetration the head of the massager should sit flat on the part to be massaged. At moderate speeds the weight of the machine should be enough to maintain contact. However, as speed increases the massager head will have a tendency to patter (bounce up and down). When this happens either slow the machine down or apply a moderate amount of pressure until the head stops pattering.



Duration

The duration of application should always be guided by your professional. However a typical starting point is 30 seconds at a moderate speed for a typical trigger point (60 for chronic deep trigger points). There may be multiple trigger points in an area, each needing an application of massage.

The massager is sealed which keeps out dust and moisture, but holds in heat which can damage or shorten the life of parts. Always allow to cool after 15 minutes of use.



Use over clothing or a cloth

To prevent irritation, minimise the risk of transmitting infection, and help keep the head of the massager clean please use over cloth or a layer of clothing. You will not need to rub with the massager so there is no need for oil or other lubricants.

Using the weight of the massager

Our massagers only weigh about 1.3kg, but holding this weight for a prolonged time can cause fatigue. We recommend that you position the part to be massaged horizontal. That way the weight of the massager is supported by the part being massaged and the massager only needs guiding to maintain position. The weight of the massager then is often enough to apply downwards pressure on the head.

Cord care

Our massagers are designed to be held and moved around. This can cause the cord to bend or twist. We have fitted our massagers with super high quality cords capable of being bent 10,000 times without fail. However, to help them last a very long time please don't pull or bend the cords excessively.



Which head to use?

This often comes down to personal preference. However, our massagers work by sending vibrations into the tissues, which the larger flat head does very well. The multi projection head is not for "digging in", but helps resist pattering at higher speeds. The smaller head is useful for accessing some harder to get to areas.

Why we built our massagers

We originally developed our massagers to benefit our patients and enable us to provide better quality more effective and affordable care. Patients enjoyed these benefits so we shared this with colleagues so they could provide these benefits to their patients.

The original need

Most pain syndromes and injuries require a very large number of sessions of massage or soft tissue therapy to thoroughly rehabilitate. However the cost and time involved makes this prohibitive. **We wanted our patients to be able to get all the massage/soft tissue therapy needed to thoroughly and properly rehabilitate their injuries or chronic pain syndromes, with no compromise.** A quality hand held massager patients could use for supplementary massage at home would make this possible.

New benefits made possible

With our new massagers making it possible for practically unlimited quality massage it opened up the possibility for many other benefits. For example many top companies provide their employees with regular massage so they are happier, more productive, and have less pain and injuries. Elite sports clubs provide their players with huge amounts of massage and soft tissue therapy to help them play better, avoid injuries and recover faster. Many of the rich and famous have regular massages so they feel great. Before these benefits were not considered for "ordinary" people. It was too expensive. It is not any more.

There are plenty of other massagers. Why couldn't patients use them?

Before we started building our massagers the manufacturers of hand held massagers for the public were mainly concerned about how they looked on shop shelves. These massagers were given as gifts, used a few times, then put in a cupboard. Professionals found them to be ineffective, and did not recommend or support their usage. This is not just our opinion. It is the findings of a UK university study published in a respected scientific journal*. As a practitioner I decided to fill the unmet need by building something that was powerful, easy to use, affordable and did a fantastic job.

* McDonagh D. et al *Good vibrations: Do electric therapeutic massagers work?*
Ergonomics Vol. 48, Iss. 6 2005

What vibration massage actually does

What happens when you use a vibration massager? In this section we outline the scientifically proven effects. Each effect requires the appropriate vibration frequency. To put these frequencies into perspective our General Purpose Massager gives vibration from approximately 10-55 Hz (cycles per second). References and more information are available in the collection of guides and research summaries on our website www.drgraeme.com

Relaxes muscles

Vibration massage from 20-60 Hz causes muscles to relax. The relaxation of muscles is often a very desirable benefit of massage. Some massagers operate faster at 100 Hz, but this has been shown to cause the opposite effect - ie. muscle contraction or tightening.

Increases blood flow

Vibration from 30-50 Hz has been shown to increase blood flow. 50 Hz seems to work better, causing a rapid increase of blood flow to the tissues which continues for over 15 minutes.

Reduces pain

As discussed elsewhere in this manual vibration massage can be used to address many causes of pain. However, vibration at 100 Hz has been shown to reduce pain by neurologically blocking pain signals. TENS machines use this principle with electrical stimulation, though vibration massage works as well, if not better. Some massagers deliver vibration at 100 Hz for this purpose, and they have been shown to reduce pain in sufferers of osteoarthritis.

Speeds up recovery and reduce post exercise soreness

Heavy or repetitive exercise causes "exercise induced muscle damage". This results in post exercise soreness and a reduction in muscular performance until fully recovered. Vibration massage from 30-65 Hz has been shown to reduce post exercise soreness, speed recovery, and reduce the amount of unwanted residual chemicals such as lactic acid.

Increases performance of muscles

The application of vibration has been shown to help the nervous system better stimulate muscle fibres, resulting in better performance. There have

been a great number of scientific trials of this using a variety of frequencies and ways to apply the vibration. Applying frequencies of 5-50 Hz direct to the muscles tends to work the best.

Speeds up healing

Vibration massage has been shown to increase blood flow which improves the supply of nutrients and oxygen. In a trial of those with impaired healing due to poor circulation the use of vibration was found to increase the levels of tissue oxygenation and has become an emerging therapy. Experiments done with rats and mice have shown vibration massage to produce far more widespread and profound effects. In these trials researchers have deliberately made cuts and injuries (which is something they cannot do with humans) then investigated their healing. They found that the application of vibration massage will:

- increase wound healing
- increase the formation of blood vessels
- stimulate the production of growth hormones
- prevent muscular atrophy
- promote regeneration and improve the conduction of nerves

Disrupts reflexes

This is a bit technical, but we discuss its uses in the section on practical applications.

General Purpose Massager frequency guide



Max 55 Hz

- Relax muscles: 20-60 Hz
- Increase blood flow: 30-50 Hz
- Speed recovery/reduce post exercise pain: 30-65 Hz
- Increase performance of muscles: 5-50 Hz
- Speed up healing: 30-50 Hz

Min 10 Hz

Practical applications

Musculoskeletal problems and pain syndromes are usually complex in nature. Their management should be determined by a professional who has the opportunity to conduct a proper investigation and monitor progress. As such, the following information is not specific advice. Rather, it is general information to alert readers to possibilities and to enable informed discussion with his or her professional. It gives an overview, with references and further information available in the various guides and research summaries on our website www.drgraeme.com

At DrGraeme we are very appreciative of professionals who can give such advice. If interested they may email us on graeme@drgraeme.com for further information and possibly a sample massager to trial (conditions apply).

Muscular problems

Muscular tightness and stiffness

Most will have experienced muscle tightness after sport or exercise, a hard day's work, a stressful day, or maybe sitting at a computer for a while. Muscles become tight, which restricts blood flow to the muscles causing a build up of waste products and a lack of oxygen and nutrients. The tightness can also restrict movement and possibly even affect one's posture and ability to move fully. Massage generally relaxes muscles and stimulates blood flow, which is why one often feels so much better after a massage, and why many companies provide massages for their workers.

Advice

Science tells us that using a vibration massager at 40-50 Hz will relax muscles and stimulate blood flow. This can be done using our General Purpose Massagers at 80-90% of full speed applied to the muscles. This could be done each day if required.

Trigger points, pain syndromes and rehabilitation

If tightened muscles are ignored and their effects allowed to accumulate one ends up with constant tightness and those tender lumps that masseurs love to find. Those tender lumps are known as trigger points. They are actually parts of the muscle that have had microscopic damage, gone into spasm and

will not release due to the muscle's reflexes creating a positive feedback loop. Just as a feedback loop created with a microphone and loud speaker creates a loud squeal that will not stop, the positive neurological feedback causes the nerves to continuously tell the section of muscle to strongly contract. The spasmed part of the muscle is shortened so the whole muscle becomes tight. The tightness restricts the flow of blood creating a shortage of oxygen and nutrients, while waste products accumulate. Eventually trigger points may worsen or become aggravated and start causing pain. They are responsible for, or contribute to, a wide range of pain syndromes ranging from back pain through to headaches, and even pain that mimics a tooth ache.

Even when not shooting pain they interfere with the function of the muscles and cause them to work abnormally. This causes a host of problems. There is a lot more information about trigger points on our website, but in summary even without causing pain muscles containing trigger points will:

- be tight, restricting movement and being prone to injury
- underperform
- quickly fatigue and become painful when exercised
- cause the body to alter its posture and mechanics to compensate
- eventually worsen or become aggravated and start constantly shooting pain

As a result of these effects they are usually involved in most injuries and musculoskeletal pain syndromes. There are many treatments for trigger points ranging from painful massage techniques through to using needles. The goal of therapy is to disrupt the neurological feedback loop, relax the muscle and stimulate blood flow. It is important to note that although therapies often (temporarily) reduce pain research has shown conclusively that trigger points require a large number of applications of therapy over time to be properly eliminated.

Advice

Vibration massage at 40-50Hz is again an excellent therapy. In addition to the effects of relaxing the muscle and increasing blood flow vibration has been shown to disrupt neurological reflexes which would allow the spasmed section of muscle to release. For treatment it is very important to place the massager head over the trigger point for long enough to allow the vibrations to disrupt the reflex and relax the muscle. We recommend clinicians try 30-60 seconds. As shown by research this needs to be repeated regularly over a long period of time for proper elimination.

Fibromyalgia and other chronic pain syndromes

Fibromyalgia and other conditions such as some migraines are considered as having an unknown cause and are treated symptomatically. However, science is now showing that they are caused by the nervous system being bombarded by pain signals over a long period of time until it becomes sensitised. With the nervous system sensitised, painful stimuli are exaggerated and normal stimuli can become painful. Also, as the nervous system forms a major part of the body's control system its sensitisation can cause a host of seemingly unrelated effects. While the source of these pain signals can be anything that causes long term pain, such as an arthritic condition, trigger points are a common cause. Because they do not show up in standard medical tests and are not treated by drugs they are too often not diagnosed and/or inadequately treated. They continue to bombard the nervous system with pain until it becomes sensitised. A clinical trial actually showed that injecting trigger points with anaesthetic stopping their pain impulses significantly improved the symptoms of fibromyalgia. Similar results have been obtained for migraines. The researchers recommend a quite logical therapy: remove the source of the pain signals that are bombarding the nervous system.

Advice

The best way to deal with fibromyalgia is to treat trigger points and other conditions appropriately so they don't bombard and sensitise the nervous system in the first place. Once present it is a very difficult problem to manage. The typical approach is via the use of drugs and therapies that address the symptoms. However, as long as the source of neurological bombardment remains the problem will remain. Although trials of massage therapy which would help address this have been positive, medical guidelines discount this because of the expense and lack of availability. A further issue is that due to the increased sensitivity such treatments may be less tolerated and may themselves add to the pain. The strategy to deal with this may be a greater number of more conservative treatments. This would be very expensive and time consuming if done by a professional alone. Self massage using a massager under professional advice and monitoring solves a lot of these problems.

Sports and exercise

Overview

Most professional athletes and sports clubs make heavy use of massage type treatments. The ability to do self massage using a hand held massager puts this type of care within reach of "ordinary" people. The most obvious benefit of the use of massage for those who play sports and exercise is the treatment of muscular conditions as described in the previous section. Due to the nature of the activity those who play sport or exercise are very prone to muscular issues and the development of trigger points. Research has shown that members of the general population have on average quite a few trigger points, so unless receiving regular treatment like a professional a typical sports person would likely have many. It must be remembered that even if not causing pain trigger points cause muscles to tighten and under perform, can adversely affect movement and coordination, and predispose to injury. Regular vibration massage would help eliminate these. In addition there are many scientifically proven benefits of vibration massage more specific to sports and exercise. They will be described here. For more information please download the sports and gymnasium guide from our website.

Warming up

Warm ups are done to help prepare the body for exercise and reduce the risk of injury. Muscles are typically stretched to their effective operational length to allow full movement, and blood flow is stimulated to help flush the muscles with oxygen and nutrients.

Advice

Vibration massage at approximately 50 Hz has been shown to both allow muscles to relax and increase blood flow. Generalised vibration massage could be combined with other parts of a normal warm up such as stretching and exercise.

Recovery/ reducing soreness

After exercise or sports participants often experience soreness known as delayed onset muscle soreness (DOMS) and a temporary reduction in function. Many trials have shown that vibration massage from 30-65 Hz applied to muscles after exercising will considerably reduce the amount of post exercise soreness, reduce the levels of lactic acid, and cause the muscle to return to full function faster.

Advice

The application of vibration massage at approximately 50 Hz has been shown to considerably reduce post exercise soreness (DOMS), reduce the build up of lactic acid and other residual chemicals, and speed recovery. This could be done by applying a General Purpose Massager at approximately 90% of full speed for about 60 seconds for each muscle. This could be done post exercise then daily during the recovery period.

Stretching

If full movement is attempted with a muscle shortened movement is restricted, and there will be a risk of tearing the muscle. Stretching lengthens muscles to their more optimum operating length, allowing full movement and reducing the risk of injury. Vibration massage from approximately 20-60 Hz has been shown to relax muscles causing equivalent lengthening of muscle to that of conventional stretching. Further, in a trial gymnasts used vibration massage at 30 Hz to inhibit the muscles' protective reflex that restricts stretching to "stretch further" than was done using conventional stretching.

Stretching muscles with trigger points

It is important to note that muscles tightened due to the effect of a trigger point will resist stretching. Attempts at stretching will further activate the positive feedback loop, causing the muscle to try and tighten further. Because the muscle is tight people will be advised to stretch it, but it will be difficult to stretch and quickly re-tighten. Too often these are the muscles that end up being injured. The correct way to stretch these muscles is to first treat the trigger point, breaking the feedback loop that inhibits stretching. The muscle should then stretch normally.

Advice

Screening for and treating trigger points should always be considered, especially in muscles known to be abnormally tight. Using a massager as described previously has been shown to have a similar lengthening effect to that of stretching, and could be used as well as conventional stretching. There are times when vibration massage would be the preferred method of lengthening muscles. For example, during the early stages of recovery from an ankle sprain calf muscle stretching may injure the healing ankle

joint, whereas vibration massage to the calf may be able to be applied safely. Using vibration massage to inhibit the stretch reflex to enable further stretching is best left to elite athletes under proper professional supervision. Such reflexes are there to protect against injury.

Increasing performance

Vibration at many frequencies has been shown to enable the nervous system to better activate muscle fibres, resulting in increased performance. Frequencies of 5-50Hz tend to require shorter applications.

Advice

An Olympic weight lifter might be very interested in using vibration massage to help get every last bit of performance from his or her muscles. However, the ordinary sports person would likely get far more benefit from the effects of vibration massage previously discussed to eliminate the things that inhibit normal optimal performance. For example, by treating trigger points one will avoid their tightening of muscles and other performance robbing effects. Using massage to help warm up and stretch will help allow full performance. Using vibration massage to help decrease post exercise soreness and speed recovery will allow normal performance sooner and possibly even encourage more training. Finally, several of these effects will help reduce the risk of injury. Obviously one will perform better when not injured.

Health and Wellness

Perhaps the best illustration of the health and wellness benefits of regular massage is the regular massages some companies provide to employees. They are known as "corporate massage", and are typically relatively short and simple (eg.15 minutes while clothed and seated). There have been a lot of very encouraging studies showing their benefits. These have been shown to:

- decrease anxiety and improve psychological state
- reduce pain
- increase flexibility
- improve sleep, and
- decrease blood pressure and heart rate

For further information about these trials and the health and wellness benefits of vibration massage please see Massage for Health and Wellness <https://www.drgraeme.com/articles/2018-articles/General/Health-and-wellbeing.php>

Advice

It is important to note that most trials into the benefits of such regular massages emulate "corporate massage" type sessions. Typical of these would be each employee getting a similar simple generic 15 minute massage, with one scheduled each week. Even with such rudimentary care the results achieved in the trials have been quite remarkable.

By using one's own massager one is not limited to a 15 minute booking schedule, nor just once a week. Longer and/or more frequent applications become possible. Also, by obtaining proper professional advice such massages can be tailored to suit one's specific requirements. It is reasonable to assume that given these even better results can be achieved.

Previously such care was limited to those working for such a company or those able to incur the expense of having it done professionally. Subject to professional advice people can now have practically unlimited massage by having a massager plugged in next to their favourite chair. As a general guide, most of the beneficial effects of vibration massage occur at a frequency of 45-50 Hz, so a generalised massage using a General Purpose Massager at 80-90% of full power would be a good starting point.

Warnings

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Do not use around water or dampness.
- Although massage is incredibly safe there are certain conditions where massage can cause injury or death. For this reason always consult a licensed health care professional before using this or any form of massage. We cannot accept any responsibility for inappropriate usage.

The following is information only to assist you to discuss things with your professional in an informed manner. It should not be relied upon as a substitute for professional advice.

- You should not massage on varicose veins or swollen or inflamed tissue.
- You should not massage over skin disorders or open wounds.
- You should definitely make your adviser aware if you are pregnant or suffer diabetes.
- You should not get massage if you have tuberculosis, tumours, phlebitis, haemorrhage or thrombosis.
- You should not massage on acute injuries, bruises or sprains.
- You should not use over pacemakers
- You should definitely make your professional aware if you have a heart or cardiovascular condition.

Warranty

Our massagers have a 12 month replacement warranty, including commercial usage. Contact either the clinic where you purchased the massager or DrGraeme directly.

Getting started

Public

Local clinic

On our website we have a list of practices that may be able to provide excellent usage advice and be able to sell you a massager. We recommend your first option should be contact any close by and use them if possible.

From us

If unsuitable you may order a massager online from us using the order facility on our website www.drgraeme.com We can post them to Australia, New Zealand, the UK, and the rest of Europe.

Practitioners and students

Ultimately we want people using our massagers and getting the maximum benefits. Therefore we very much appreciate those practitioners who use them, and provide great advice. We are also very happy to see student practitioners learning optimum usage. Because of this we have attractive practitioner rates, wholesale rates, samples and further information for practitioners. Practitioners should email us directly. Further, we have extra heavily discounted massagers and other benefits for student practitioners and their teaching colleges. Again, please email us directly.

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Instructions

Available from