

« BACK TO ALL ARTICLES

Friday 25th June, 2021 Author: [Dr Graeme Blennerhassett](#)

Percussion massage vs vibration massage

The simplest way to explain the difference between a percussion and vibration massager is that vibration massagers use vibration to penetrate whereas percussion massagers use mechanical vibration to assist physical penetration. This is like comparing a [jackhammer](#) with [vibrating compactors](#) used in the construction industry. In this article we will discuss the effectiveness, safety and usage of each.



CONTENTS

[Scientifically proven benefits](#)
[Penetration](#)
[Safety](#)
[How to tell the difference between a percussion and vibration massager](#)
[Table: Comparison of percussion and vibration massage](#)
[Further information](#)
[Professionals](#)
[Reference](#)

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Scientifically proven benefits

Vibration massage

Vibration massage is supported by extensive scientific research. For an excellent summary please see the [The scientifically proven effects of vibration massage- with clinical applications](#). In summary, these clinically proven effects include the following.



• Relaxing muscles

Summary of the scientifically proven effects

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these clinically proven effects include the following.

- Relaxing muscles
- increasing blood flow
- “stretching muscles”
- reducing post exercise soreness and speeding recovery
- improving performance
- reducing pain
- helping musculoskeletal conditions
- increasing healing

Summary of the scientifically proven effects of vibration massage

Percussion massage

We were not aware of any research or other scientific information supporting the use of percussion massagers so we did an extensive search of websites claiming to show the benefits of percussion massage. **In every case where they referenced a scientific study it was a study of vibrations, not percussion.**

Please see our [article on the “science” of percussion](#) for more information on how scientific information is misrepresented, and how to get half decent results in trials researchers even modify percussion massagers so they act as vibration massagers.

Penetration

False information on line

In our research we found many unsubstantiated claims that percussion massagers penetrate 60% better than vibration massagers. We believe the source of this claim is the following statement on Theragun’s website, claiming that their professional grade percussion massagers penetrate 60% more than consumer grade vibration massagers. This is probably true, but consumer grade vibration massagers are [generally poor quality](#), [poorly designed and not very effective](#). A comparison with these is neither valid or flattering.

The Theragun PRO has a 16mm amplitude that reaches 60% deeper into the muscle than consumer-grade vibration massagers

Quote from Theragun website regarding penetration

Vibration penetrates much better

It is a fundamental principle of physics that properly applied vibration

Earthquake vibrations can penetrate 100s of km



Vibrations can penetrate and deliver their energy 100s of km away, so quality vibration massagers have no

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It is a fundamental principle of physics that properly applied vibration penetrates much further than physical penetration. For example, according to a [scientific journal article on the effects of vibrations in the construction industry](#) (1) vibrations from a pile driver travel from 18- 247m, whereas vibrations from a quarry blast



deliver their energy 100s of km away, so quality vibration massagers have no trouble penetrating deep into muscles. There is no need to drive heads in like a jackhammer.

travels 1.6-6.4km. **There is no question that a properly designed vibration massager can penetrate much further than a percussion massager.**

Safety

The physical penetration of a massager head that occurs in percussion massage creates a far greater risk of causing damage or injury.

How to tell the difference between a vibration massager and a percussion massager.

While there is some crossover between the two types of machine there are certain characteristics to look for.

The amplitude of the vibrating head

Amplitude simply means how far the head goes up and down. A typical vibration massager will use an amplitude of about 3-5 mm. If the amplitude was much greater it would push the head in or tend to patter and bounce uncontrollably. Theraguns have an amplitude of 16mm, which is clearly to help drive the head in. To tell how far a massager head moves up and down you can look at it side on while it is running.



The shape of the head

Looking at the example of the compactor and the jackhammer, vibration massagers tend to use a flattish contact to help vibration transfer, whereas percussion massagers tend to have shaped heads such as balls or more pointed contacts to help the head penetrate.



percussion massagers tend to have shaped heads such as balls or more pointed contacts to help the head penetrate.

tend to have round and pointed heads

tend to have flat heads for vibration transfer

Machines that look like massagers

If you go to [alibaba.com](#), the portal used by manufacturers and search “massager” you will find over 200,000 listings. These are typically those Theragun described as consumer machines. Too many are built as cheaply as possible, with more concern about looking the part than how they work. We would not consider them as serious vibration massagers or percussion massagers.

Comparison of percussion and vibration massage

	Mode of operation	Scientifically proven benefits	Safety	Amplitude	Heads
Vibration massage	Penetrates with vibration	Extensive: see research summary	Relatively safe	3-5mm	Flattish for vibration transfer
Percussion massage	Uses vibration to push in head	Tries to claim the benefits of vibration	Penetrating head can cause injury or damage	larger	rounded or pointed

Further information

For further information about the beneficial effects of vibration massage and suitable machines please see the following:

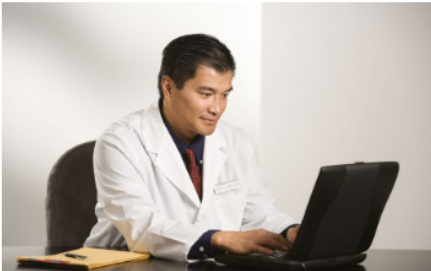
[The scientific effects of vibration massage with clinical applications](#)

[How to choose a massager](#)

Check out our economical, easy to use professional standard machines: [the General Purpose Massager](#) or our [Ultimate Quad Head Massager](#)

Professionals

If you are a professional and wish to know more about vibration massage please check out [practitioner page](#) for more information and possibly a sample massager to try this therapy yourself. Our DrGraeme massagers were originally built by Dr Graeme for use in his clinic, and to prescribe to his



practitioner page for more information and possibly a sample massager to try this therapy yourself. Our DrGraeme massagers were originally built by Dr Graeme for use in his clinic, and to prescribe to his patients for additional self use at home. Now these are used by colleagues and other professionals for similar purposes.



Professionals: click the image to find out more and possibly trial vibration massage

Reference

- 1 Svinkin MR. [Minimizing Construction Vibration Effects](#). Pract Period Struct Des Constr. 2004;9(2):108–15.

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About Dr Graeme

Several years ago Dr Graeme, a Chiropractor practicing in Victoria, Australia was looking for a serious hand held massager his patients could use at home to get the extra quality massage they needed. The ones he found in the shops and on-line for home use looked nice but were not serious, and... [read more](#)

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