



POWER  PLATE®

Discover the Difference

## Medical Conditions

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Power Plate and Fibromyalgia

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# Medical Device Directive (MDD)



Power Plate is officially classified as a class IIa Medical Device within the European Economic Area (EEA). This has been achieved under the Medical Devices Directive (MDD) 93/42/EEC as amended.

**The following medical claims have been investigated and officially upheld:**

- Can assist in falls prevention
- Enhancement of strength and power
- Reduction / alleviation of chronic pain
- Reduction in appearance of cellulite
- Body weight and body fat reduction
- Enhancement of bone density and prevention of bone mineral loss
- Enhancement of circulation and functioning of cardiovascular system
- Enhancement of flexibility and range of motion

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# Medical Device Directive (MDD)



## WHAT IMPORTANCE DOES MDD PLAY FOR YOU ?

- You will be able to start referring to the beneficial medical aspects of the PPI Medical Device that have been validated through our Clinical Literature Review
- PPI is the only WBV company in the world to have its full product range certified under the MDD umbrella
- New found creditability for WBV

**REMEMBER:** *PPI is now a medical device manufacturing company*

# Fibromyalgia

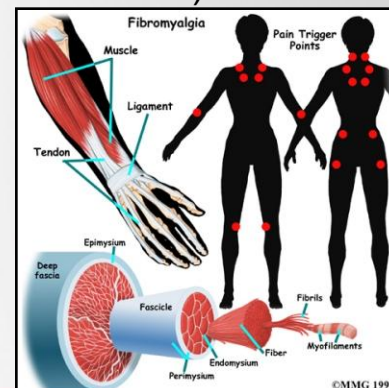


*Fibromyalgia is a chronic condition characterized by **widespread pain in the muscles, ligaments and tendons**, as well as **fatigue** and **multiple tender points** (places on the body where slight pressure causes pain).*

## Common Symptoms

- Widespread **pain** - pain in specific areas of the body when pressure is applied, including the back of the head, upper back and neck, upper chest, elbows, hips and knees. The pain generally persists for months at a time and is often accompanied by stiffness.
- **Fatigue and sleep disturbances** – sufferers often wake up tired and unrefreshed regardless of getting plenty of sleep. They may be missing the deep restorative stages of sleep.
- **Nighttime muscle spasms in the legs** and restless legs syndrome may be associated with fibromyalgia.
- **Irritable bowel syndrome**, with related constipation, diarrhea, abdominal pain and bloating.
- **Headaches and facial pain**, possibly related to tenderness or stiffness in the neck and shoulders.
- **Heightened sensitivity** to odors, noises, bright lights and touch.
- **Depression, numbness or tingling sensations in the hands and feet** (paresthesia)
- **Difficulty concentrating**
- **Mood changes and chest pain**
- **Dry eyes, skin and mouth**
- **Painful menstrual periods**
- **Dizziness and anxiety**

III. from <http://www.eorthopod.com>



# Fibromyalgia



## Concerns for Exercise

The factors limiting people suffering from fibromyalgia are the following:

- **Fatigue.**
- **Constant pain** sensations which tend to **increase muscle tension and create spasms, increasing inflammation** and reducing the capacity to move.
- **Depression and anxiety**, inhibiting the motivation to exercise.
- **Numbness, tingling** sensations and **dizziness.**
- **Receptors** in the body may not give realistic **feedback** on body sensations (overload due to continuous pain signals).

*Those with FM **may neglect exercise in order to avoid pain.** This will lead to muscle de-conditioning, forcing the patient to use far more energy to accomplish tasks than is necessary. This may contribute to even more fatigue and make the muscles more susceptible to micro trauma, thus aggravating pain at even a low intensity of exertion.*

## Fibromyalgia and Power Plate Exercise

- The mechanical vibration of the Power Plate stimulates the mechanoreceptors in the body and desensitizes pain receptors (**pain masking**).
- **Muscle pain is often accompanied by stiffness. Flexibility and massage/relaxation modalities can be very helpful in restoring body mobility.**
- Many Power Plate users claim to have **improved sleep patterns** since the implementation of Acceleration Training in their lives. This may be because of the acute cortisol reduction.
- **Fibromyalgia patients often complain of Irritable Bowel Syndrome. Many users have noticed improvement in bowel movement regularity.**

# Fibromyalgia



## Recommendations

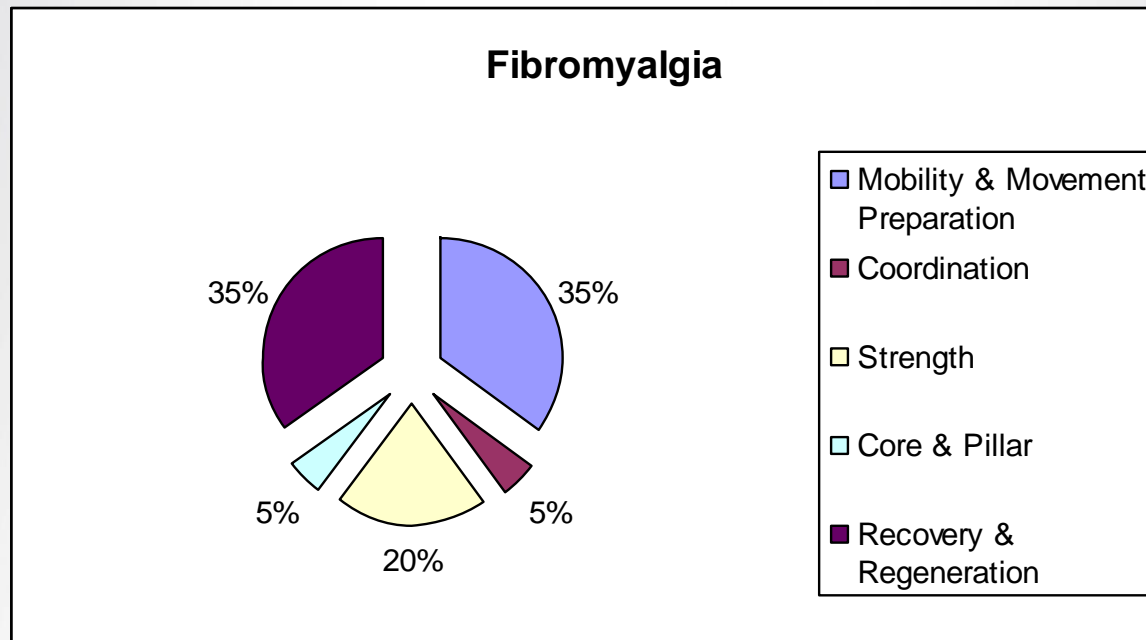
- **Alternating moderate activity with plenty rest** is of great importance, because it will allow patients to control pain by adjusting activities.
- Subjects suffering from fibromyalgia should maintain an even activity level and **avoid overexertion**, even on good days.
- **Do not increase the intensity of the routine more than once a week**, as it will take 1 to 3 days before they can assess any pain caused by overexertion.
- Those who suffer from **headaches and dizziness** should be **introduced to vibration very gently**, and exposure should be limited to very short sessions.
- Progress should be **based on their reactions and habituation** to vibration.
- **Elbows, hips and knees** can be **rested on the machine only if they do not experience any discomfort**.

# Fibromyalgia



## Guidelines for Exercises and Execution

- Focus mainly on **flexibility, relaxation and massage**. These are the major applications to **reduce pain and stiffness**.
- **Some strength** exercises can be implemented as well, to prevent a decline of muscle strength and endurance.
- These clients should start by exercising **twice a week** and eventually **progress to three times**, but the **intensity should never be excessive**.





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# Research Fibromyalgia



## **Title:**

Use of vibration-assisted exercise in fibromyalgia patients.

## **Published:**

American Journal of Physical medicine & rehabilitation. Abstract 2006 (85). (Danko et.al.)

## **Results:**

“Although both groups showed improvements on both the Pain Visual Analog and the Physical Functioning Scales, the patients who completed the program improved in 16 total items, while those who did not complete the program, showed an improvement in 8 total items.”

“Of the 8-item difference between the two groups, the most noticeable improvements made by the completed group--and not by the uncompleted group--included decreased pain in the last 48 hours (particularly after the training sessions), decreased number of workdays missed in the last seven days, increased days felt good in the last seven days, and decreased anxiousness and depression.”

“The completed group also showed higher levels of physical activities by showing improvements in 7 items on the Physical Functioning Scale, while the uncompleted group showed improvements in only 2 items.”

## **Conclusions:**

***“Patients who completed the program showed more improvements than those who did not. In a post-program survey, ten of the twelve patients who completed the program showed interest in continuing in such a program, even if it means paying for the machine usage. Additionally, a follow-up study is being conducted to see the effects of the same exercises without vibratory assistance.”***



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# Research Fibromyalgia



## **Title:**

Six weeks of whole-body vibration exercise improves pain and fatigue in women with fibromyalgia.

## **Published:**

Journal of Alternative Complementary Medicine. 2008 14(8). (Allentorn-Geli et. al.)

## **Methods:**

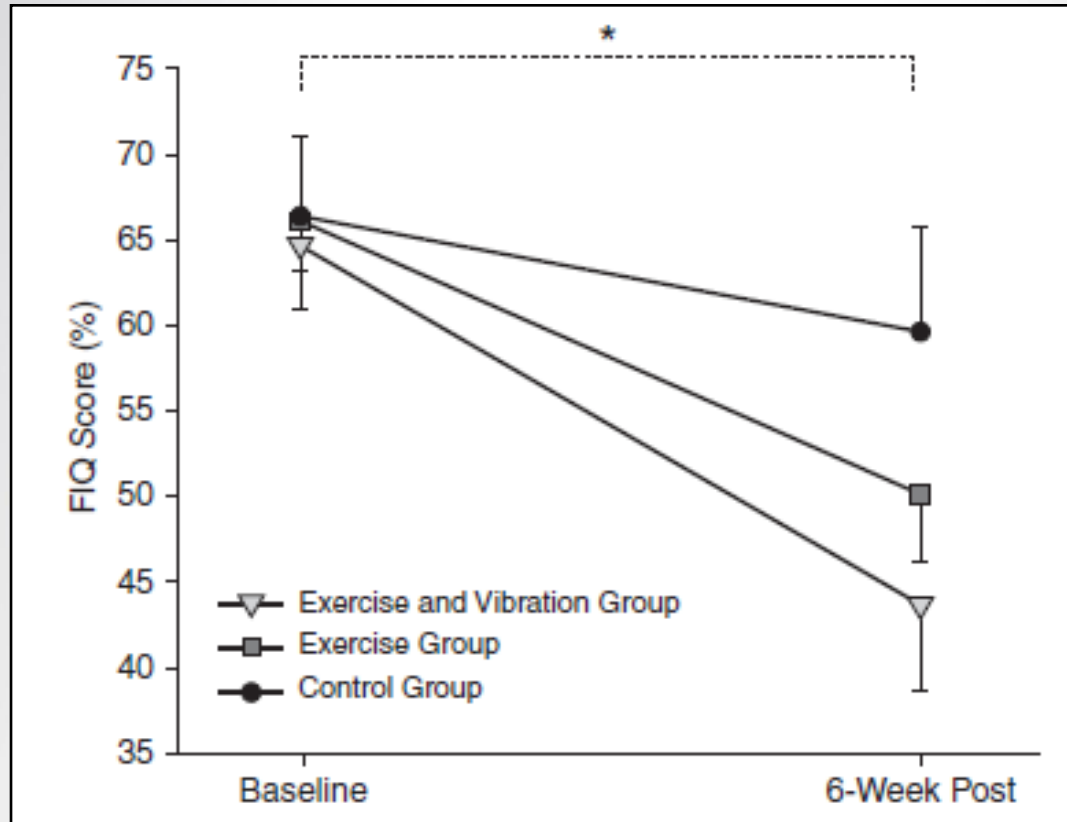
- Thirty-six (36) women with fibromyalgia,
- 3 treatment groups: exercise and vibration (EVG), exercise (EG), and control (CG).
- Exercise therapy, consisting of aerobic activities, stretching, and relaxation techniques, performed twice a week (90 min/day).

Following each exercise session, the EVG underwent a protocol with WBV (30Hz, Low), whereas the EG performed the same protocol without vibratory stimulus

- 4.5 minutes per session for the first 2 sessions, and 18 minutes for the remaining 10 sessions.
- The Fibromyalgia Impact Questionnaire (FIQ) was administered at baseline and 6 weeks following the initiation of the treatments. Estimates of pain, fatigue, stiffness, and depression were also reported using the visual analogue scale.



# Research Fibromyalgia

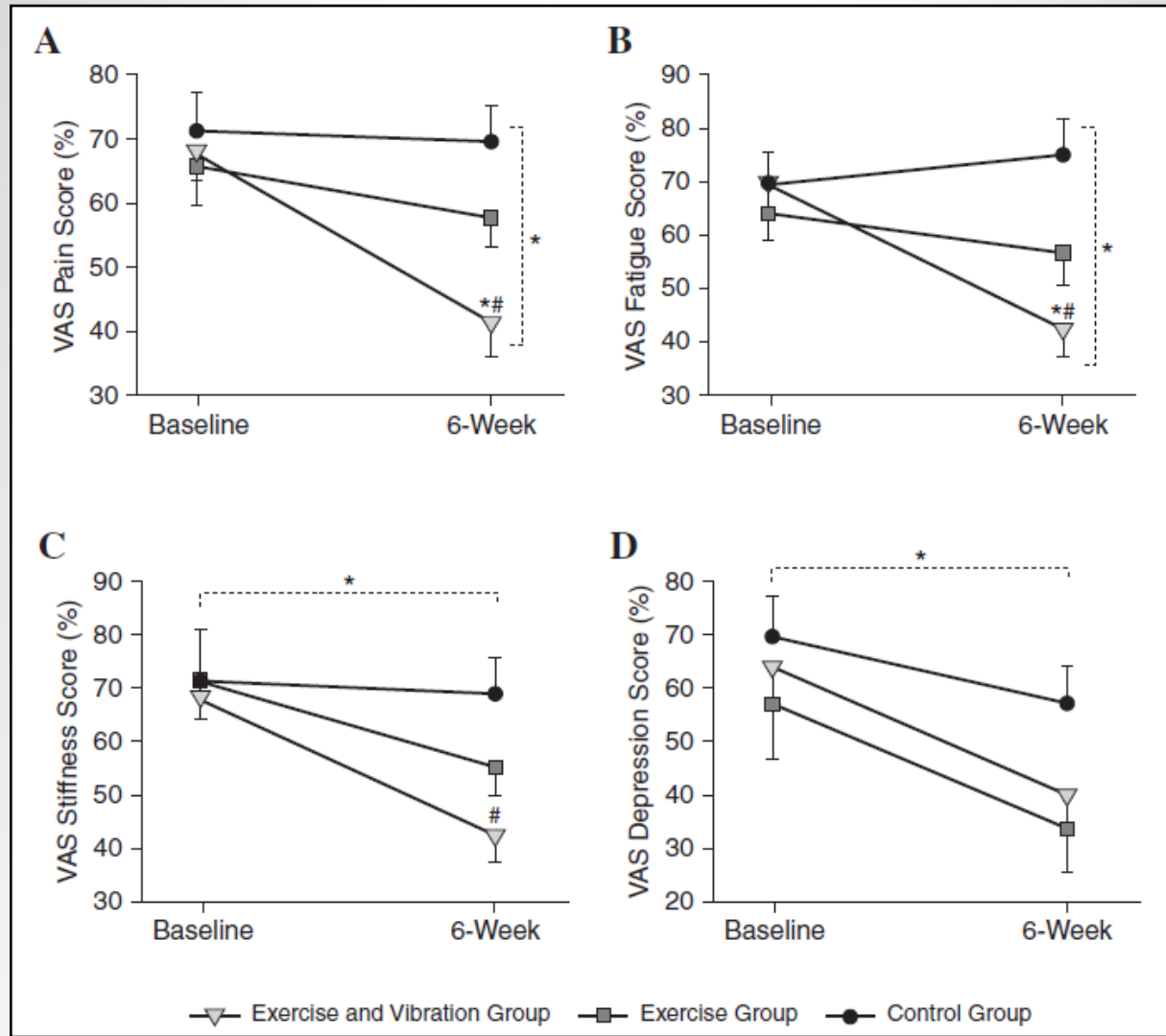


***Fibromyalgia Impact Questionnaire***

# Fibromyalgia



## Research



# Research Fibromyalgia



## **Results:**

“Pain and fatigue scores were significantly reduced from baseline in the EVG, but not in the EG or CG. In addition, the EVG showed significantly lower pain and fatigue scores at week 6 compared to the CG, whereas no significant differences were found between the EG and CG ( $p > 0.05$ ).”

## **Conclusion:**

“Results suggest that a 6-week traditional exercise program with supplementary WBV safely reduces pain and fatigue, whereas exercise alone fails to induce improvements.”



# Health Statement and Medical Guidelines



***Before beginning Power Plate, the person must be cleared by their doctor to perform flexibility, balance, strength, and cardiovascular training involving impact and shock absorption.***

*\*Always ask your client if they have a history of surgical, current or pre-existing medical concerns, or changes in their medication and physical condition before each session. This applies to current clients, even if you already have an established rapport.*

If the person has cardiovascular pathology such as, and not limited to, an implanted defibrillator or pacemaker; or if the person has any physical change in their health state or condition:

There are no documented interference issues with medically implanted cardiovascular devices (i.e. Cardiac Defibrillator and or Pacemaker) because Power Plate is a mechanical vibration functional tool not electrical or magnetic.

When the person is cleared for exercise after a defibrillator or pacemaker is implanted within the chest, avoid exercises that bring the chest close to or in contact with the platform (end range push-ups, utilizing Power Plate for massage, as well as exercises where the arms are extended overhead with or w/o resistance).

If the person is pregnant, pre or post partum, we do not recommend starting ***any new form of training until cleared by a physician, as research currently remains inconclusive for this population.***

***\*During pregnancy, after week 10, the client must not lie supine (on their back) unless their head, neck and shoulders are supported and elevated at an incline of  $\geq 30^\circ$  angle.***

If the person has a detached retina, vertigo or motion sickness, they may be more sensitive to vibration. Each person is an individual, and again, should begin an exercise program only after their physician clears them for exercise, with knowledge they will be utilizing Power Plate.

With lack of documented research, there may or may not be concern with acute implantation of metal in the body, such as surgical hardware or implants, screws, pins, plates or rods.