

Tường thuật hội thảo

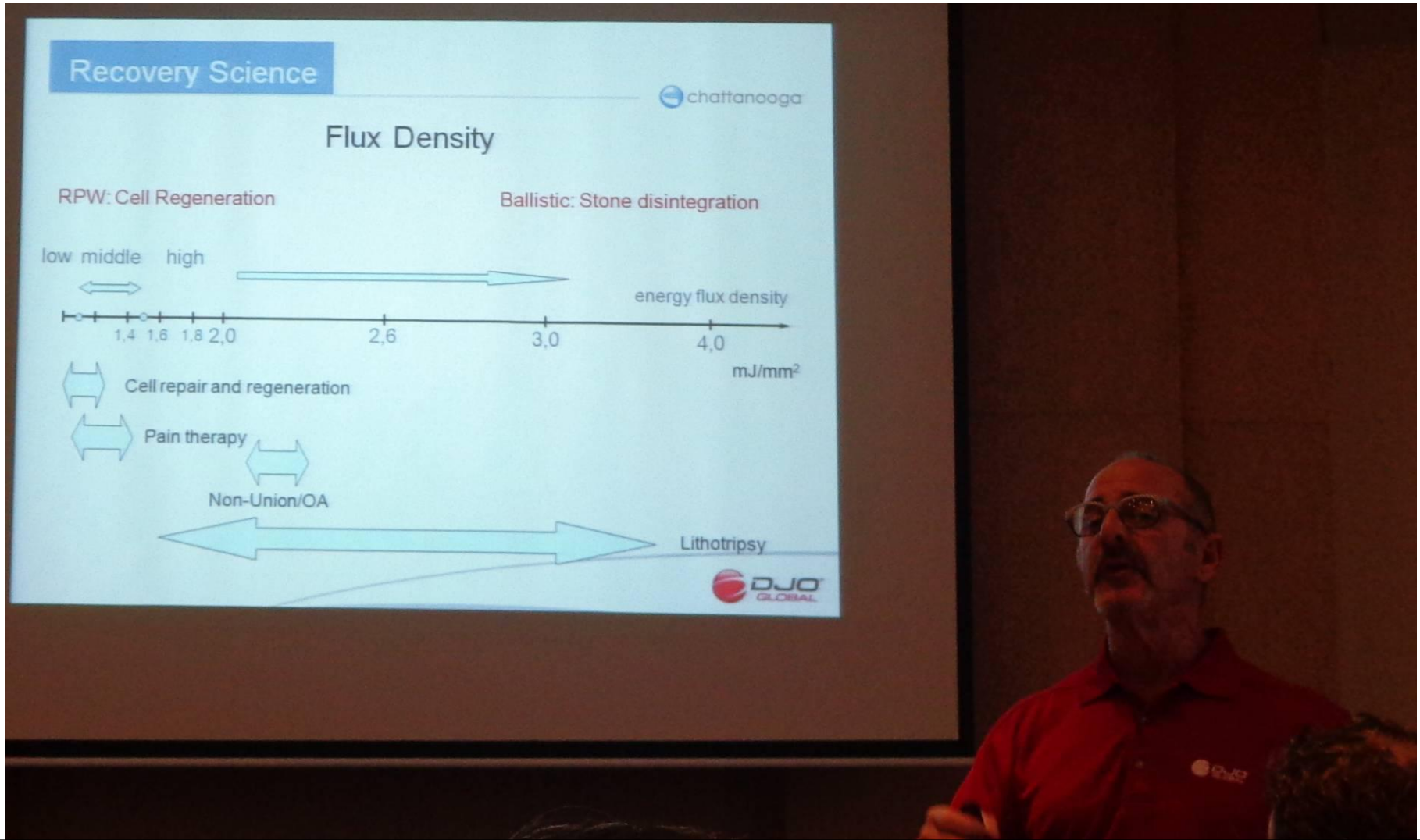
Giới thiệu sản phẩm của Chattanooga/DJO Global

1. Máy xung kích (Shockwave)
2. Máy KTĐ không dây (Wireless professional)


Hồ Quang Hưng

8/7/2014

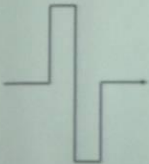
Đầu phát máy xung kích của hãng STORN (Đức) Người trình bày: BS kéo nắn Mỹ (DC: Doctor of Chiropractics)




Optimum current

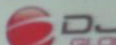
OPTIMIZING WAVE FORM FOR COMFORT 

However we now know there are critical factors which, when satisfied, will maximize client safety and comfort.

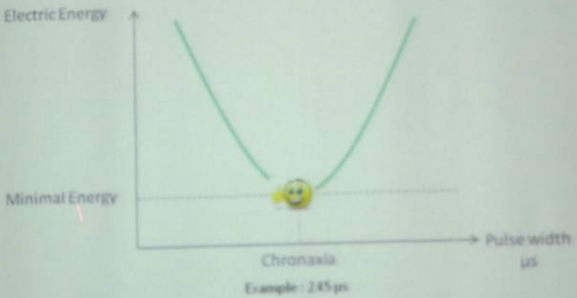


1. RECTANGULAR SHAPE
2. SYMMETRIC/BIPHASIC
3. CONSTANT CURRENT and...
4. POINT OF CHRONAXIA



Mi SCAN - continued 

A short ten second assessment where the electrodes and remote communicate to ascertain the point of Chronaxia



- Finding the Chronaxic point for every session is crucial to maximise comfort.

Optimum current

The choice of pulse current is extremely important for efficiency and patient comfort. The optimum current has been chosen for the Wireless Professional. This pulse has the following characteristics:

1. **Constant pulses** of current, produced by a constant current generator.
2. **Vertical establishment** in order to be effective immediately and to reduce the application time of the current.
3. **Rectangular shape** in order to apply the lowest possible electrical intensity.
4. Pulse duration that is equal to the **chronaxy** of the nerve structure requiring stimulation in order to minimise electrical energy.
5. **Compensated pulse** with an electrical mean of zero in order to prevent side effects linked to polarization

Công nghệ MI



Muscle Intelligence™ Technology

mi-Technology: Our Muscle Intelligence Technology™ is unique in the market. It offers automatic personalized stimulation, adapted to each patient's physiology. The mi-SCAN, mi-TENS, mi-RANGE and mi-ACTION functions are available on every module. This is how it works:

mi-SCAN: a personal touch

This function uses the sensor to determine and tailor the optimal stimulation parameters (chronaxia) to each patient and for each session.

mi-ACTION: involving the patient

Combined active exercise allows the therapist to better incorporate electrotherapy into treatments. mi-ACTION allows patients to trigger the stimulation with their own active muscle contraction.

mi-TENS: Self-regulating pain therapy

A continuous control of the stimulation intensity in order to eliminate unwanted contractions during a pain relief program.

mi-RANGE: controlling intensity

In order to enhance optimal muscle twitches in low frequency programs (i.e. Endorphinic) the mi-RANGE indicates the minimum intensity level to the therapist.



Slow vs Fast muscle fiber


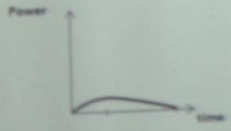
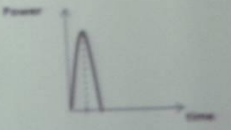
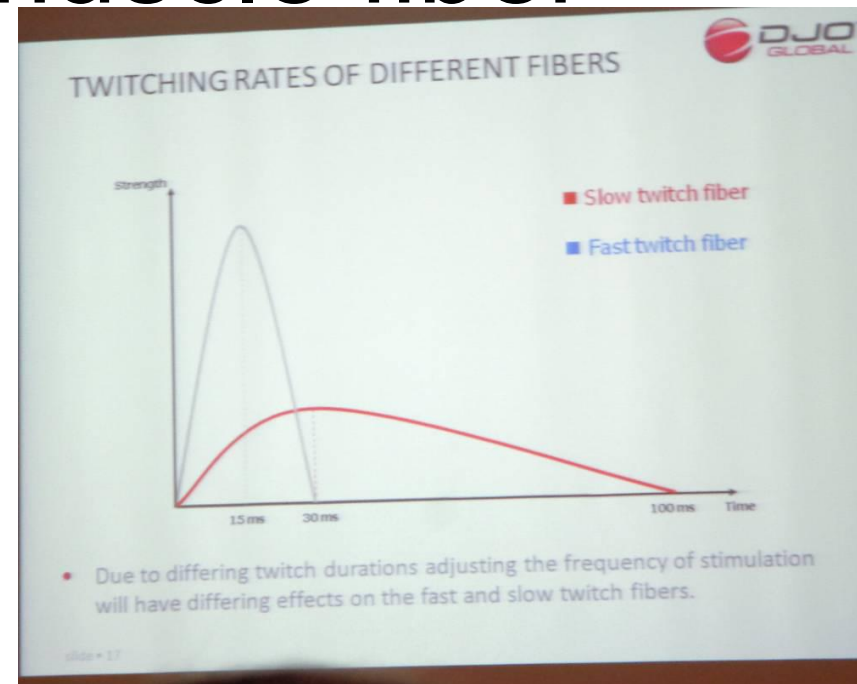
BASICS OF FIBRE TYPES

Type I Fiber

- Red
- Small diameter
- Force ---
- ENDURANCE +++
- Aerobic
- Slow twitch fiber

Type II Fiber

- White
- Large diameter
- FORCE +++
- Endurance ---
- Anaerobic
- Fast twitch fiber

Type I fiber	Type II fiber
Red	White
Small diameter	Large diameter
Force +	Force +++
Endurance +++	Endurance +
Aerobic	Anaerobic
Slow twitch fiber	Fast twitch fiber



FREQUENCIES AND PROGRAMS

Each goal has its own specific frequency

2 to 9 Hz 10 to 20 Hz 20 to 30 Hz 40 to 70 Hz 75 to 100 Hz 100 Hz

**Improve
blood flow**

Endurance

**Muscle
firming**

**Muscle
volume**

Strength

**Explosive
Strength**

- User can be sure they are challenging the muscles in the correct way
- Only aspect that needs consideration is intensity of the stimulation...

Each goal has its own specific frequency

2-9 Hz	10-20 Hz	20-30 Hz	40-70 Hz	75-100 Hz	100 Hz
Improve blood flow	Endurance	Muscle training	Muscle volume	Strength	Explosive strength

Mi-scan tự động trong 10 giây để tìm chronaxy



FES: Functional electrical stimulation



Motor point pen để tìm trigger point



Vài suy nghĩ về điện kích thích

- Tìm điểm vận động
- Chọn dòng tối ưu: sóng vuông, hai pha đối xứng, thời gian pha bằng chronaxy, tần số xung theo mục đích
- Phối hợp vận động chức năng với KTĐ