



La curación por vibración (también llamada terapia de vibración) es el uso de vibraciones mecánicas para prevenir, **tratar y promover la recuperación de una variedad de dolencias físicas, incluyendo dolor, lesiones deportivas y pérdida de densidad ósea.**

La terapia de la vibración implica la aplicación de la vibración a una parte o a todo el cuerpo. Esta vibración se suministra a través de una variedad de herramientas de masaje y / o equipos especializados que se encuentran en ambientes clínicos y de clubes de salud, así como a veces disponibles para uso doméstico.

Los antiguos griegos promovieron la terapia de vibración para curar el estancamiento local de sangre (moretones) y aumentar la movilidad articular (artritis). Los practicantes crearon vibraciones colocando un pedazo largo de madera, que un asistente sostenía, sobre el área afectada. El practicante entonces usaría el cuerpo del paciente como un estabilizador y movería la madera; Las vibraciones de este movimiento serían transferidas al área afectada. **En el siglo 16 Japón**, un libro popular abogó por el uso de percusión y masaje de vibración para **mejorar las quejas reumáticas y fomentar la curación de los huesos rotos.** Hace más de 40 años, el programa espacial ruso observó que los astronautas que regresaban del espacio experimentaban fracturas óseas y pérdidas de masa ósea mucho antes que sus contrapartes terrestres. Los rusos usaron dispositivos de vibración de todo el cuerpo para ayudar a construir la masa ósea de los astronautas. **La NASA** (Administración Nacional de Aeronáutica y Espacio) ha utilizado la terapia de vibración para **prevenir la pérdida de masa ósea en los astronautas, especialmente las mujeres, que son más propensas a la osteoporosis.**

La terapia de vibración fue analizada por el neurólogo del siglo XIX Jean-Martin Charcot. Charcot creó una silla de vibración después de observar a los pacientes de **Parkinson** y los efectos beneficiosos que sufrieron después de un viaje en tren o en carruaje. Más tarde un colega de Charcot, Gilles de la Tourette, creó un casco vibrante, pensando que el cerebro reaccionaría a las vibraciones.

Los defensores han promovido la terapia de vibración para tratar una variedad de otras condiciones, como **esclerosis múltiple, síndrome del miembro fantasma, parálisis cerebral, artritis, tinnitus, úlceras y fibromialgia.** También afirman que esta modalidad **reduce la celulitis, regula la función reproductiva, refuerza el sistema linfático, mejora la cicatrización de las heridas y aumenta la glucosa y el metabolismo corporal.**

Teoría / Evidencia

General: El mecanismo de acción detrás de la terapia de vibración no está claro; Sin embargo, se han presentado varias teorías. En el tratamiento de la densidad ósea, los defensores afirman que la vibración mecánica aplica estrés significativo pero seguro en los huesos del paciente. El estrés creado por la vibración envía una señal química desconocida a los huesos. Esta señal puede causar que los huesos aumenten su masa interna. Del mismo modo, los defensores afirman que la terapia de vibración induce un pequeño estiramiento en los músculos de la zona donde se aplica. Debido a un principio conocido como el reflejo de estiramiento miotático, los músculos responden a este pequeño tramo al contraerse. El estiramiento y contracción continua de un músculo puede ayudar a construir la masa muscular. El fortalecimiento de los músculos evita que ocurran lesiones y promueve la restauración de la masa muscular después de una lesión. Por último, la vibración mecánica ofrece un estímulo constante que puede anular, y por lo tanto bloquear, la señal de dolor que se envía al sistema nervioso.

La terapia de la vibración es el tema de la investigación mucho más en los ensayos clínicos que la mayoría de las otras modalidades integradoras. Los usos más investigados de la medicina vibratoria son para aliviar el dolor y aumentar la densidad ósea, y como terapia

Niños: No se conoce el efecto biológico completo sobre los niños de la terapia de vibración del cuerpo entero (WBV). Después de recibir terapia de WBV en pie, se observó que los niños transmitieron vibraciones de manera diferente en el tobillo y la cadera a intensidades más altas (33Hz) en comparación con los adultos. Además, la transmisión de la vibración no fue diferente en niños en otras áreas, incluyendo la cabeza.

Se encontró que los niños con parálisis cerebral que reciben tratamiento con WBV además de la fisioterapia tienen una velocidad de marcha media más rápida medida por la prueba de caminata de 10 minutos.

Constipación: Dos semanas (seis sesiones de 15 minutos) de terapia con WBV de baja intensidad en pacientes con estreñimiento funcional crónico redujeron la gravedad de los síntomas.

Incontinencia: Se demostró que la terapia con WBV es eficaz para disminuir la pérdida de orina y aumentar las cantidades anuladas en pacientes después de la eliminación radical de la glándula prostática y la eliminación de toda o parte de la vejiga urinaria. Los autores del ensayo propusieron que se realizaran estudios adicionales que combinaran WBV, educación del piso pélvico y electroestimulación y biorretroalimentación.

Dolores y lesiones musculares: Se encontró que la terapia localizada de vibración en adultos con lesiones en el tobillo o los músculos isquiotibiales tenía efectos beneficiosos, como aumentar la flexibilidad y disminuir la rigidez percibida. El efecto a largo plazo de la terapia vibratoria localizada en la recuperación de lesiones no está claro.

Se encontró que la terapia de vibración en las patas superior e inferior de los corredores masculinos descendentes disminuyó el dolor muscular de inicio retardado. Además, se encontró que la terapia con WBV tenía efectos beneficiosos en la fuerza de los músculos de las

piernas y las rodillas. En las extremidades superiores de los estudiantes atletas se observaron efectos adicionales en comparación con el entrenamiento de resistencia.

Osteoporosis: Se ha propuesto la terapia con WBV como otra opción para los individuos con osteoporosis, que debe usarse junto con las recomendaciones clínicas recomendadas, incluyendo cambios en la dieta, medicamentos óseos y ejercicios de peso para prevenir fracturas óseas.

De acuerdo con múltiples ensayos clínicos, la evidencia de aumento de la densidad ósea para los individuos que reciben tratamiento con WBV era insuficiente. Un ensayo clínico en mujeres mayores con osteoporosis mostró aumento de la densidad del cuello femoral y del hueso lumbar después de recibir el tratamiento con WBV.

Dolor: Los ensayos clínicos han sugerido que la terapia de vibración de cuerpo entero de baja intensidad puede ser una opción adecuada para reducir el dolor en pacientes con dolor lumbar crónico. **WBV terapia en pacientes con fibromialgia** se encontró a mejorar el equilibrio y evitar la pérdida de calidad de vida relacionada con la salud.

Sinusitis: Se encontró que la terapia de vibración era una opción de tratamiento libre de fármacos para individuos con sinusitis.

Accidente cerebrovascular: La investigación sugiere que el tratamiento con WBV utilizado en pacientes con accidente cerebrovascular puede no ser más eficaz que los ejercicios solos.

Los pacientes con accidente cerebrovascular hemisférico derecho recibieron terapia de vibración localizada en el músculo del cuello y encontraron mejoras en la negligencia espacial (conciencia de los objetos o personas en el lado opuesto del impacto del accidente cerebrovascular).

Úlceras: Se encontró que la terapia de vibración localizada tiene efectos beneficiosos en la presión de curación y úlceras venosas.

ESTUDIOS CLÍNICOS

[Phys Sportsmed](#). 2009 Dec;37(4):31-8. doi: 10.3810/psm.2009.12.1739.

The acute effects of local vibration therapy on ankle sprain and hamstring strain injuries.

[Peer KS¹](#), [Barkley JE](#), [Knapp DM](#).

Los efectos agudos de la terapia local de vibración en el esguince de tobillo y las lesiones de la tensión isquiotibial.

Peer KS1, Barkley JE, Knapp DM.

Información del autor

Abstracto

OBJETIVOS:

El propósito de este estudio fue determinar si la estimulación muscular biomecánica (BMS) aplicada directamente a diferentes segmentos del cuerpo usando el dispositivo Swisswing resulta en mejoras agudas en el rango de movimiento y la rigidez percibida en adultos físicamente activos con esguince de tobillo agudo o subagudo y tendón de la corva Lesiones de tensión.

MÉTODOS:

Dos grupos separados de individuos con esguince de tobillo de grado I o II ($n = 5$; $21,2 \pm 1,9$ años) o una ceпа isquiotibial ($Nn = 5$; $20,6 \pm 1,8$ años) se sometieron a 20 minutos de tratamiento controlado consistente en hielo, Compresión y elevación, y 10 minutos de BMS segmentario usando el Swisswing a 20 Hz. El tobillo (dorsiflexión, flexión plantar, inversión, eversión), flexibilidad de los isquiotibiales y valoraciones subjetivas de rigidez se evaluaron antes del tratamiento de control (línea de base), tratamiento post-control y tratamiento post-Swisswing.

RESULTADOS:

En comparación con la condición post-control, el tratamiento de Swisswing significativamente ($P < 0,03$ para todos) aumentó la flexión del tobillo y la flexibilidad de la eversión e isquiotibial, y significativamente ($P < 0,05$) la percepción percibida del tobillo y la rigidez de los isquiotibiales.

CONCLUSIÓN:

La terapia segmentaria de BMS usando el dispositivo Swisswing parece tener beneficios agudos significativos para mejorar la flexibilidad y reducir la rigidez percibida en adultos sanos con lesión en el tobillo o en el isquiotibial. Se necesitan investigaciones futuras para determinar la duración de estos efectos y si los períodos repetidos de terapia segmentaria con BMS ayudan a la recuperación de lesiones a largo plazo.

The Effect of Vibration Therapy Over Neck Myofascial Trigger Points (vibraMTrP)

Patrocinador:

Universidad de Valencia

Información proporcionada por (Responsable):

Lirios Dueñas, Universidad de Valencia

Descripción detallada:

Los puntos gatillo miofasciales (MTrPs) son una fuente común de dolor (regional) en pacientes

que presentan dolor musculoesquelético. La vibración mecánica se ha sugerido como tratamiento para el alivio del dolor. En este estudio, los efectos de la terapia de vibración en las personas con dolor de cuello no específico y MTrPs fueron investigados. Diecisiete pacientes con dolor de cuello crónico no específico fueron asignados aleatoriamente a un grupo de tratamiento (grupo de vibración, n = 9) o grupo de control (n = 8). El grupo de vibración recibió 10 sesiones autoadministradas de terapia de vibración (45-50 Hz durante 15 minutos con el sujeto en decúbito supino). El dolor de cuello percibido y la discapacidad y los umbrales de dolor de presión sobre MTrPs del trapecio superior y de la escápula bilateral del elevador se midieron al inicio y después de las primeras, cinco y 10 sesiones de tratamiento.

[J Clin Diagn Res.](#) 2014 Jun;8(6):LE01-4. doi: 10.7860/JCDR/2014/7323.4434. Epub 2014 Jun 20.

Vibration Therapy in Management of Delayed Onset Muscle Soreness (DOMS).

[Veqar Z¹](#), [Imtiyaz S²](#).

Terapia de Vibración en el Manejo del Dolor de Músculo de Comienzo Retrasado (DOMS).

Veqar Z1, Imtiyaz S2.

Información del autor

Abstracto

Tanto la población atlética como la no atlética, cuando se someten a algún ejercicio no acostumbrado o desconocido, experimentarán dolor 24-72 horas después del ejercicio. Este ejercicio especialmente excéntrico en la naturaleza causado principalmente por el daño muscular se conoce como dolor muscular de inicio retrasado (DOMS). Este daño se caracteriza por dolor muscular, disminución de la producción de fuerza muscular, reducción de la amplitud de movimiento y malestar experimentado. DOMS se debe a las lágrimas microscópicas de fibra muscular. La presencia de DOMS aumenta el riesgo de lesión. Un rango reducido de movimiento puede conducir a la incapacidad para absorber eficientemente el choque que afecta la actividad física. Las alteraciones del movimiento mecánico pueden aumentar la tensión sobre las estructuras de los tejidos blandos. La reducción de la fuerza de salida puede indicar el reclutamiento compensatorio de los músculos, lo que conduce a un estrés poco habitual en la musculatura. Las diferencias en las relaciones de fuerza también pueden causar una tensión excesiva en la musculatura desacostumbrada. Se han propuesto una serie de intervenciones dirigidas a disminuir los síntomas de DOMS. Aunque se han realizado investigaciones voluminosas a este respecto, existe poco consenso entre los profesionales en cuanto a la forma más eficaz de tratar el DOMS. Movimiento mecánico oscilatorio proporcionado por la terapia de vibración. La vibración podría representar una intervención eficaz para mejorar el rendimiento neuromuscular en los atletas. La vibración ha demostrado eficacia en flexibilidad y energía explosiva. La vibración puede aplicarse tanto a la zona local como a la vibración de todo el cuerpo. La terapia de vibración mejora la fuerza

muscular, el desarrollo del poder, la conciencia cinestésica, la disminución de dolor muscular, el aumento de la amplitud de movimiento y el aumento del flujo sanguíneo bajo la piel. VT fue eficaz para la reducción de DOMS y recuperar la ROM completa. La aplicación de la terapia de vibración de cuerpo entero en postexercise demuestra menos dolor umbral de presión, dolor muscular junto con menos reducción isométrica máxima y fuerza voluntaria isocinética y niveles más bajos de creatina quinasa en la sangre.

Vibration and pressure wave therapy for calf strains: a proposed treatment

[Amol Saxena](#), [Marie St. Louis](#), and [Magali Fournier](#)

Terapia de vibraciones y ondas de presión para las cepas de terneros: un tratamiento propuesto

Amol Saxena, Marie St. Louis y Magali Fournier

Información del autor Información de copyright y licencia

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Ir:

Resumen

Las cepas de ternera (pierna) tienen una variedad de regímenes de tratamiento con resultados variables y retardo a la actividad (RTA). Estas lesiones implican interrupción de porciones o todo el complejo mio-tendinoso gastrocnemio-sóleo. El tratamiento conservador consiste inicialmente en reposo, hielo, compresión, elevación (ARROZ). Inmediatamente después de la lesión de la pantorrilla, los pacientes pueden utilizar crioterapia, masaje, rango de movimiento pasivo y ejercicio progresivo. En general, las cepas de ternera de Grado I a Grado III pueden tardar hasta 6 semanas antes de que el atleta pueda volver a entrenar. También puede implicar la pérdida de más del 50% de la integridad muscular. Recientemente, la terapia de vibración y las ondas de presión radial se han utilizado para tratar cepas musculares y otras lesiones mio-tendinosa que implican puntos gatillo. Los estudios han sugerido que la terapia de vibración con la rehabilitación puede aumentar la fuerza muscular y la flexibilidad en los pacientes. La terapia de vibración segmentaria (SVT) es el tratamiento a un área más focal. La terapia de vibración (VT) se aplica directamente al área de lesión. VT es un estímulo mecánico que se cree que estimula los receptores sensoriales, así como la disminución de las células inflamatorias y receptores. Por lo tanto, VT podría ser una valiosa herramienta para tratar eficazmente al atleta y disminuir su tiempo de recuperación. El propósito de este trabajo es dar al lector conocimientos básicos de VT y proponer un protocolo de tratamiento para cepas de terneros utilizando esta tecnología junto con ondas de presión radial.

Palabras clave: cepa de ternero, onda de presión radial, terapia de vibraciones

- Los ensayos clínicos han observado efectos tales como una disminución de la celulitis, fortalecimiento y tonificación muscular, aumento de la masa ósea, mejoría de la circulación sanguínea, equilibrio mejorado y disminución de la reacción de las hormonas correlacionadas con el estrés después de la terapia vibratoria de todo el cuerpo. Sin embargo, no se ha alcanzado un consenso sobre los efectos de la vibración de todo el cuerpo al proporcionar los beneficios pretendidos utilizando todas las máquinas disponibles.
- Los terapeutas de masaje, terapeutas ocupacionales, fisioterapeutas y otros trabajadores del cuerpo integran terapia de vibración en sus prácticas

A CONTINUACION MAS ESTUDIOS CLINICOS

GENERAL NEUROLOGY

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