

Working with Inflammation

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**ADVANCED
TRAININGS**

Inflammation is...

- The immune system's tissue 1. p_____ and 2. r_____ response;
- *El Sistema inmunológico es el responsable de*
- *1. p_____ y 2. r_____ del tejido;*
 - *Causado por:*
- Triggered by:
 - 3. i_____
 - 4. i_____, or
 - 5. i_____
 - 3. i_____
 - 4. i_____, o
 - 5. i_____.

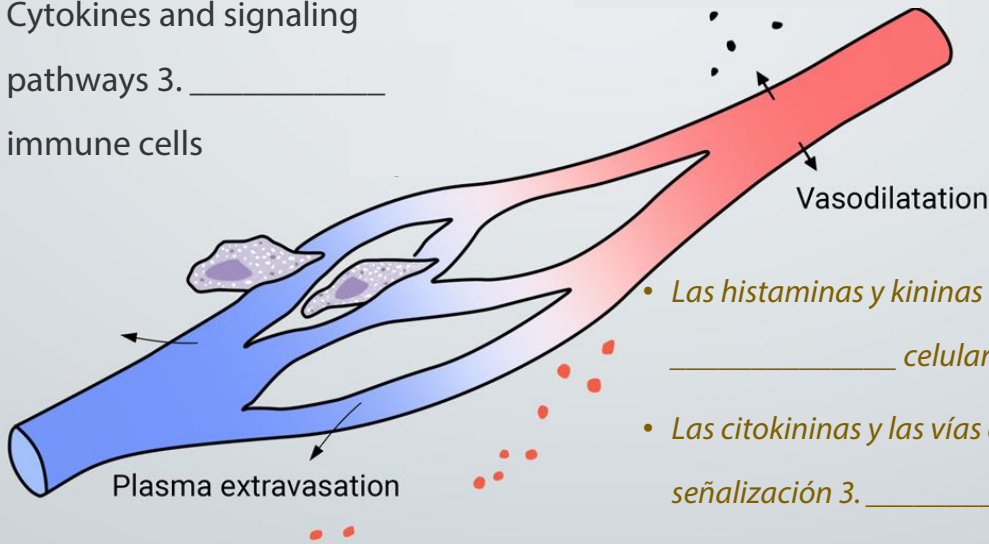
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Inflamación, Simplificada

Acute
Phase



- Histamine and kinins increase vessel and cell 2. _____
- Cytokines and signaling pathways 3. _____ immune cells



- Las histaminas y kininas aumentan _____ celular y capilar.
- Las citocinas y las vías de señalización 3. _____ las células inmunológicas.

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Inflammation is Good/ *La Inflamación es Buena*

Because It Is:

Porque es:

- Necessary. Without inflammation, the body can't protect or

1. _____ itself.

- Normally self-limiting. Winds down when protection and 2. _____ tasks are complete.

- Necesaria. Sin la inflamación el cuerpo no puede protegerse ni

1. _____ a sí mismo.

- Normalmente, autoregulada. Cesa tan pronto como la tarea de protección y 2. _____ han sido completadas.

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Inflammation is Good/ *La inflamación es Buena...*

Except, when there is/*Excepto cuando:*

•3. _____ Inflammation •3. _____ *inflamación.*

•Eg, a compromised immune system

•Ej. Sistema inmune comprometido

•4. _____ Inflammation •4. _____ *inflamación.*

•Eg, allergic reactions; autoimmune disorders, or,

•Ej. Reacciones alérgicas; desórdenes autoinmunes

•Normal inflammatory reactions that don't resolve, and so become chronic.

•Reacciones inflamatorias normales que no encuentran resolución, y se convierten en crónicas.

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Types of Inflammation

Local



General



Acute



Chronic



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What about Diet?

- However, there is no 3. _____ on best inflammation diet(s), and diets have a 4. _____ shelf-life.
- Nutrition is very difficult to 5. _____:
 - Lab and animal studies don't always apply
 - Individual differences, interactions, and context all add complexity
- As manual therapists, 6. _____ generally within our scope
 - (...but, often worth asking about).

¿Qué hay con la dieta?

- Sin embargo, no hay un 3. _____ en cual es la mejor dieta, y las dietas tienen un 4. _____ largo de vida.
- La nutrición es muy difícil de 5. _____:
 - Laboratorios o estudios con animales no siempre aplican
 - Diferencias individuales, interacciones, y contexto, todo añade complejidad.
- Como terapeutas manuales, 6. _____ generalmente en el alcance de nuestro trabajo
 - (...sin embargo, vale la pena preguntárselo).

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What about Diet?

- The gut plays a key role in 1. _____ inflammation.
- There are many 2. _____ of diet being helpful.
 - Mediterranean diet; MIND diet; Anti-inflammatory food pyramid; Bulletproof diet; keto diet; gluten-free diet; turmeric, green tea extract, blueberries, ginger, tea, dark chocolate, fish oil...

¿Qué hay con la dieta?

- Los intestinos juegan un papel importante en la inflamación 1. _____.
- Hay muchos 2. _____ de dietas que ayudan.
 - Mediterránea; dieta MIND; Pirámide anti-inflamatoria; keto; gluten-free, cúrcuma, té verde, blueberries, jengibre, té, chocolate oscuro, aceite de pescado...

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- C _____
- A _____
- L _____
- M _____
- S _____

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Client Engagement

Compromiso del Cliente



•...is the 1. _____
of working with
inflammation.

It involves:

- Catalyzing clients' 2. _____
- 3. _____ results together
- 4. _____ to one's own body
- 5. _____ to pace, grade, titrate,
and dose

•...and is a result of the
therapeutic 6. _____.

•...es el 1. _____ de
trabajar con inflamación.

Conlleva:

- Crear un 2. _____ en el cliente.
- 3. _____ resultados juntos.
- 4. _____ a su propio cuerpo.
- 5. _____ a seguir al paso, medir, valorar,
dosificar.

•...y es un resultado de la
6. _____ terapéutica.

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Autonomic Nervous System (ANS) Calming

Calmar el Sistema Nervioso Autónomico

•Autonomic stress can

1. _____ inflammatory reactions, both locally and systemically.

•El stress del Sistema autonómico puede

1. _____ las reacciones inflamatorias, tanto locales como sistémicas.



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Enhancing Circulation Aumentando la Circulación

•Inflammation's normal 1.

_____ relies on
tissue 2. _____ and
fluid flow.

La 1. _____ normal del
proceso inflamatorio
descansa en la
2. _____ y flujo del
fluido.



Thanks to Dr JC Guimberteau
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Movement Safety

Non-threatening sensation, touch, movement, and directed attention can:

- 1. _____ sense accuracy.
- Help renegotiate the brain's habituated
- 2. _____ reactions:
 - Eg, a) _____,
 - b) _____
- 3. _____ and normalize sensation.

Seguridad de Movimiento

Un tipo de toque, sensación, movimiento y atención dirigida

No-amenazante:

- 1. _____ la precisión sensorial.
- Ayuda a que el cerebro renegocie los patrones de reacciones
- 2. _____ :
 - Ej, a) _____
 - b) _____
- 3. _____ y normalizar la sensación.

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Summary

- Many times, local inflammation responds quickly and dramatically to hands-on work.
- Other times (especially with systemic inflammation), your goals will be to calm, support, ease, and inspire the whole person, rather than "fixing" the inflammation.
- Remember that helping can take many forms.

Resumen

- Muchas veces, la inflamación local responde rápida y dramáticamente a nuestro toque.
- Otras (en especial cuando la inflamación es sistémica), nuestro objetivo principal es calmar, apoyar, suavizar e inspirar a la persona como un todo, en lugar de querer "arreglar" la inflamación.
- Recuerdo que 'ayudar' puede tomar muchas formas.

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Optional Supplemental Materials

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- **Slideshow PDF** (free for subscribers)
- **eBook “Mini-Manual”** (\$1.99 with code “*itookinflammationlive-ebook*”)
 - 60+ page PDF of online course slides,
 - AMT book excerpts,
 - note organizer pages,
 - articles and readings,
 - more techniques, etc.
- **1hr Online Certificate Course** (\$7.50 with code “*itookinflammationlive-certificate*”)
 - 1 CE/CAMT Credit; Certificate
 - Lecture; eBook; and extras



Answer Keys

Inflammation is...

The immune system's tissue

1. protection and
2. repair response;

Triggered by:

3. injury,
4. infection, or
5. irritation.

Inflammation, Simplified

Histamine and kinins increase vessel and cell 2. permeability

Cytokines and signaling pathways 3. summon immune cells

Inflammation is Good

Because It Is:

- Necessary. Without inflammation, the body can't protect or 1. heal itself.
- Normally self-limiting. Winds down when protection and 2. repair tasks are complete.

...Except, when there is:

- 3. Not Enough Inflammation, or 4. Too Much Inflammation

What about Diet?

- The gut plays a key role in 1. systemic inflammation
- There are many 2. stories of diet being helpful
- However, there is no 3. consensus on best inflammation diet(s), and diets have a 4. short shelf-life
- Nutrition is very difficult to 5. research:
- As manual therapists, 6. not generally within our scope.

Client Engagement

...is the 1. foundation of working with inflammation. It involves:

Catalyzing clients' 2. interest, 3. Tracking results together, 4. Listening to one's own body, 5. Learning to pace, grade, titrate, and dose. ...and is a result of the therapeutic 6. alliance.

Autonomic Nervous System (ANS) Calming

Autonomic stress can 1. prolong inflammatory reactions, both locally and systemically.

Liquids (Enhancing Circulation)

Inflammation's normal 1. progression relies on tissue 2. perfusion and fluid flow.

Movement Safety

Non-threatening sensation, touch, movement, and directed attention can:

1. Refine sensate accuracy.

Help renegotiate the brain's habituated 2. protective reactions:

Eg, a) immobilization, b) pain

3. De-threaten and normalize sensation.

1. Stimulate and 2. Re-Start the Inflammatory Cycle

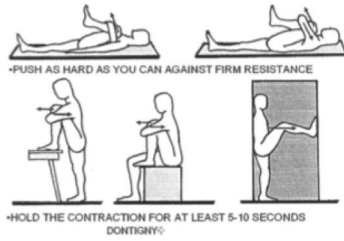
- Skilled direct soft tissue work is thought to sometimes 2. re-start a "stalled" inflammatory cycle.
- The intense sensation of direct work may help re-set 3. protective thresholds as well (tho in others, can 4. sensitize or aggravate).
- Practitioner training, experience, sensitivity, careful 5. pacing, and client health/engagement are crucial.

SIJ Self-Care I

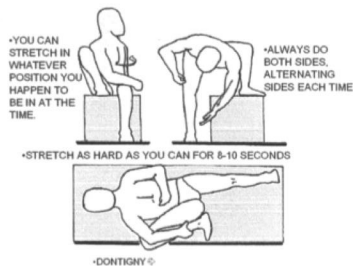
I.X-17

CM

Instructions / Intentions / Feel or Watch For



Movements / Cues:



Notes:

Source: Robert DonTigny

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Adv. Myo. Techs: Ilia

SIJ Self-Care II

I.X-16

CM

Instructions / Intentions / Feel or Watch For:



Movements / Cues:



Notes:

Seated: Robert DonTigny
Doorframe: source unknown

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Supporting and Unwinding Arm: Motility

A.D-06

Unterstützen und Entwirren der Arme: Motilität

CAM



Instructions / Intentions / Feel or Watch For:

Touch bones; Feel for and follow any latent tension in arm in order to release.

Movements / Cues:

Notes:

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Adv. Myo. Techs: Arm

Vestibular/Orienting Release

W.A-06

Heben / Senken des Kopfes

AM



Instructions / Intentions / Feel or Watch For:

Lift and very slowly lower head.

Feel for release of tonus each step of the way, pausing to wait for client to let head go.

Variation: support head as client slowly reclines onto table, stopping and waiting whenever activation or tensing occurs.

Movements / Cues:

"Just let your head be heavy into my hands..."

Notes:

For clients with chronic vertigo, go very slowly and wait for subsidence of dizziness and any autonomic nervous system (ANS) activation before proceeding. Pace your work so as not to increase ANS activation or overwhelm.

Keeping eyes open can help reduce any dizziness.

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Adv. Myo. Techs: Whiplash

Acute Injury Technique

W.A-07



Instructions / Intentions / Feel or Watch For:

1. Gently, test motion of injured part in each direction.
2. Without pushing, take part into easiest direction.
3. Hold, follow, wait for release.
4. Gently recheck movement.
5. End in stillness.

Movements / Cues:

Notes:

Also known as the "Chinese Release."

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Adv. Myo. Techs: Whiplash

Floating Sacrum

P.D-07

Gleitendes Sacrum

Sacro Flotante



Instructions / Intentions / Feel or Watch For:

Imagine a boat (sacrum) floating in the water (your hand). Follow any subtle movements you feel.

Movements / Cues:



Notes:

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Adv. Myo. Techs: Pelvis

Arm in the Sleeve

A.A-11

Arm im "Ärmel"

CLM



Instructions / Intentions / Feel or Watch For:

Holding soft-tissue "sleeve" while client lengthens bony "arm:" telescoping, growing bone.

Movements / Cues:

"Let your arm get longer, right through the bone."
 "Allow your shoulders to stay relaxed, resting on the table."

Notes:

Help client stay open, wide, and relaxed in shoulder girdle.

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Adv. Myo. Techs: Arm

Mother Cat

P.B-12

*Katzenmutter**Madre Del Gato*

Instructions / Intentions / Feel or Watch For:

Movements / Cues:

Notes:

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Adv. Myo. Techs: Pelvis

Crural Fascia / Retinacula

AN.XA

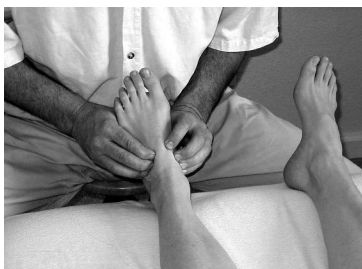
Fascia Cruris / Retinacula



Instructions / Intentions / Feel or Watch For:

"Fluffing up," lifting and loosening the retinacula.

Movements / Cues:



Notes:

Indicated for preparation for ankle work, particularly dorsiflexion restrictions.

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Adv. Myo. Techs: Ankle

Sciatic Nerve Glide Test

SC.B

Ischiasnerv: Gleittest

CLMS



Instructions / Intentions / Feel or Watch For:

Direct client to compare the sensations of straightening the affected and unaffected legs. If straightening the affected leg increases sciatic pain, nerve tethering could be a factor (at or proximal to the site of reported pain).

Use Sciatic Nerve techniques to locate and release neural sheath adhesions. In general, work proximal to distal, retesting to track improvement.

Movements / Cues:

Straightening leg (extend knee).

[If pain increases with knee extension:] "Where do you feel it most?" (Can often indicate site of tethering.)

Can be helpful as a take-home client exercise/stretch. Clients should be cautioned not to overdo it, so as to avoid irritating an inflamed sciatic nerve.



Notes:

Variations (not pictured):

1. Positive test result when bringing leg across the body (knee extension with hip flexion with adduction) can indicate piriformis or hamstring involvement.
2. Placing the sole of the passive leg on the table by raising the knee can help differentiate between lumbar and non-lumbar tethering. Since knee-up position decreases lumbar extension, suspect tethering at lumbar if having passive leg's knee up decreases pain.

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Adv. Myo. Techs: Sciatica

Long Slump Slider (Modified)

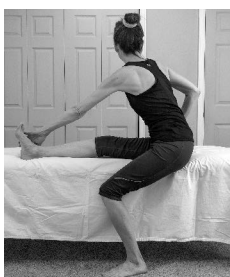
SC.XB



Instructions / Intentions / Feel or Watch For:

Movements / Cues:

Variation: seated on floor.



Notes:

"3 sets, 5 repetitions held for 5 seconds of unilateral Modified Long Slump Slider (MLSS) significantly improved bilateral (...) muscle extensibility and stretch tolerance, which was retained 3 weeks post-intervention" (Pietrzak and Vollaard, 2016)
<https://noijam.com/2017/06/09/the-modified-long-sit-slump/>

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Adv. Myo. Techs: Sciatica

Differentiating Bones of Hand

A.E-03

Differenzierung: Knochen der Hand



Instructions / Intentions / Feel or Watch For:

Differentiating and "describing" all bones of hand. Take your time; "fill the mind."

Movements / Cues:

Notes:

For Carpal Tunnel or Repetitive Strain symptoms, especially when thumb oppositional movements produce symptoms, pay special attention to Scaphoid/Trapezium joint at base of thumb.

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Adv. Myo. Techs: Arm

Rotator Cuff / Glenohumeral Capsule

A.B-05

*Rotatorenmanschette***LMS**

Instructions / Intentions / Feel or Watch For:

Feel for and release restrictions around glenohumeral joint.

Movements / Cues:

Passive rotation, circumduction, etc. of humerus.

Notes:

Indicated for reduced inferior glide, as well as rotator cuff, labrum, or impingement issues.

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Adv. Myo. Techs: Arm

Achilles Tendon

AN.XA

*Achillessehne***S**

Instructions / Intentions / Feel or Watch For:

Movements / Cues:

Notes:

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Adv. Myo. Techs: Ankle

Infrapatellar Fat Pad /Patellar Tendon

K.B-04



Instructions / Intentions / Feel or Watch For:

Work the infrapatellar fat pad in joint space between femur and tibia. Feel for tenderness, fibrosity.

Movements / Cues:

Variation: passive flexion, extension, rotation.

Notes:

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Adv. Myo. Techs: Knee

Pes Anserinus

K.X-02



Instructions / Intentions / Feel or Watch For:

In cases of pes anserinus irritation,
1. Work to evoke relaxation and glide in constituent structures:
- Sartorius
- Gracilis
- Semimembranosus.
2. Differentiate layers of pes anserinus tendons themselves, relieving stress on bursa.

Movements / Cues:



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Adv. Myo. Techs: Knee