



Wrist Pain & Issues

Description

Lesson Overview

In this lesson, we introduce wrist pain and explore considerations for supporting students who are experiencing wrist issues.

Objective

Become familiar with wrist pain and issues, and teaching considerations for supporting students who are experiencing or recovering from carpal tunnel syndrome or other wrist pain.

Description

Note some potential causes for wrist pain and how posture and habits can contribute to wrist issues. Explain the typical advisement regarding weight-bearing poses for students experiencing wrist pain or soreness. Take note of poses that put significant pressure on wrists. For those whose pain has subsided, describe a gradual approach of returning to full practice. Provide a simple readiness test that can be used before engaging in practices that require 90-degree wrist extension. Explain how upper body alignment is related to wrist issues and how increasing strength and mobility of shoulders and upper back can help with wrist issues. Describe alignment points for weight-bearing asana. Be aware of where you can review stretches to help with range of motion in the wrists; alternatives and adaptations for relevant poses; sequences for those with wrist issues and related study resources.

Symptoms & Causes

Symptoms



Wrist soreness or pain (new or chronic)

Potential Causes

The flexibility of our hands and their twenty-nine joints causes them to be vulnerable to injury. â??

Amber Burke

- Repetitive strain / stress due to typing / texting /mousing or other activities such as yard work or using other tools
- Carpal tunnel syndrome (see more below)
- Tendonitis of the wrist or hand
- · Arthritis of the wrist or hand
- Ganglion cysts
- Yoga practice-related issues, such as improper alignment in weight-bearing poses (see more below)
- Injuries causing strains, sprains or fractures
- Herniated discs in the neck can cause pain and tingling all the way down the arms. (Olga Kabel)

Wrist Pain in General

Although wrist pain is clearly an overly general description and carpal tunnel syndrome (CTS) is a specific diagnosis, we discuss these together because of the various interrelated factors involved in them. Wrist pain almost invariably extends beyond the wrist, especially into the hand, and even when it does not, its cause can derive from factors extrinsic to the wrist itself. The pain can also manifest in different parts of the wrist, offering some clues as to the cause. â?? **Mark Stephens**

Posture, Workplace Ergonomics

RSIs [repetitive strain injuries] stem from excessive and continuous stress on the musculoskeletal system, often brought on by poor postural habits, as well as workplace ergonomics. When the shoulders and upper back donâ??t provide a supportive structural base for arm movements, the burden of the activity may fall on the smaller joints. Furthermore, poor alignment in the shoulders and upper back can constrict nerves in the arms, which can manifest as pain, swelling, and numbness in the wrists. â?? **Marla Apt**

Examining Some Causes of Wrist Stress

When the wrist is hiked upward â?? extended â?? it puts stress on all the soft tissue, especially tendons, in the wrist. When it comes to keyboard typing with hiked wrists (your wrists should be completely neutral), the stress is low but frequent; when it comes to things like yoga or CrossFit, the stress is high but infrequentâ?! If we are using our hands as feet such as in arm balances, planks and downward dog, we need to give them a chance to get stronger gradually â?? not go from couch to 100 chaturanga push-ups in one practice. Not only are the forearms and wrists likely to be too weak and unconditioned to hold a plank or do repeated push-ups, but if the core, too, lacks strength, the problem gets compounded as the yogi is likely bring the weight forward toward the shoulders (away from the weak core), creating even more extension in the wrists. â?? **Gabriella Boston**



Common Daily Tasks vs. Exercises That Test the Wrists

Take some time to notice the current range of motion in your wrists. Make a list of many of the tasks you perform throughout the day with your hands. When you take a moment to realize what you do with your hands (drink beverages, write notes, type at your computer, drive, and scroll through social media apps) youâ?? Il soon notice that your wrists are either in a neutral or flexed position many hours throughout the day. Now, letâ?? s look at the mechanics of Downward Facing Dog â?? you are not only putting your wrists in extension but also adding gravity and body weight into the equation! Ouch!! â?? Monica Bright

Prevention

â??Often people inadvertently put too much weight on their wrists,â?• according to experts at Go To Ortho, an orthopedic urgent care in Portland, Oregon. â??They tend to dump their body weight on the base of their hands, accidentally straining their wrists.â?• Instead, focus on creating a *hasta bandha* â?? a hand lock â?? by pressing into the mat with your fingertips and the base of your fingers, and taking pressure off the heel of the hand. â?? **Tamara Y. Jeffries**

See more below on possible prevention of wrist issues through strengthening and stretching. In addition, Ram Rao PhD, a long-time yoga practitioner, gives what might be an example of prevention while also citing research on yogaâ??s effectiveness in relieving pain from carpal tunnel syndrome:

As a neuroscience researcher, I have been involved in bench work activities for more than two decades. Routine laboratory work involves repetitive hand movements, tissue homogenization using hand-held homogenizers, pipetting using hand-held pipet aids, reagent and chemical preparations, and tabulating data (typewriters then and computers now). Call it luck or divine grace, but I have not suffered from any nerve compression in the wrists. It is well established that repetitive finger and thumb motions with the hand flexed either down or up at the wrist causes carpal tunnel syndrome (CTS). â??

Research





Carpal Tunnel Syndrome Pain Reduced (1995) link

- Randomized, single-blind, controlled trial
- 42 individuals with carpal tunnel syndrome, ages 24-77
- Patients in the yoga-treated group had statistically significant improvements for grip strength and pain reduction

More About the Study Author

On returning from her annual study with B.K.S. Iyengar, senior Iyengar Yoga teacher Marian S. Garfinkel, Ed.D., found over 900 e-mail messages waiting. Everyone from CNN to nurses in Texas to



individuals in Poland were trying to reach her. For, just as she departed for India, the November 11 issue of The Journal of the American Medical Association had been released. In it was an article, with Garfinkel as the lead author, reporting on a study that set out to determine whether yoga postures based on the lyengar method can relieve the symptoms of carpal tunnel syndrome, that common ailment resulting from repetitive activities like typing. The studyâ??s conclusion: Yes, indeed, it canâ?! Publication in that prestigious medical journal was the culmination of three yearsâ?? work for GarfinkelÂ?, from getting the idea for the study, to designing the yoga intervention and lining up rheumatologists to help her, to finding grant money, and then submitting the article. Just as you donâ??t often see the word â??yogaâ?• in JAMA, you donâ??t see many Ed.D.s Doctors of Education writing JAMA articles. It is, after all, the leading journal for medical doctors. But Garfinkel is a â??can doâ?• sort of person. And listening to her talk about what she has done and is doing can make you feel like a couch potato even if you donâ??t own a TV. â?? **Kathryn Black**

[See the <u>link</u> for many more details on the study author, Marian Garfinkel.]

General Approach





Is yoga a good idea for those with carpal tunnel syndrome or other wrist and hand problems? It depends: Yoga can be irritating or helpful, depending on the emphasis of the practice. â?? **Amber Burke**

When There is Pain & Soreness

- If there is pain and soreness, itâ??s typically advised to avoid weight-bearing or other activities that increase pain such as excessive wrist extension. Therefore, without significant adaptation, classes with vinyasa flow or arm balances are likely to be inappropriate for those with wrist issues.
- If pain is mild, warm up fingers, hands, arms and shoulders before more challenging activity.



- Relieving pain is best approached through a focus on the entire chain of related body parts: fingers, hands, wrists, forearms, shoulders and upper back.
- In a small number of cases, avoiding some wrist movements may be advisable even in non-weight bearing poses. Baxter Bell MD describes such cases here, noting, for example, arthritis of the wrist and ganglion cysts.

When Pain is Mild

Students and clients experiencing mild wrist pain can benefit from warming up their fingers, hands, arms, and shoulders before beginning their practice. Wrist and forearm massage are also effective in helping reduce pain. So long as the pain is mild, the following exercises can be healing. â?? Mark Stephens

Align, Stretch, Strengthen, Modify

Achy wrists arenâ??t something you just have to endure if you want to practice yoga. In fact, your asana practice can actually enable you to develop mobility and stability in your wristsâ??as long as you pay attention to a few key factorsâ?! Yoga can keep your wrists healthy and pain-free if you practice proper alignment principles; stretch and strengthen your wrists, hands, and forearms; and use intelligent modifications when necessary. â?? **Christine Malossi**

Eliminate Source of Strain & Then Release Strain in Hand and Forearm

The first order of business when dealing with wrist pain is to analyze your repetitive hand activity and either eliminate it (if possible) or change your hand position so that your wrists remain in a neutral position when you do itâ?! Once the repetitive hand positioning has been addressed you can begin to follow the usual protocol of contract-relax-stretch for releasing tension in your hand and forearm muscles. They get tight and tense just like the muscles elsewhere in the body, yet we tend to focus on our hamstrings much more then we do on our handsâ?! Here are some examples of hand movements that you can include in your routine. â?? Olga Kabel

Focus on the Entire Chain of Related Body Parts

Treatment of wrist pain cannot be focused on the wrist alone, it has to involve fingers, hands, wrists, forearms, shoulders and even upper back. â?? **Olga Kabel**

When Pain Has Subsided

- Avoid movement that causes pain or numbness.
- When pain has subsided, a common approach is gentle <u>stretches</u> followed by gradual reintroduction of weight bearing. (Julie Gudmestad)
- If the wrists are not acutely inflamed or in need of therapy, proper alignment, strengthening activities and adaptations may prevent injury and/or address a weakness.
- When posture and workplace ergonomics are a cause, consider a focus on strengthening and proper alignment of shoulders and upper back.



The Role of the Shoulders & Upper Back

Yoga can assist with healing RSI in the wrists by working on alignment in the upper body, so that the larger muscles in this region can better support and guide movements of the elbows, wrists, and handsâ?!. [Specific] asanas will help develop mobility and strength in the shoulders and upper back to minimize nerve compression and stress on the smaller joints. â?? **Marla Apt**

Choosing Stretches & Asana

- Please note that there are many poses that require wrist extension while few that require flexion. See Wrist Stretches for wrist flexion stretches to use as counterposes.
- Julie Gudmestad suggests a readiness test before practicing poses requiring 90 degrees of wrist extension. This is done by simply coming into Marjaryasana (Table Pose / Hands & Knees) with heels of hands under shoulders and noticing effect on wrists. If not completely comfortable, the priority should be increasing range of motion.
- â??In general, most people can safely do all of the wrist movements if they are not bearing weight on the hands and wristsâ?! So even if you have wrist issues, you can still do a modified practice using lots of poses.â?• (Baxter Bell MD)

Poses that put a lot of pressure on wrists include:

- Cat / Cow Flow
- Adho Mukha Svanasana (Downward Facing Dog Pose)
- Urdhva Mukha Svanasana (Upward Facing Dog Pose)
- Plank Pose
- Chaturanga Dandasana (Four Limbed Staff Pose)
- Arm Balances
- Utthita Trikonasana (Extended Triangle Pose)

Other Considerations

- Use gloves that have cushioning for the palm.
- Reduce the angle of the wrist using yoga props or a rolled-up mat to lift the heel of the hand.
- If weight-bearing is the issue, avoid arm balancing poses or drop the knees.
- â??Those with hyper-flexible wrist joints may want to avoid full extension in weight-bearing poses to avoid wear and tear on the internal wrist structures and overstretching ligaments.â?• (Baxter Bell MD)

Important Findings About Managing Wrist Pain

There are a few lessons that I learned from that experience:

- 1. Wrist pain is so common that some larger tech companies have an an agement teams are are wow!
- 2. Some wrist pain can be managed effectively with movement therapy and massage (unless it is a sign of a more complex, underlying condition like rheumatoid arthritis, ganglion cyst and so on).



- 3. Treatment of wrist pain cannot be focused on the wrist alone, it has to involve fingers, hands, wrists, forearms, shoulders and even upper back.
- 4. Ergonomics plays an important role in wrist pain management â?? hand positions during typing, mousing and other activities MUST be analyzed and improved upon.
- 5. Itâ??s best to deal with wrist pain right away, before it becomes a chronic issue.

Your wrist is a pretty complex structure. It consists of:

- eight small bones
- ligaments that connect those bones to each other (and to hand bones and forearm bones)
- tendons that attach muscles to bones.

â?? Olga Kabel

Soreness in Arm Balance Poses





A Variety of Potential Causes

If students experience wrist soreness in any arm balance pose, the cause could be:

- 1. Improper alignment
- 2. Lacking core strength needed for the variation being practiced
- 3. Lacking wrist strength needed to bear body weight
- 4. Wrists not accustomed to that degree of extension
- 5. Wrists not structurally capable of that degree of extension
- 6. History of wrist issues, such as carpal tunnel syndrome



Teaching Considerations

Clearly, different approaches are needed to address wrist issues based on the cause. Considerations include:

- 1. Practice wrist stretches beforehand.
- 2. Select a variation that meets individual needs.
- 3. Practice on a firm surface. Too much cushioning causes excessive wrist extension.
- 4. When appropriate, practice forearm version if weight-bearing on wrists should be avoided (such as with carpal tunnel syndrome). For example, Side Plank Pose can be replaced with a forearm variation and Dolphin Pose can replace Down Dog.
- 5. Ensure proper alignment. For example, not grounding evenly through the palm can cause strain, and, in Side Plank Pose, improper sinking into shoulder of grounded arm increases pressure on wrist.
- 6. Practice regularly to develop core and wrist strength.

Engage Leg Muscles Strongly

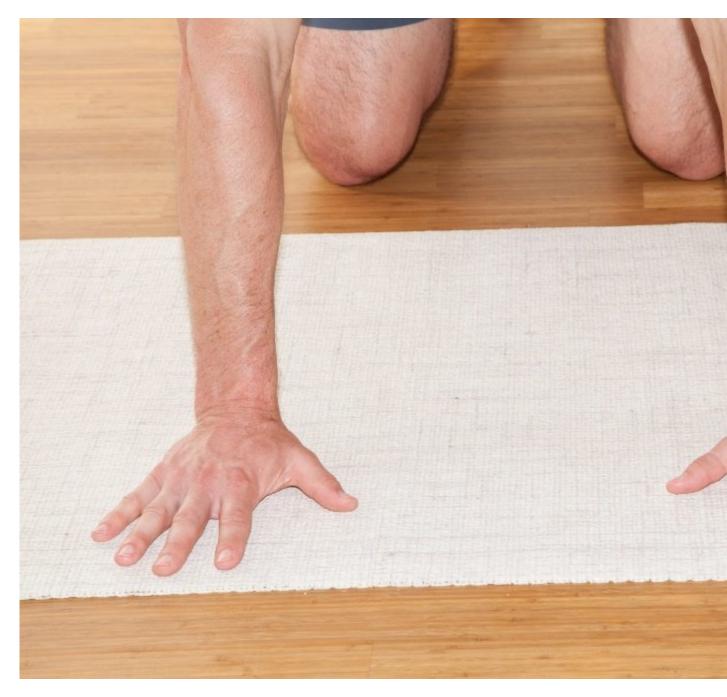
Bring pressure into each of your fingers, all the way down to the tips. At the same time, remember to engage your leg muscles strongly so they can carry some of your weight. All of this will lighten the load on your wrists, which may be enough to relieve the pain. â?? **Ann Pizef**

It May Be Alignment, or It May Not Be a Good Pose for the Particular Student

Many of us tend to roll a bit to the outer edges of the hands and to the heels of the palms, overusing muscles that are already tired from computer work or food prep. If we continue this habit it can lead to repetitive strain injury (RSI), such as carpal tunnel syndrome. Thatâ??s why itâ??s important to look at your weight-bearing in poses like downward dog. Itâ??s even more important in the transition to plank or upward dog, when we tend to â??buckleâ?• the hand and lose support across the knuckle pads of the fingers. If working toward even distribution in the hands doesnâ??t work, a wedge or rolled mat supporting the heel of the palm may help change the habit and build some strength in weaker muscles. But there are also times when we just need to back away from a pose thatâ??s hurting us, as in the following caseâ?! Most hand balances (minus a wedge) require a 90-degree extension of the wrist. (For a point of reference, downward dog requires about 50 degrees.) My clientâ??s full wrist extension was 40 degrees, as it had been since she was a child. She was not just weak or tight in her wristsâ??this was her bone structure. Yet she had been trying to force her wrists in the poses by bending her elbows in straight arm poses like plank and side plank, or by adding more height to a wedge. â?? Beth Spindler

Weight-Bearing Alignment of Hands





When the hands are supporting the body weight, please see Weight-Bearing Alignment of Hands guidelines here.

Stretches, Adaptations & Sequences





Improving ROM in Wrists

For Wrist Issues: Improving Wrist ROM

The following 2- minute video, â??Piano Fingers,â?• is designed to strengthen and articulate the muscles of the forearm, wrists, and fingers:

Pose Adaptations, Variations & Alternatives

For Wrist Issues: Pose Variations & Alternatives

Adaptation Examples

Instead of downward dog, do dolphin. Instead of doing a wheel pose on the floor, you can place blocks at an angle against a wall and place your hands on those blocks. Instead of cobra or upward dog, the modification can be a baby cobra or sphinx. Instead of plank on your hands, do a plank on your forearms and come down to the knees if the core is too weak to hold up the hips. Dacus suggests that if the pain is mild but persistent, you might try wrist wraps during yoga. They provide relief and are also a reminder to be extra careful with your wrists. \hat{a} ? They provide compression and support but they also



advise you that you have something to be extra mindful of, a? he says. a?? Gabriella Boston

Sequences

- Sequence Library: Conditions & Accommodations link
- Dianne Body, Yoga for All Training, Yoga for All Mini-Course: Alleviating Wrist & Hand Pain 12-min video
- Jessica Stickler, Yoga International, Yoga for Happy Wrists 15-min video
- Amber Burke, Yoga International, A Yoga Practice for Carpal Tunnel Syndrome link
- Amber Burke, Yoga International, Yoga for Your Hands and Wrists link
- Dianne Bondy, Hands Free Yoga Flow: Balance-Based Vinyasa Yoga Practice 11-min video

Sequence on Yoga International

Reif explains: â??A therapeutic practice for the wrists and hands will include shoulder alignment, stretching and strengthening of the upper extremities, and neural glidesâ??movements that mobilize the affected nerves.â?• In keeping with this advice, the practice below emphasizes shoulder alignment, because the three main nerves of the arms (median, ulnar, radial), which are often implicated in wrist pain, originate in the neck and shoulders. The practice includes shoulder and arm stretching and strengthening movements designed to keep the shoulders in the healthy alignment that may help to decompress nerve channels, as well as neural glides to assist the nerves in sliding freely along these channels. Those with current wrist or hand irritation may wish to do this complete practice three or four times a week. â?? **Amber Burke**

Shoulder & Upper Back Care

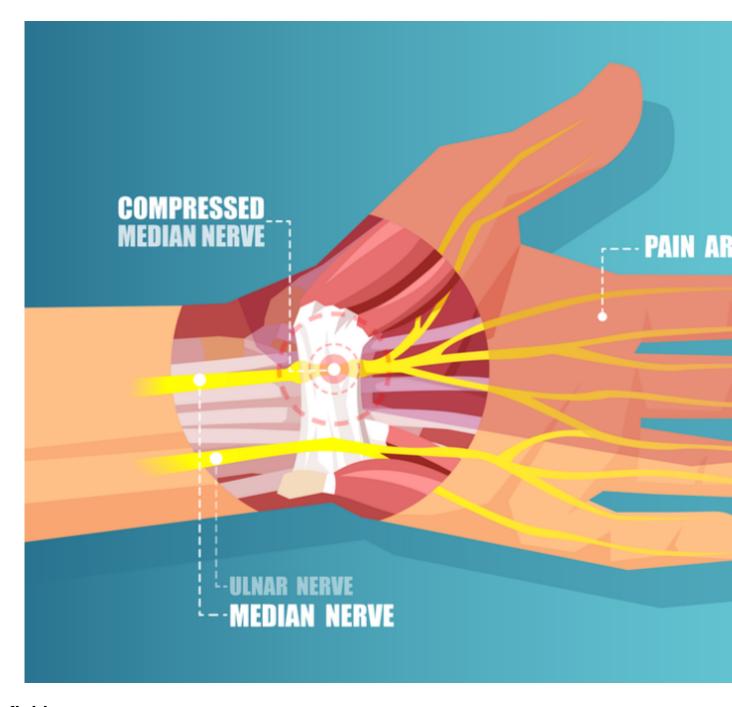




- Neck, Shoulder & Upper Back Care a?? Please see this section for yoga tools including shoulder strengtheners, chest openers, alignment tips and more.
- <u>Bhujangasana (Cobra Pose)</u> is one of your options for strengthening upper back and opening shoulders. To avoid weight on wrists, however, see <u>Prone Backbend Variations</u> or consider Marla Aptâ??s suggestion <u>here</u> for a wall version: Stand six inches from wall, fingertips at wall; lift heels, press pubic bone into wall. Then practice actions of Cobra Pose.

Carpal Tunnel Syndrome





Definition

- Carpal tunnel syndrome is the name given to symptoms caused by pressure on a particular nerve in the wrist. (See below for details.)
- The compression of this and an erveant causes tingling, numbers, and/or pain in the thumb side of the hand.

Overview: Pressure on Nerve

Carpal tunnel syndrome is a swelling of the tissues in the wrist. This swelling can occur for several different reasons, but the end result is that it puts pressure on the median nerve, a major nerve in the



hand for both movement and feeling. When the nerve is impinged in this way, it can cut off both our ability to feel sensation in the hand, and our ability to control the fingers. Initial symptoms may show up as an ache in the wrist that can extend into the hand and up the arm. This can then develop into tingling and numbness in the thumb and middle fingers, and a weakness or tendency to drop things. Excessive mouse usage can lead to carpal tunnel syndrome. However, if the sensation is accompanied by pain or pinching in other areas, it may indicate that the problem is not limited to the wrist but is actually originating deeper in the body. The median nerve is formed from branches of five nerves that originate in the neck and upper back. Because of this, the nerve can be impinged in many different areas (neck, upper back, shoulder, forearm) and all of these will produce similar symptoms in the wrist. â?? **Sarah Court**

Carpal Tunnel Syndrome Defined

How do we know the difference between carpal tunnel syndrome and other types of wrist pain in yoga? â?! Carpal tunnel syndrome refers specifically to the symptoms caused by pressure on the median nerve at the â??carpal tunnelâ?• in the wrist. The carpal tunnel is the space or â??tunnelâ?• created by several carpal bones (found at the base of the palm) and a connective tissue band that goes across the base of the palm close to the wrist. The median nerve, as well as several tendons, run through the â??tunnelâ?• created by those bones and connective tissue, into our hand. The median nerve starts as part of the brachial plexus. The brachial plexus is a bundle of nerves that starts in the neck and ultimately innervates our arm, forearm, and handâ?! If the median nerve is compressed as it passes through this anatomical tunnel, and causes tingling, numbness, and/or pain in the thumb side of the hand, you may end up with a diagnosis of carpal tunnel syndrome. **â?? David Keil**

Symptoms

- Tingling
- Numbness
- Other â??nervyâ?• sensations on the thumb and forefinger side of your hand that may travel up the forearm
- Weakness when holding or gripping things
- David Keil explains that wrist pain NOT likely to be caused from carpal tunnel syndrome includes pain on the pinky side of the hand and pain on the top crease of the wrist.

Causes

- The primary cause for carpal tunnel syndrome is overuse and repetitive movements such as typing.
- â??Repetitive use is not the only reason for carpal tunnel syndrome. It can also be a result of other systemic diseases (diabetes, hypothyroidism, lymphedema, <u>rheumatoid arthritis</u> and so on).â?• (Olga Kabel)

What Might Help

- Changing activities that are causing the tension and pain
- Physical therapy exercises



- Anti-inflammatory support
- Splinting the area to reduce pressure on the carpal tunnel during movement
- Students experiencing the acute pain of carpal tunnel syndrome are unlikely to come to class but if theyâ??re recovering after other treatments, advisements elsewhere in this lesson can help to reduce or eliminate weight-bearing on the hands and guide choice of posture modifications.
- Carpal tunnel syndrome can worsen with wrist flexion, even when non-weight bearing, so flexion may need to be minimized or avoided in cases of carpal tunnel syndrome. (Baxter Bell MD)

Yoga May Help Prevent Carpal Tunnel Syndrome

Yoga may help prevent the onset of carpal tunnel syndrome. I say this theoretically. The reason is that in yoga practice we donâ??t just use the forearm muscles in a contraction way. We also stretch them through various postures. These include poses like reverse namaste, chaturanga, plank, etc. Yoga helps us create a healthy balance between strength and flexibility in these tissues. â?? **David Keil**

See Also

- Arthritis of the Wrists & Hands
- Contraindications by Condition
- Safety & Adaptations Hub

Dupuytrenâ??s Contracture

About

- Dupuytrenâ??s contracture, also known as Vikings disease, is a thickening of the fibrous tissue layer underneath the skin of the palm and fingers. It may appear as nodules, puckering or cords on palm.
- It is due to collagen deposited in the fascia just below the skin on the palm side of the hand.
- The contracture of tissue can cause the fingers to curl (flex).
- Symptoms include painful bumps (nodules) under the skin that develop into tight bands of tissue, causing the fingers to curl.
- The most commonly affected fingers are the ring and pinkie fingers.
- The cause of Dupuytrenâ??s contracture is not known. It is not caused by an injury or heavy hand use. (Ortho Info)
- The condition is gradually progressive at variable rates with no known cure.

Treatment

• In very early stages, those with Dupuytrenâ??s contractures are encouraged to massage their palms and stretch it to help maintain and improve extension of the fingers involved, but beyond that stage, those methods have no significant impact on reversing the curl of the fingers involved. Western medical treatment options for when the contractures begin interfering with daily activities include: non-surgical options of localized radiation treatments, injection of an enzyme into the collagen bands that helps dissolve them, or surgical techniques that cut, release, or remove the collagen cords. â?? Yoga for Healthy Aging

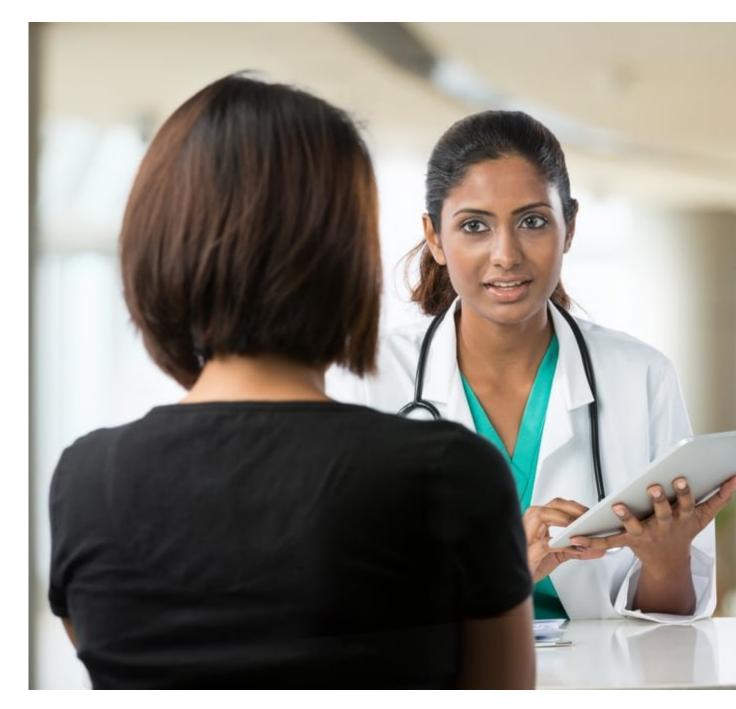


Asana

- In asana, the major impact is on practice of any poses where the hands are placed palms down on the floor or wall, such as Cat-Cow Flow and Adho Mukha Svanasana (Downward Facing Dog Pose).
- In general, the accommodations for wrist issues will be of use in considering accommodations for this condition. However, because the underlying issue is different, there are some needs and approaches for Dupuytrens that may differ. For instance, in the Yoga for Healthy Aging <u>article</u>, they describe ways of changing finger position that may be enough to resolve any issues.

Cautions: Diagnosis & Referral





- 1. As a reminder, yoga teachersâ??and even yoga therapistsâ??are not trained or licensed to diagnose injury, illness or disorder. You may wish to be very clear about this point, and to ask students if they have obtained a diagnosis.
- 2. Be prepared to refer students to an expert. Have contact information for qualified experts that you can provide, as needed. See more in When to Refer Out which includes how to respond to students, and questions for their medical provider.
- 3. Yoga is likely to be an excellent supplemental resource for students. But of course, teachers must be cautious and clear when responding to studentsâ?? individual needs so that yoga support is not construed as a diagnosis, a â??prescription,â?• or a recommendation for sole treatment

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