

Management of Post Covid Complications through Lifestyle Management, Practicing Yoga and Meditation

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ABSTRACT: The COVID-19 pandemic is still present. It has a significant impact on a lot of individuals all around the world. The COVID-19 recovery rate is excellent. The pandemic's aftereffects on survivors' physical, physiological, and mental health are still present. After COVID-19, there is a critical requirement for patient rehabilitation. This research attempts to define the importance of YOGA AND MEDITATION in recovery following COVID-19 while taking into account the post viral impact. The severe acute respiratory syndrome coronavirus (SARS-CoV-2) that causes COVID-19 mostly attacks the lung, with significant negative effects on the immune system, physical health, and mental health. The rate of coronavirus disease infection spread is accelerating daily, Yoga is help for keeping up fit by you physically as well as mentally. Reliable act of yogic breathing procedures (pranayama) expands the lung's wind stream, air limit, endurance, and productivity. Yoga could likewise be useful in working on respiratory limit alongside breathing activities in this way by and large impact of yoga preparing toward worked on pneumonic capability in patients with constant obstructive aspiratory illness.

I. INTRODUCTION-

Research into post-covid-19 syndrome is essential since long covid is still a mystery and it is not yet known how new covid-19 variants will alter the prevalence and severity of long covid. It is necessary to have a better understanding of the pathophysiology, risk factors, symptoms, and available treatments in order to lessen the burden and demand on people with long-term diseases. Post-COVID-19 syndrome, which affects 87% of hospitalised patients, has afflicted millions of COVID-19-recovered patients. After first

recovering, even mild COVID-19 people continue to have health issues.[1]

Yoga is a practise that aims to create balance between the body and mind. It is based on a very delicate science. Healthy living is a science, and an art. Yoga results in complete harmony between the mind and body, between people and the natural world, and between personal consciousness and universal consciousness. Yoga supports the development of psychological and physiological health, emotional balance, and the management of daily stress and its effects. Yoga is helpful in situations where stress is thought to be a factor. Numerous yogic techniques, including asanas, pranayama, dhyana (meditation), purification, and relaxation techniques, are believed to assist control the body's reaction to stress. Numerous randomised controlled studies have demonstrated the effectiveness of yogic practises in managing non-communicable conditions that can coexist with COVID 19 patients, such as hypertension, chronic obstructive pulmonary disease (COPD), bronchial asthma, diabetes, sleep disorders. Depression, obesity, etc. Additionally, yoga has been demonstrated to be beneficial for vulnerable groups like the elderly and young children.

In the human response to infectious disease, the immune system's functionality is crucial. Stress is a cofactor in infectious illness susceptibility and consequences, according to a growing body of research. Research on using yoga to treat flu symptoms during aflu season have yielded encouraging results. A recent randomised experiment comparing mindfulness meditation and exercise to a wait-list control group of people aged 50 and older discovered significant drops in ARI disease during the cold season. Yoga is also known to boost mucosal immunity in elderly people by

raising salivary beta Defensin-2 levels. Since they are a population that is more likely to get such infections, yoga might be helpful as a preventative approach. In older adults with asthma and COPD, yoga techniques like Kriya, Yogasana, and Pranayama have been demonstrated to lower airway reactivity. Thus, there is enough data to support further research into the claim that training in yoga and meditation can lessen weakness to ARI sickness.

The following aims are offered for yoga-based lifestyle modules that can be applied for many social groups in the modern world.

1. To increase population immunity generally.
2. Prehabilitation of patients in isolation or quarantine, whether or not they have moderate symptoms, as well as of vulnerable populations (children, the elderly, and those with comorbid diseases like diabetes and hypertension).
3. To supplement yoga-based therapies and meditation techniques in 19 Covid cases receiving hospital and isolation care for psychological support. [2]

POST COVID-19 ENTANGLEMENTS AND ITS MANAGEMENT

It is sensible to expect that 80% of the individuals who recuperated from Coronavirus of a somewhat suggestive appearance won't have durable results and will eventually improve totally. Patients with a moderately serious suggestive appearance that required hospitalization however, not counterfeit ventilation had no mid-term inconveniences. Patients with serious indicative show who need counterfeit ventilation prone to encounter long haul issues and deferred recuperation aging. Changes in the pathophysiology of SARS-CoV-2, provocative harm, and immunologic abnormalities in Coronavirus are potential pathways prompting post-COVID-19 inconveniences.

The different multiorgan framework can be impacted in extreme Coronavirus survivors [3]

- **Pneumonic circumstances and their administration after COVID-19**

Coronavirus survivors have recorded an extensive variety of pneumonic side effects, from dyspnea to confounded fibrotic lung injury and ventilator weaning [3]. The most predominant constant side effect outside intense COVID-19 is dyspnea, with 42-66 percent pervasiveness at 60-100 days follow-up, like the recuperated patients from ARDS of various etiologies.

A conditional finding of a significant radiological and indicative change in an example of COVID-19 recuperated patients shows that at post-Coronavirus, corticosteroid treatment could be successful in a subset of patients [4].

- **Hematologic circumstances and their management after COVID-19**

The pervasiveness of venous thromboembolism (VTE) was accounted for in the 5% patients recuperated from COVID-19 (Nalbandian et al., 2021). While authoritative confirmation is missing, furnished with supported essential thromboprophylaxis (as long as 45 days), delayed medical clinic release (up to a month and a half), and in those oversaw as short term patients could have a superior risk-benefit proportion in SARS-CoV-2 contamination [3]. Anticoagulation specialists like direct oral anticoagulants and low-sub-atomic weight heparin are liked in post-COVID-19 contamination. Like set off VTE, anticoagulation drugs are recommended for those with imaging-affirmed venous thromboembolism (as long as 90 days) [5]

- **Cardiovascular circumstances and their management after COVID-19**

A Chinese report revealed that 20% of COVID-19 recuperated patients at 60 days' subsequent archived chest torment while 9% and 5% of COVID-19 recuperated patients shown proceeding with palpitations and chest torment separately at a half year follow-up [3]. In those with cardiovascular issues after an intense disease or intermittent heart side effects, evaluation with electrocardiogram and echocardiogram for sequential clinical and imaging at 4-12 weeks can be thought of. Declining from serious exercises or actual activity as long as a half year prior myocarditis is settled via cardiovascular attractive reverberation imaging or troponin standardization. It is likewise suggested for sportsperson with Coronavirus related cardiovascular difficulties [6]. In people with stable cardiovascular illness, renin-angiotensin-aldosterone framework (RAAS) inhibitors are valuable and ought to be supported, notwithstanding introductory hypothetical stresses over the chance of intense COVID-19 and expanded degrees of ACE2 with their utilization [6].

All things considered, suddenly halting RAAS inhibitors might be risky. Low-dose beta-blockers can assist patients with directing their pulses and lessen adrenergic

movement. The utilization of drugs in patients like enemy of arrhythmic specialists (like amiodarone) with fibrotic respiratory changes following COVID-19 needs exceptional consideration.

- **Neuropsychiatric circumstances and their management after COVID-19**

Coronavirus survivors have archived intermittent discomfort, diffuse myalgia, rest unsettling influence, and burdensome side effects [3,7]. Headache like migraines and late-beginning cerebral pains connected to raised cytokine levels are other COVID-19 post-intense appearances. A clinical report detailed around 10% of patients, having loss of taste and smell with repetitive migraine. Almost 30-40% of patients announced clinically serious sadness and nervousness. For neurologic circumstances for example, headache, standard medicines might be utilized with the conference of a doctor. In patients with mental brokenness, a neuropsychological evaluation ought to be viewed as in the post-intense infection climate.

- **Renal circumstances and their management after COVID-19**

Outrageous intense kidney injury (AKI) influences 5-6% of generally hospitalized patients with up to 30% of fundamentally COVID-19 patients which requesting renal substitution treatment (RRT), especially those with extreme diseases requiring mechanical ventilation [8]. Albeit the pervasiveness of dialysis-subordinate AKI at release is poor, the level of renal capability improvement isn't surfaced. Accordingly, COVID-19 recuperated patients with diligently compromised renal capability in the post-COVID-19 irresistible cycle can profit from nephrologists in AKI survivor facilities, which has been connected to improved results before.

- **Endocrine circumstances and their management after COVID-19**

Patients without diabetes mellitus have created diabetic ketoacidosis, weeks to months after the COVID-19 signs have settled. Coronavirus can likewise compound immune system thyroid sicknesses, like Hashimoto's thyroiditis or Graves' illness [9]. In patients with as of late analyzed diabetes mellitus who don't have regular risk factors for type 2 diabetes, serologic tests for type 1 diabetes related autoantibodies and rehash post-prandial C-peptide examinations sought to be finished at follow-up, while dealing with patients is

proper with such risk factors as though they had ketosis-inclined type 2 diabetes. Corticosteroids can be utilized to control hyperthyroidism brought about by SARS-CoV-2-related troublesome thyroiditis.

- **Gastrointestinal and hepatobiliary conditions and their management**

After COVID-19 Coronavirus can change the stomach microbiota, leaning toward crafty irresistible specialists subsequently lessening helpful commensals [10]. The stomach microbiota's ability to impact the movement of respiratory diseases (stomach lung pivot) has recently been perceived in flu and other respiratory diseases. *Faecalibacterium prausnitzii*, a butyrate-delivering anaerobe related with great wellbeing, was demonstrated to be contrarily connected to sickness seriousness in COVID-19. In any case, clinical exploration is continuing in regards to post-COVID-19 consequences for gastrointestinal what's more, hepatobiliary frameworks [3].

- **Dermatologic circumstances and their management after COVID-19**

Dermatic indications of COVID-19 arose later (64%) or simultaneously with (15%) other post-COVID-19 side effects in an around the world test of 716 people with COVID-19, with an expected deferral of 7.9 days in grown-ups from the beginning of upper respiratory side effects to dermatologic results. In the Chinese preliminary of recuperated COVID-19 patients, just 3% of patients show skin rash following a half year. Balding was the most normal dermatologic protest, with around 20% of patients detailing it. Going bald can be brought about by telogen emanation, which is brought about by a viral disease or a pressure factor. In any case, clinical review is going around the world concerning impacts of post-COVID-19 on dermatologic circumstances [3,11].

- **Optional contaminations related with post-COVID-19**

The executives *Mucormycosis*, otherwise called *zygomycosis* or *phycomycosis*, is an interesting furthermore, dangerous parasitic sickness that principally influences individuals who have a compromised safe framework [12]. As indicated by the study, 8% of auxiliary bacterial or parasitic contaminations were created among COVID-19 patients or recuperated COVID-19 patients while in the clinic, notwithstanding broad

use of steroids and anti-toxins [13]. The utilization of a great deal of steroids and expansive spectrum antibiotics to treat COVID-19 could incite or deteriorate parasitic disease [14]. In an investigation of 135 COVID-19 tainted patients, a 26.7 percent rate of obstructive parasitic diseases. When the conclusion is laid out, careful debridement of the fungal infected locale ought to be embraced earnestly. A concentrated careful technique in mucormycosis has an extraordinary achievement rate. To start, amphotericin-B deoxycholate is the antifungal treatment of decision, with liposomal definitions leaned toward because of lower nephrotoxicity. Posaconazole is a reasonable option in contrast to amphotericin treatment in conditions at the point when it is stubborn or bigoted [14].

- **Different provocative disorders**

MIS-C is characterized by the accompanying disorders like different organ brokenness, fever, looseness of the bowels, spewing, dermatological issues like rashes, expanded provocative markers with neurological, and cardiovascular entanglements which might occur in youngsters with - post-COVID-19 disease [15]. Metanalysis investigation of youngsters with MIS-C revealed an endurance pace of 91.1% and a death pace of 3.5%. Current treatment of MIS-C incorporates immunoglobulin I.V., steady glucocorticoids, and a low measurement of headache medicine [3]

BREATHING PROBLEM WITH HEALTH WORKERS (AFTER COVID) AND IT'S MANAGEMENT

Many health workers are suffering from breathing problems after covid

Subsequent to recuperating from the underlying contamination, certain individuals keep on encountering COVID-19 side effects for weeks or months. This is called long COVID, and it might include shortening of breath (windedness)

Many health workers who tested positive for the disease had side effects following 5 weeks, it may longer for 12 weeks or more. or, the side effects might most recent a half year or longer.

The lengthy impacts of long COVID are as yet hazy, and progressing observing, with exams and blood tests, is critical.

Specialists might prescribe medicines and treatments to decrease the side effects. This might incorporate aspiratory restoration and breathing activities.

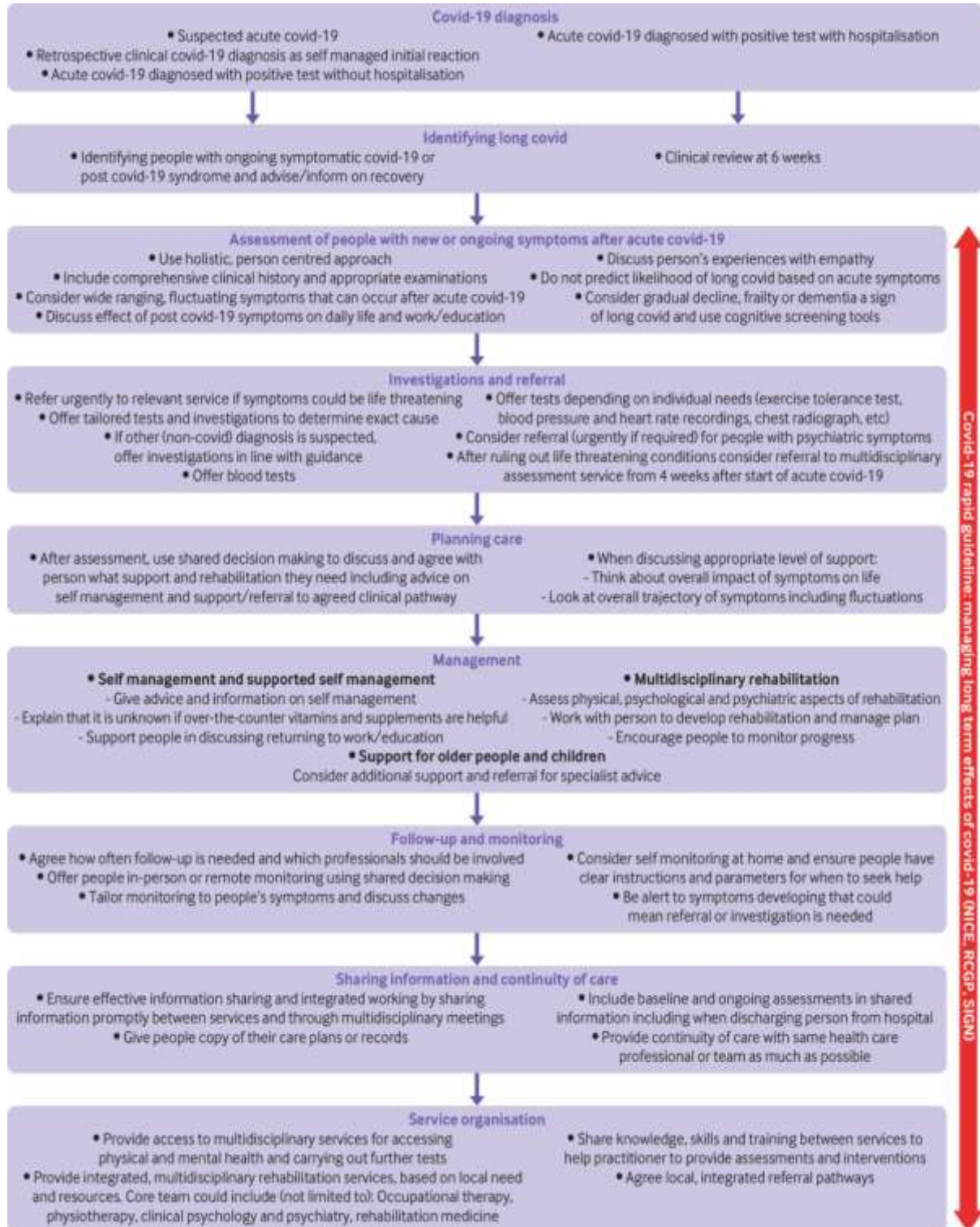
Coronavirus isn't the main source of windedness.

Different issues that might cause this and comparable side effects include:

- focused energy exercises
- elevated degrees of stress or tension
- asthma, persistent obstructive pneumonic illness, or one more kind of lung infection
- different diseases, like a cold or influenza

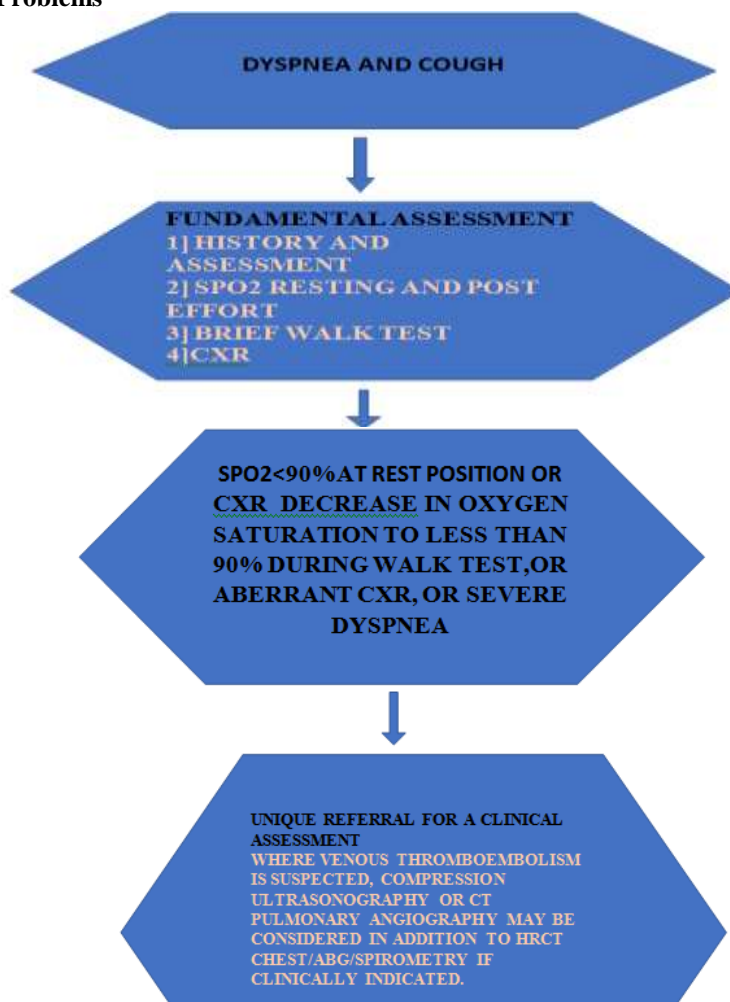
The infection liable for COVID-19 can contaminate the lungs, causing windedness and different side effects. Windedness can be gentle, requiring home consideration, or extreme, requiring treatment in a clinic. In the event that this side effect is significant or unexpectedly deteriorates, look for clinical consideration immediately.

THE LONG TERM EFFECTS OF COVID-19



[<https://www.bmj.com/content/374/bmj.n1648>]

A Suggested Formula Or Calculation For Evaluating Patients Who Exhibit Signs Of Post-Covid Respiratory Problems




YOGA ASANA AND PRANAYAMA AFTER RECOVERY FROM CORONAVIRUS: AN EXERCISE REGIMEN FOR POST-COVID-19 CARE

Techniques (postures)	Name of Asana
Warm up Asana	Neck Movement-Up/Down And Round (clock wise anti clock wise) Shoulder's Movement-Round Trunk Movement-Round Knee Movement-Round
Standing Asana	Tadasana Pada-hastasana ArdhaChakrasana Trikonasana
Sitting Asana	ArdhaUshtraasana Sasakasana UtthanaMandukasana Simhasana Marjariasana

	UrdhvaHastottanasana Vakrasana
Lying Asana	Makarasana Bhujangasana Setubandhasana Utthanapadasana Pawana Muktasana Markatasana Shavasana
Breathing Techniques	Vaataneti Kapalabhati Anulomvilom Bhastrika pranayama deep breathing
Pranayama techniques	Nadishodhana Ujjaayee Bhramari
Meditation	Dhyaan Om mantra

Standing postures अचल आसन
TRIKONASANA, TADASANA, URDHVA HASTASANA, PADAHASTASANA, CHAKRASANA
 त्रिकोणासन, ताडासन, ऊर्ध्व हस्तासन, पादहस्तासन, चक्रासन

Trikonasana त्रिकोणासन



1. Stand erect with the feet wide apart. Point the left foot to the left and right foot slightly to the left. Stretch the left arm out at the shoulder level and stretch the right arm straight up, holding it against the right ear.

2. Exhaling, bend to the left and slightly forward to bypass the ribs. Slide the left hand down the left leg, reaching out to the lowest region. Breathe normally. Return slowly to the position in step number 1.

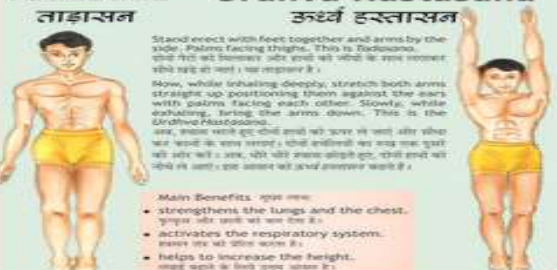
3. Repeat, bending over to the right. The right leg stays straight up, holding it against the right ear.

Main Benefits:

- relieves pain in the neck and shoulder joints.
- exercises the spinal cord, the hips, the thighs and the arms.
- develops the mental power.
- beneficial to the eyes.

Tadasana Urdhva Hastasana

ताडासन ऊर्ध्व हस्तासन




Tadasana: Stand erect with feet together and arms by the side. Palms facing thighs. This is Tadasana.

Urdhva Hastasana: Now, while inhaling deeply, stretch both arms straight up, positioning them against the ears with palms facing each other. Slowly, while exhaling, bring the arms down. This is the Urdhva Hastasana.

Main Benefits:

- strengthens the lungs and the chest.
- activates the respiratory system.
- helps to increase the height.

Padahastasana पदहस्तासन




1. Stand with the feet together. Exhale. Breathe in. Inhaling, raise the arms above the head against the ears. Slowly, while exhaling, return back slowly.

2. Exhaling, bend forward from the pelvis. Keep the knees and spine straight. Clasp the toes with the thumbs and index fingers. Pull the head in slowly towards the shins. Hold. Now, inhaling, return back slowly.

Main Benefits:

- removes excessive fat.
- stretches the ligaments of the legs.
- increases elasticity and rejuvenates the entire spine.
- adds the flow of blood to the brain.

Chakrasana चक्रासन



1. Lie down on the floor and bend your knees. Bring the feet in to your buttocks. Bend the arms at the elbows and place them on the ground on either side of the head with fingers pointing towards the feet.

2. Inhaling, lift up your hips. Pressing down on your hands, place the top of the head on the floor. Rest lightly.

3. Exhaling, push down on your hands. Pushing down on your hands, place the top of the head on the floor. Rest lightly.








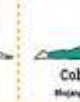





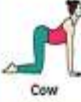


















Main Benefits:

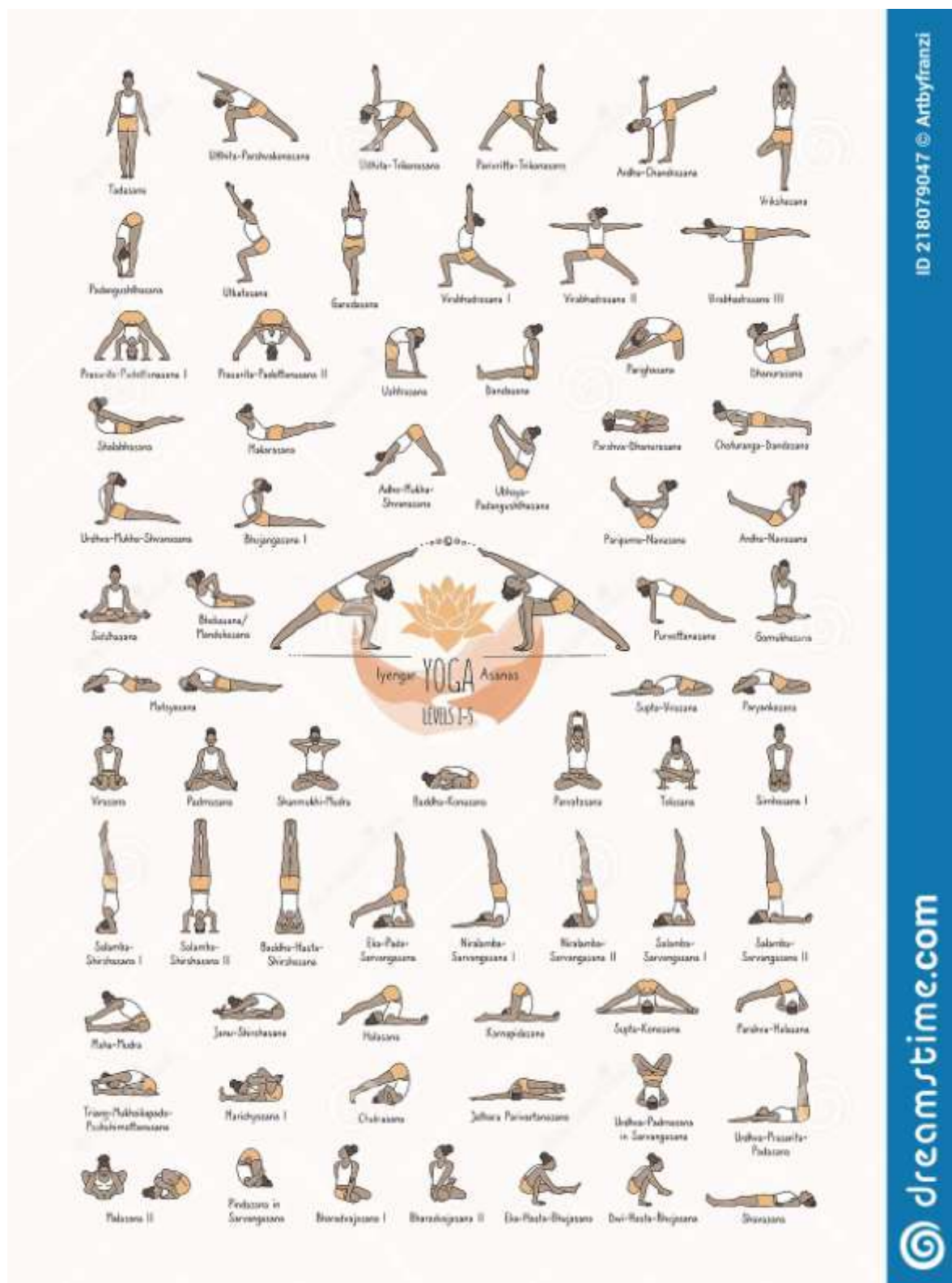
- spine becomes quite elastic.
- strengthens the muscles of the legs, the thighs and the arms.
- keeps the body, especially the chest and neck, in good shape.

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<http://www.vcpmaps.com/trikonasana-tadasana-urdhva-hastana-padhastana-chakrasana-chart-1807355.html>

SPORTAXIS **YOGA ASANAS**

Seated Poses															
	Easy Sukshma	Lotus Padmasana	Firelog Agnisambhavana	Hero Virasana	Garland Vanikasana	Cow face Gomukhasana	Butterfly BaddhaPadmasana	Scale Tilkasana							
	Standing Poses														
		Tree Vrikshasana	Goddess Uttara Kumbhira	Back Bend Hasta Uthanasana	Eagle Garudasana	Warrior-I Virabhadrasana I	Warrior-II Virabhadrasana II	Warrior-III Virabhadrasana III	Dancer Natarajanasana						
		Spine Mobility													
			Sphinx Salamba Bhujangasana	Cobra Bhujangasana	Upward Dog Urdhva Dhanurasana	Downward Dog Adho Mukha Svanasana	Extended Puppy Uttara Shishirasan	Bridge Setu Bandha Sarvangasana	Locust Salabhasana	Spinal Twist Ardha Matsyendrasana	Easy Twist Parivrtta Sthirasana	Thread the Needle Parsva Sthirasana	Fish Matsyenasana	Bow Dhanurasana	
															
			Cow Balsana	Cat Bhujangasana	Camel Ushtrasana	Wheel Chakrasana	Dolphin Gomukhasana	Forward Fold Uttanasana	Chaturanga Chaturanga Dandasana	Dolphin Plank Bhujangasana II	Seated Fold Paschimotthasana	Flow Vrikshasana	High Plank Phalakasana	Bird Dog Dandayama Bharangasana	
Core															
			Upward Plank Parvatasana	Boat Navasana	Side Plank Vasisthasana	Happy Baby Ananda Balasana	Heron Kranthasana	Marichyasana-I Marichyasana I	Lizard Uttara Bhujangasana	Pigeon Ardha Kapotasana	One Leg Pigeon Eka Pada Kapotasana	Sleeping Swan Suptasana II	Half Frog Ardha Bhujangasana	Reclining Twist Supta Matsyendrasana	
	Hip Openers														
			Butterfly - II BaddhaPadmasana II	Frog Mandukasana	Forward fold-II Paschimotthasana II	Chair Twist Sardula Uthanasana	Seated Straddle Upavista Konasana	Monkey Munshasana	Butterfly - II BaddhaPadmasana II	One leg Forward Fold Eka Pada Sthirasana	Seated Forward Fold Paschimotthasana	Reclining Butterfly Supta BaddhaPadmasana	Saddle Supta Virasana	Corpse Savasana	
			Stretches												
				Staff Dandana	One leg Forward Fold Eka Pada Sthirasana	Seated Forward Fold Paschimotthasana	Reclining Butterfly Supta BaddhaPadmasana	Saddle Supta Virasana	Corpse Savasana						



II. CONCLUSION:

Aasana (postures) and pranayam (breathing examples) in view of yoga has been framed as powerful strategy for practices for post Coronavirus recovery. An example practice plan in this light has likewise been introduced. The psycho-social care and rehabilitation of COVID-19 patients under quarantine and isolation may benefit greatly from yoga. They are very helpful in reducing their anxieties and phobias. Designing brief and comprehensive exercise programmes will be essential given the enormous number of persons afflicted by COVID and the current paucity of scientific evidence. Yogic asanas and pranayama have long been known to be successful in this regard and are the world's solution for all physical exercise and psychological rehabilitation needs.

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