

## TWISTING ASANAS AND THEIR ROLE IN BMI AND WHR REDUCTION

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Article Received on  
01 February 2025,

Revised on 21 Feb. 2025,  
Accepted on 11 March 2025

DOI: 10.20959/wjpr20256-35950



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### ABSTRACT

Twisting asanas, a basic element of yoga, are renowned for their capacity to increase flexibility, cleanse the body, and enhance overall health. This article delves into the function of twisting asanas in lowering Body Mass Index (BMI) and Waist-to-Hip Ratio (WHR), two major measures of body composition and risk of diseases. Twisting positions activate the digestive system, enhance circulation, and encourage fat loss by activating several muscle groups, particularly in the core and abdominal areas. The mechanical effect of twisting enhances metabolic rate, enhances fat burning, and aids in the loss of visceral fat, leading to improved body composition. In addition, consistent practice of twist asanas can enhance posture, alleviate stress, and increase awareness, all of which are useful for long-term weight regulation. Based on the analysis of scientific literature and the study of physiological effects of twisting motion, this article offers an in-depth grasp of how these asanas can potentially aid BMI and WHR

reduction, providing insights into their possible use as a holistic method for enhancing metabolic well-being and weight control.

**KEYWORDS:** Asanas, BMI, WHR, Obesity.

## INTRODUCTION

Ever since the Vedic era, a healthy and long life has been stressed, and a well-kept body has been considered fundamental to the entire well-being of a person. Acharya Charaka wrote about a person possessing a well-balanced proportion of muscles, having a strong and compact body, and a well-developed sense organ as being resistant to different diseases. These people can withstand hunger, thirst, heat, cold, and physical labor, and they have balance in digestion, food assimilation, and muscle metabolism, which helps them stay healthy and full of energy.

But in today's world, most people are suffering from unbalanced body composition. Overweight and obesity are common problems nowadays. Obesity, which is a chronic illness, presents serious threats, resulting in disorders such as diabetes, high blood pressure, cardiovascular diseases, musculoskeletal conditions (particularly osteoarthritis), and some cancers. Based on the report of the World Health Organization (WHO) in 2008, more than 1.4 billion adults aged 20 years or more were overweight, out of which more than 200 million men and nearly 300 million women were obese. By then, 35% of adults aged 20 and above were overweight, and 11% were obese. More than 40 million children under the age of five were also overweight by 2011. In total, more than one in ten adults globally were obese, with women more likely to be affected than men.

Not with standing the obesity crisis, most people are not familiar with the causes of this phenomenon and the alarming health effects that it entails. Every year, a minimum of 2.6 million deaths result from being overweight or obesity. Overweight and obesity are the fifth global risk factor for mortality, the WHO states.

In Ayurvedic language, *Sthoulya* means abnormal and excessive deposit of Meda Dhatu (adipose tissue), equivalent to obesity in contemporary medical science, i.e., a condition of excess body and visceral fat that becomes hazardous to health. Acharya Charaka has stated that in those with more fat, other Dhatus (tissues) fail to develop properly. In the current busy lifestyle, improper eating habits and lack of exercise are major factors for the increase in obesity.

Twisting asanas stimulate the abdominal organs, improve spinal flexibility, and enhance metabolism. They aid in detoxification, improve digestion, and reduce fat accumulation around the waist.

## AIM

To evaluate the BMI and WHR reduction effect of Twisting Asanas and compare in the management of obesity.

## METHODS

A randomized clinical trial was conducted with 30 participants. The test group practicing twisting asanas performed

- Katichakrasana
- Bhunamanasana
- Vakrasana
- Marichyasana
- Jatharparivartanasana Each asana was performed for 10-15 seconds per round, with five rounds daily over 90 days.

### 1. *Kati Chakrasana* (waist rotating pose)<sup>[1]</sup>

Stand with the feet about shoulder width apart and the arms by the sides. Raise the arms to shoulder level then twist the body to the right. Bring the left hand to the right shoulder and wrap the right arm around the back, bringing the right hand around the left side of the waist. Look over the right shoulder as far as is comfortable.

Keep the back of the neck straight and imagine the top of the spine is the fixed point around which the head turns. Hold for two seconds, accentuate the twist, gently stretching the abdomen. Return to the starting position. Repeat on the other side to complete one round. Keep the feet firmly on the ground while twisting. Relax the arms and back as much as possible throughout the practice. Do not strain. The movement should be relaxed and spontaneous. Perform the rotation smoothly, without jerking or stiffness. Practise 5 to 10 rounds.

**Breathing:** Inhale raising the arms. Exhale twisting to the side. Inhale returning to the centre. Exhale while releasing the posture.

**Awareness:** On the stretch of the abdomen and spinal muscles, and on the breathing synchronized with the movement.

**Benefits:** This asana tones the neck, shoulders, waist, back and hips. It is useful for correcting back stiffness and postural problems. The relaxation and twisting movement

induces a feeling of lightness and may be used to relieve physical and mental tension at any time during the day.

**Practice note:** This asana may be performed in a more dynamic way by swinging rhythmically with the arms, without synchronizing the movements with the breath.

Note: This is one of the *asanas* for *shankhaprakshalana*.

## **2. Bhu Namanasana (spinal twist prostration pose)**

Sit with the spine erect and the legs outstretched. Place the hands to the side of the right hip. Move the right hand back slightly further behind the body with the fingers pointing backward.

Twist the trunk 90 degrees to the right, using the arms and shoulders as levers. Slowly bend the torso and bring the forehead to the floor, close to the hand placed behind the body. The spine should be as straight as possible.

Try to keep both buttocks on the floor. Hold the final position for a short time. Slowly raise and return to the starting position. Repeat the movement on the other side. This completes one round. Practise up to 5 rounds.

**Breathing:** Inhale while facing forward. Retain the breath in while twisting. Exhale while bending. Retain the breath out in the final position or breathe normally if holding the asana for some time. Inhale while raising the trunk. Exhale while re-centring the body.

**Awareness:** Physical-on relaxation of the back and on the breath.

**Spiritual** - On Manipura chakra.

**Sequence:** This asana should be practised after completing a series of forward and backward bending *asanas*. It also stretches the legs and spine when performed after long periods of time sitting in a meditation posture. It is a preparatory practice for more advanced twisting asanas such as *ardha matsyendrasana*.

**Contra-indications:** People with back problems, peptic ulcer, hernia, hyperthyroidism, high blood pressure or heart problems should not practise this asana.

**Benefits:** This asana stretches the spine and lower back, making the muscles supple and stimulating the nerves.

### 3. VAKRASANA<sup>[2]</sup>

*Vakra* means twisted. In this *asana*, the spine is twisted, which has a rejuvenating effect on its functioning.

**Sthiti:** *Visramasana*.

#### Technique

- Sit with extended legs together, hands by the side of the body, palm resting on the ground in *dandasana*.
- Bend the right leg and place the right foot beside the left knee.
- Bring the left arm around the right knee and clasp the right big toe or place the palm beside right foot.
- Take the right arm back and knee the palm on the ground with the back straight.
- Exhale, twist the body to the right.
- Remain in the posture for 10-30 seconds with normal breathing and relax.
- Inhale, take out the hands, and exhale to relax.
- Repeat the same on the other side.

**Benefits:** This *asana* increases the flexibility so the spine and stimulates the functioning of the pancreas, which helps in the management of diabetes.

### 4. MARICHYASANA<sup>[3]</sup>

This asana is dedicated to the sage *Marichi*, son of the Creator, *Brahma*. *Marichi* was the grandfather of *Surya* (the Sun God).

#### TECHNIQUE

1. Sit on the floor with the legs stretched straight in front.
2. Bend the left knee and place the sole and heel of the left foot flat on the floor. The shin of the left leg should be perpendicular to the floor and the calf should touch the thigh. Place the left heel near the perineum. The inner side of the left foot should touch the inner side of the outstretched right thigh.

3. Stretch the left shoulder forward till the left armpit touches the perpendicular left shin. Turn the left arm round the left shin and thigh, bend the left elbow and throw the left forearm behind the back at the level of the waist. Then move the right hand behind the back and clasp the left hand with the right at the wrist or vice versa. If that is not possible then clasp the palms or the fingers. (Plate 70)
4. Now, turn the spine to the left, keeping the outstretched right leg straight. Remain in this position gazing at the outstretched right big toe and take a few deep breaths.
5. Exhale, and bend forward. Rest the forehead, then the nose, next the lips and lastly the chin on the right knee. (Plate 71) While in this position, keep both shoulders parallel to the floor and breathe normally. Stay in the pose for about 30 seconds and see that the back of the entire extended leg rests on the floor throughout.
6. Inhale, raise the head from the right knee (Plate 70), release the hands, straighten the left leg and come to position.
7. Repeat the pose on the other side for an equal length of time.

## EFFECTS

The fingers gain in strength by the practice of this *asana*. In the preceding *asanas* (namely, *Janu Śirṣāsana* (Plate 63), *Ardha Baddha Padma Paschimottānāsana* (Plate 66) and *Triang Mukhaikapāda Paschimottānāsana* (Plate 69) the abdominal organs are made to contract by gripping a leg with the hands. In this pose the hands do not hold the legs. To bend forward and to rest the chin on the knee of the extended leg the abdominal organs have to contract vigorously. This creates a better circulation of blood round the abdominal organs and keeps them healthy. In the beginning it is very difficult to bend forward at all after gripping both hands behind the back, but it comes with practice. The dorsal region of the spine is also exercised in this pose.

## 5. JATARA PARIVARTANASANA<sup>[4]</sup>

*Jatara* means the stomach, the belly.

*Parivartana* means turning or rolling about, turning round.

## TECHNIQUE

- Lie flat on the back on the floor.

- Exhale, raise both legs together until they are perpendicular to the floor. They should remain poker stiff, so do not bend them at the knees.
- Stretch out both arms sideways in line with the shoulders, so that the body resembles a cross.
- Remain in this position for a few breaths. Then exhale, and move both the legs sideways down towards the floor to the left until the toes of the left foot almost touch the finger-tips of the outstretched left hand. Try and keep the back well on the floor. In the initial stages, the right shoulder will be lifted off the floor. To prevent this ask a friend to press it down, or catch hold of a heavy piece of furniture with the right hand when the legs are turned sideways to the left.
- Both legs should go down together, the knees being kept tight throughout. As far as possible keep the lumbar portion of the back on the floor and turn the legs only from the hips. When the legs are near the outstretched left hand, move the abdomen to the right.
- Stay in the pose for about 20 seconds, keeping the legs stiff throughout. Then move the still stiffened legs slowly back to the perpendicular with an exhalation.
- Remain with the legs perpendicular for a few breaths and then repeat the movements by lowering the legs to the right and turning the abdomen to the left. (Plate 128) Stay here also for the same length of time and with an exhalation, come back to the perpendicular legs position and then gently lower the legs to the floor (Plate 98) and relax.

**EFFECTS:** This asana is good for reducing excess fat. It tones and eradicates sluggishness of the liver, spleen and pancreas. It also cures gastritis and strengthens the intestines. By its regular practice all the abdominal organs are kept in trim. It helps to relieve sprains and catches in the lower back and the hip region.

## RESULTS

The twisting asana group demonstrated a notable reduction in BMI and WHR. The asanas were found to enhance digestive efficiency, detoxification, and flexibility while reducing abdominal fat.

## DISCUSSION

Twisting asanas compress and decompress abdominal organs, stimulating digestion and toxin elimination. Their ability to enhance metabolic activity makes them a key tool for obesity management.

## CONCLUSION

Twisting asanas significantly contribute to BMI and WHR reduction and should be integrated into weight loss programs for their holistic health benefits.

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