

Iyengar-Yoga for Scoliosis

by Helen Barsby

„Yoga teaches us to cure what need not be endured and endure what cannot be cured.“

*B.K.S. Iyengar**

Yoga for scoliosis is not about healing a scoliosis, it is about creating and maintaining the highest possible quality of life. This means freedom in movement, freedom from pain, freedom to breathe, and freedom from the discomforts of misalignment. With hard work improved posture can be achieved and this can be maintained only through regular practice.

My story

I came to Iyengar Yoga in my early twenties, specifically looking for a practice, which would help sustain me and my active lifestyle as a professional musician, as well as keep my strong scoliosis, which had appeared in my early teenage years, in check. The progression to a 45° Cobb angle, (the critical angle where surgical intervention is proposed) had been monitored in hospital over several years until I was seventeen and then left to its own devices until I decided a couple of years later to become proactive.

(At seventeen I had refused the option of wearing a brace, or of having an operation to permanently straighten the spine).

In the early 1990's after a guest workshop in Detmold by senior teacher Clé Souren (with whom I later did my teacher-training in Amsterdam), the flame for Iyengar Yoga was truly lit. I realized that I had indeed found something profound: an artform combined with effective tools for health. This built on my already longstanding interest in eastern thought and philosophy.

My having a scoliosis did not deter me. Clé told me that it would not hinder me from receiving my teacher qualifications, due to the fact that understanding and teaching yoga goes far beyond producing perfect asana. I knew that I searched for a practice for the alignment and the health of my spine, and instinctively realized that I had found it here. After working with Stefanie Quirk in the medical class in Pune, her recommendation was to turn to Marcia Monroe in New York as my next teacher for scoliosis. I invited Marcia and hosted seven workshops in Berlin from 2016-2022 where she generously shared her knowledge with

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us. Her teaching and methodology are the basis of my practice and understanding.

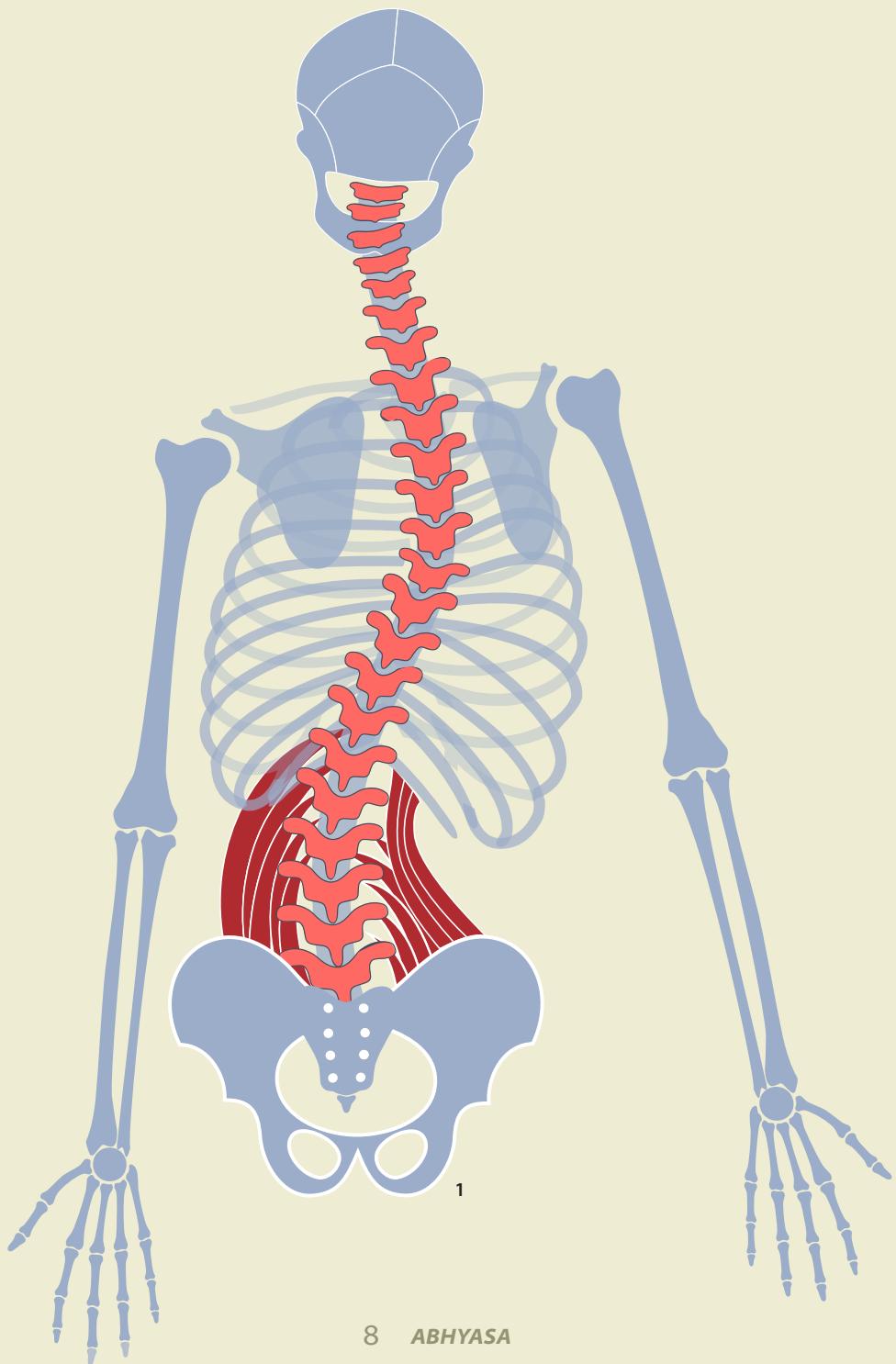
About scoliosis

Scoliosis (Ancient Greek) - a bent spine

The term scoliosis was introduced by Hippocrates the Greek physician (often called the father of modern medicine) in the 5th Century BC to describe the lateral deviation of the spine. Around 3% of the world's population has scoliosis. One common deviation from the center line, is the appearance of a side shift of the thoracic spine to the right (figure 1). The body, in order to maintain a balance reacts producing other curves to the left above and below this main curve. Why does this occur? Why most commonly in adolescent females? In addition to the side shift off-center there is a rotational action pushing the scoliosis. The ribs in the right chest are then pushed not only outwards but also backwards. This is the easily visible hump which can be seen when bending forwards, as in the Adams test used by pediatricians. The other deviation, often seen later with aging, is the side shift of the pelvis, where the major curve of the spine occurs in the lumbar spine. Scoliosis can be passed on genetically, or is perhaps caused by the blockage of cerebrospinal fluid flow during fetal growth. It often occurs during adolescence where the rapidly growing body grows out of kilt, and it can also arise as the result of incorrect posture, be caused by an accident, by one-sided occupations, or from deviations in leg-length.

When scoliosis becomes evident it is always better to intervene immediately. Especially in adolescents who still have soft and growing skeletons, there is the chance to reduce the curves of the scoliosis. With adults, the approach is more conservative, we work to counter any further scoliotic progression. If scoliosis is not addressed, then the problems we experience later will be more severe. In young people the body can handle the strains of asymmetry more easily. Later however, the effects of scoliosis (uneven weight distribution for example) can take their toll on neighboring joints, such as the hips, knees and sacroiliac joints. In the worst-case scenario the vital organs (heart and lungs) can be compromised.

Scoliosis is a disturbance in the balance of the spine, and similar to the klesas (afflictions) it can bother us in a mild, medium or extreme way. It is something which we carry with us in all phases of life. It is something we need to address, it afflicts us a lot or a little, and we can work on it with various degrees of intensity. There are times where yoga practice needs to be very sensitive towards imbalance, and its various degrees of discomfort, manifesting in pain, tension, stiffness or collapse. This requires a more conservative practice, using more props, or intermediate stages of asanas. There are other times when we can practice like everyone else, totally open to going deeper into our asana practice. We can work hard on physical level to redress the curves of our scoliosis, and even transcend the cycles of suffering caused by it.



Yoga Practice with scoliosis

How do I practise alignment when I know that I am crooked? Patanjali gives us the answer: II.33 *vitarkabadhane pratipaksabhavam*, culturing the practice of the opposite.

Marcia Monroe taught that this sutra is the most pertinent one for practicing yoga with scoliosis. No matter in what position we are in, the scoliosis wants to push and pull the body out of straightness into its curves (in all three dimensions) and our attention needs to be always on cultivating the awareness of this tendency, and actively working against it.

Proprioception: feeling the scoliosis

Often, we are unsure about our scoliosis, especially when its curves are subtle. We know that we are crooked, but in many poses it's hard to understand exactly where. Therefore, we need to spend more time on proprioception (feeling the body and the awareness of the body in space) before we can know what and where to correct. We need to sense the body and its deviations, through feedback from the outer world. This begins using physical props such as the floor, the wall, chairs, stools, blocks, blankets, belts and small pads. Using a mirror can be a visual aid, as can internal awareness of the space within, using the touch of the breath, the contact of the skin to our clothing. Sensitivity towards tension, both hyper- and hypo are important keys, as well as having the knowledge of difference in size, strength and muscle tone

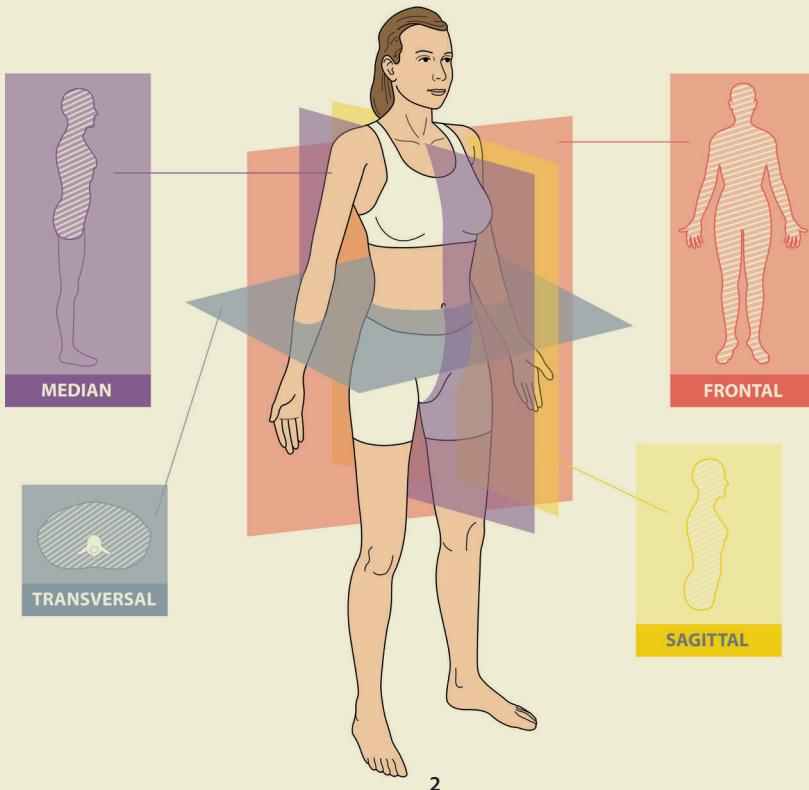
between the muscles of the left and right sides. Studying the shape of our feet, and feedback (pain/tension) in the hips, knees, ankles, feet, shoulders and elbows can help us understand where the stress of imbalance manifests itself.

In yoga working with scoliosis it is a good idea to regularly spend time lying on the floor in prone, side and supine positions. More contact with the floor invites the body to relax and gives valuable feedback about the extra curves (and the resulting valleys and mountains) and generally about the balance between the left and the right sides. Is there torsion in the pelvis, in the shoulders, are the head and neck tilting? Is there a complete lack of midline from the feet to the crown of the head? Is there a front to back weakness, whereby the spine is in too much lordosis/kyphosis, or the opposite: a too straight segment? Is there a difference in the freedom and degree of rotation of a leg or an arm? Do they have restricted movement due to the position of the hips and shoulders?

Methodology for working against Scoliosis as taught by Marcia Monroe

Scoliosis is a three-dimensional diversion from the norm. In order to really correct this, we need to work on all anatomical planes (figure 2).

When working concretely against the forces of scoliosis it is helpful to work systematically through all planes using these four steps (figure 3):



1. Extension (Sagittal Plane)
2. Translation /side-shift (Medial Plane)
3. Flattening mountains /filling valleys (Frontal Plane)
4. Derotation (Transverse Plane)

Marcia began her sessions working with these steps in very simple symmetrical poses such as *Supta Tadasana*, *Ardha Uttanasana* or *Adhomukha Virasana*. After the whole system (the limbs, the spine, the

inner and outer curves) starts to extend, then step two (translation) can come in. Locating exactly where the sideways collapse occurs, we side-shift those parts into the already extended body. The breath tells us where the mountains and valleys thrive for step three which requires new landscaping; flattening all extra curves, bringing life into collapsed areas, and quietening (often softening) the humps, which are areas with high tension. The final step of derotation is intertwined

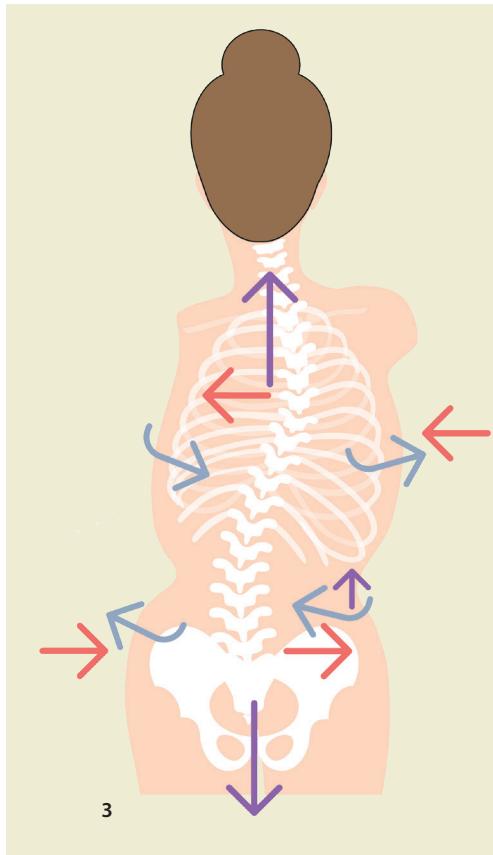
with the correction of the mountains and valleys, because these always occur together in conjunction with the curves: towards the back in the outside of a curve, and towards the front on the inner side.

1. Extension in the Sagittal Plane

The sagittal plane is where extension and flexion occur, is a good place to start. Lengthening the torso and the limbs immediately relieves the body from the tendency to collapse, creates space between the vertebrae, and length in the lungs. It releases, vitalizes, opens, stabilizes and lengthens the system. As if a corset is placed to the left and to the right, the body centers, moves towards the center-line, which strengthens at the core. (Asanas: *Tadasana, Urdhva Hastasana, Adhomukha Svanasana*). If the body is weak, or suffering from stiffness, passive poses such as, *Adhomukha Virasana, Uttanasana* in the ropes, or prone *Savasana* are often the best starting point.

2) Translation/Sideshift to the Medial Plane

In the sagittal plane the scoliosis still wants to pull the body to the right and to the left, towards the lateral curves. With attention we practice sensing the uneven tension in the straightened arms and legs, and can even move the bones sideways within the limbs. In one shoulder and in one hip there will be the tendency for the head of the femur/humerus to move outwards, pulling the body outwards. We can seek to redress this, using subtle internal movements, actively taking the bone away from its fle-



sh at the outer body. Guruji said that we should learn to move the bones like muscles. It's via the head of the femur that we can adjust the pelvis, and via the head of the upper arms that we can adjust the shoulders. One very effective pose to translate the thoracic spine is the intermediate stage of *Anatansana* where we try to vertically raise the sections of the spinal curve which want to collapse towards the floor. The top arm stretching vertically to the ceiling has

access to the breastbone, which is connected to the ribs, which then finally reach the vertebrae at the rear. In *Vasishthasana* (variation standing on the elbow and the upper arm extended vertically) the upper arm plays the same role.

We have the sideshift inherent in *Parsva* variations of the asanas, such as *Parsva Adhomukha Virasana*, (figure 4) *Parsva Uttanasana*. Creating straightness in both sides of the flanks will be different on each side, and we need to take this knowledge into the lateral standing poses.

3. Flattening the mountains/filling the valleys in the Frontal Plane

There is hardness in the mountains, both in the muscles and in the bones, which are constantly coping with the forces of scoliosis. It's important to firstly try to soften these areas. Passive positions such as *Savasana*, *prone Savasana*, *Adhomukha Virasana*, supported *Uttanasana* (in the ropes, or over a high stool), *Chaturangasana* supported in a chair (figure 5) should be practised regularly. Both in passive and active practice, external correction using props can be added. Props such as small pads placed under the mountains, and areas which drop too much, belts to contain the bulge, sandbags as weight, or lying under a *Halasana* bench to contain side shift, are a few examples. In the active versions of asanas, the body needs to learn to provide these supports itself. Tying belts around the torso at different heights is a good tool for feeling and guiding the torso towards alignment.

The breath is a huge aid in reshaping the body. Collapsed areas can fill from within using inhalation, and mountainous humps can release with exhalation.

4. Rotation/Derotation in the Transverse Plane

Rotation needs to be an inherent part of any scoliosis work, firstly to maintain the natural mobility of the vertebrae, secondly to counter the rotation which is always there in any scoliosis, and thirdly to be the relief for the spine after strong work in the sagittal plane (forward-bends/backbends). Firstly, there has to be clarity about one's map of the spine and its deviations. Here we need to be alert as to when a twist is furthering the scoliosis, as opposed to opposing it. II.33 *pratipaksabhavanam* (the principle of cultivating the opposite) is especially pertinent. In Iyengar yoga we don't avoid twisting to both sides. We do however twist very differently to the right and to the left. When I know which segments rotate where, then I differentiate on each side. For example, in *Bharadvajasana* twisting to the right, I am interested, in my case, in keeping the already backward rotating ribcage in check, and instead I work on twisting the areas below and above (waist and shoulder/upper arm) (figure 6). Twisting to the left is the opposite story: here I resist in the lumbar and twist strongly in the chest.

Twists are the most interesting and complex tools for working on scoliosis. It is very useful to experiment with props, both for proprioception as well as to support

the body from collapsing. An example is placing the feet on the wall in *Jathara Parivartanansa* with bent legs, that the legs remain supported and active, or alternatively supporting the legs on a bolster in the same pose. Practicing the twisted standing poses with the support of a chair is another example. My experience is that it can be too strong to do too many twists back-to-back, and that it is essential to move beyond the physical level. Using Prashant's techniques of 'breathasising' the body, twisting reaches a much finer, deeper and profound state. The spine is felt as one energy channel, which helps us transcend the restricted awareness levels only looking at the crookedness on the physical level. Once the core is activated, prana is released, the breath centralizes, and the spine moves. This is the key to unlocking and changing the forces driving scoliosis. One unforgettable experience for me in the medical class in Pune in 2006, was when Guruji decided to help me twist in *Marichyasana III*. I was practicing twisting to the left, seated directly beside the trestler, with my arms wrapped around its post. Guruji tied a wooden slanting-plank vertically to my right flank, and then proceeded to pull this away using his weight. I had to hold on with all of my strength to not fall over with him, and as a consequence my right curve straightened away from him, I felt an energy surge upwards along the spine. It was an unforgettable experience which happened very quickly. He provoked the curve in his direction, and I had no choice but to do the opposite.

Modifying the Asanas

We always practice both the left and right sides of the asanas. Working from asymmetry requires using the awareness of how each side is managing, and the knowledge of which different modifications and extra support can help each side to become more even.

Because it is very difficult to assess the position of the pelvis in any standing pose, we prepare by using modified versions of poses, such as standing poses in the supine position with the feet at the wall, at the trestler, at the wall, in ropes, or on a chair, to give us more feedback. Geeta insisted that for scoliosis we should be doing 'anterior spine' at the trestler (practising starting facing the trestler) (figure 7). I was at first confused by this, and now understand the importance of the frontal body becoming a support for the back. The scoliotic landscape is easier to see and feel at the back, because of the spine's superior position. However for every hump (mountain) at the back there is a corresponding collapse (valley) at the front. Resisting collapse forwards and discovering the valleys has been a huge clue in my practice, as well as accessing deeper layers (especially in the lower belly area), and learning to spread the front and the back evenly and simultaneously.

In Iyengar yoga we use the four limbs to access the spine. The lower limbs have access to the lower spine, the upper limbs have access to the thorax and upper spine. The



necessity for freedom of movement of the legs and arms, and their ability to connect in the hips and shoulders cannot be underestimated. It is very important that all three *Supta Padangusthasana* variations and that all arm variations (*Urdhva Hastasana*, *Urdhva Baddanguliasana*, *Urdhva Hasta Padasana*, *Paschima Buddha Hastasana*, *Gomukhasana*, *Pashima Namaskar-asana*) are regularly practiced. Practicing all of these in the supine position, or standing at the wall, gives immediate feedback about the effect on the spine (especially felt in one sided asanas). One legged (*Eka Pada*) one armed (*Eka Hasta*) positions where there is a front and back leg, a raised and lowered arm, are perfect for one-sided access to both the inner and outer sides of curves. When I feel and understand my own differences between the left and right sides for example in *Supta Padangusthasana II* (differences in leg freedom, connection in the hip joint, stiffness in the hamstrings, difficulty in keeping the pelvis even, difficulty in keeping both flanks long), only then will I be able to translate and compare this to the feedback I receive in *Trikonasana*, and can then decide which extra supports I chose to take to make both sides more even. These could be for example practicing *Trikonasana* with the front foot elevated on a block at the wall with the lower arm raised at the wall, or practicing in a rope to lengthen the iliopsoas (figure 8) with the lower arm forwards on the back of a chair, or placing the front foot further forwards (asymmetric foot position) on the side where the pelvic torsion disturbs good alignment.

Lateral positions directly address the laterally deviating spine, and are a very effective tool. They were definitely part of my first list of asanas in the medical classes in Pune. They are however sometimes too complicated to easily assess and understand one's scoliosis. Then we can switch by reducing our practice to the asanas in the sagittal axis, to quieten and also work specifically on core strength and midline. Marcia Monroe taught sometimes a whole day of asanas in the sagittal plane, deliberately avoiding the lateral poses. (Asanas: *Supta Padangusthasana I*, *Urdhva Prasarita Padasana*, *Tadasana*, *Uttanasana*, *Adhomukha Svanasana*, *Urdhva Muhka Svan-asana*, *Utkatasana*, *Chaturangasana*, *Salabhasana*, *Virabhadrasana III*, *Parsvottanasna*, etc).

Sometimes, we deliberately delay working so concretely on the scoliosis, until the system is relaxed and prepared to respond. If the levels of pain or frustration are too high, or the range of motion too inhibited, then this affects the whole system. Starting with prone or supine *Savasana*, using extra supports, such as pads and blankets, moving slowly to *Adhomukha Virasana*, towards supported poses, such as standing poses lying on the floor is a gentle introduction to the later repertoire. Here the approach is: firstly relaxation, secondly mobilization (bringing movement into the limbs), and thirdly activation (extension and holding). When the mind starts to feel and connect with the body and its position, then clarity comes, and with it the willpower and ener-

gy to work more actively on the affected areas.

What should Iyengar Yoga teachers know?

When working with scoliosis priority should be given to balancing the pelvis and shoulders rather than the feet and hands. Sometimes for example in the standing poses, the feet and the hands are positioned asymmetrically in order to help correct pelvic and shoulder torsion.

A body with scoliosis is not strong, and care has to be taken to respect this, and not to push the body further into its scoliotic shapes. Unlike a bridge built to stand the tests of time, the spine with scoliosis is weak, and if the load somewhere is too much something will eventually give. Strengthening is an important part of scoliosis work, but it is important that mobility is not neglected. This is why yoga is the perfect tool. Too much mobility on the other hand can destabilize, so care has to be taken when repeating movements many times, for example when practicing twists or backbends repeatedly, practicing *Surya Namaskar*, doing fast work at the ropes, or other asanas in flow. Care needs to be taken when segments of the spine are stuck and refuse to move. This is especially the case with operated sections of the spine which are held together by screws and rods. The neighboring areas take the load, and this can wear them out.

Especially the flexible types need sensitive guidance. A teacher should restrain

from pushing them. Through the lack of resistance, a flexible body often doesn't give clear feedback. The discrepancy between what the body easily does, especially towards the direction of the scoliosis, and what the mind is unsure of is often apparent. It is important to practice the stabilizing techniques of pulling the femur heads and humerous heads into the hip and shoulder sockets, which bring connection and stability into the body.

When the student is completely confused about twisting, where to rotate, and where not to rotate, then it's best to simplify, just to twist to each side to a moderate degree, with the focus on the breath and on lengthening the spine.

The bottom line in any given moment is that no asana should provoke the scoliosis into progression. When collapse into scoliosis happens, one should immediately come out of the pose, and do something to the opposite to neutralize. One good example is the collapse of the frontal ribs in *Sirsasana*. It is better to practice a very short and intense *Sirsasana*, which we know is an important pose, and one that strengthens the spine, than to stay longer and experience collapse in any segment. For shoulder and neck problems, there are supported variations (for example the elbows contained in the *Halasana* box or in an upturned chair, with blocks supporting C7, or hanging in ropes).

When the surrounding joints start to show problems, such as pain in the hip/pelvic/knee/foot/shoulder or elbow joints, then this should be addressed. They are



showing us where too much stress is, and their neighboring joints often show us clues.

How to teach?

The teacher can always help by pointing out and correcting misalignment which is quickly obvious from the external viewpoint. The touch of external hands can be very helpful feedback and guidance. It is important that the teacher is clear about the corrections that they give, and that they understand the mechanics of scoliosis. If in doubt, send the student to someone with more experience. Care has to be taken as to the appropriateness of over-zealous, or too much correction on any given day. Sometimes people practicing are mentally/physically or emotionally exhausted. Too much corrective guidance can be frustrating or overwhelming. Remember to constantly read the facial expression, not just the scoliosis.

People with scoliosis should be helped to feel their body, and its misalignment. They shouldn't be treated as if they are ill. This condition does bring the feeling of unease in the body and mind, but it isn't a disease which can be cured and removed. Teachers should encourage people with scoliosis to try to attain the full range of motion and full range of asanas, especially focusing on feeling the body in space, its alignment, and practicing stability. More support, for example belting the shoulder blades, practicing at the wall with extra props should be encouraged. Perhaps most important of all is learning to support the spine oneself from within.

One humbling attitude I have adopted over the years is to accept that those of us with scoliosis are like aged practitioners every time that we step onto the mat. On any given day, there may be the necessity to remain at beginners' level Asanas, or at intermediate stages, aiming for accessing the body and mind, rather than at progressing at normal pace in our yoga practice. As the elderly have to do, we need to slow down, we need to constantly bring the body into dialogue with the mind, each struggling on its own level.

For me yoga for scoliosis is a heightened form of yoga practice. Due to inherent imbalance people with scoliosis practicing yoga need more awareness of their state and starting point on any given day. They need to be sensitized to feel which areas are struggling (perhaps even unable) to go into the asanas, and to always move towards balance. Balance between the right and the left, but also between over- and under-doing. In his book *Light on Pranayama* on the Sutra II.33, Guruji explains:

*„the internal measuring and balancing process which we call *paksa pratipaksa* is in some respects the key to why yoga practice actually works, why it has mechanical power to revolutionize our whole being.“*

Illustrations:

Figure 1, 2, 3 D. Edler

Figure 4, 5, 8 R. Ockel

Figure 6 Stadtgören Photographie

Figure 7 H. Barsby from Pune