

## **PROPER BODY MECHANICS for all classes including ZUMBA**

Please note the following recommended exercise guidelines to obtain optimal results and to prevent injury:

### **KNEES:**

To avoid worsening existing knee problems or to even to prevent a new injury, be mindful of any "quick" or "fast" pivoting or twisting on the knee. If there is a preexisting condition, either do the move much slower than shown or in comparison to another class member. It's absolutely 'smart' to modify the moves for 'your' body. Also keep in mind whether you have a 'bad' knee or not, please be especially mindful of 'picking up your heels' when you do turn. If the heel of the supporting (non-leading leg) is flat and you try to turn, you will lock out that back knee. Rather, it is super important to pick up the heels of *both* feet so you can pivot naturally without any direct impact to the knee. This is one of the biggest problems I observe in classes. Please remember to pick up your heels and work on the ball of your foot for most latin moves. Specifically for Zumba, it's best to relax the foot and move it naturally up and then down throughout the movements so the foot does not stay flat for too long.

The knees should always be bent at least 10 degrees to avoid hyperextension and at no time should a move cause 1/2 the body's weight to go one way while the opposite knee is facing the other direction or even straight ahead. In other words, if my right knee is facing left, so should my left knee. If my right knee is facing right, so should my left knee. All knees should face in the same direction to avoid injury. If jumping, be mindful to land on your feet in a toe-ball-heel order to properly absorb the weight of the body coming down from a jump. As well as the number of repetitions jumping on one knee matters. Eight reps per knee is highly advised to prevent injury. Switch to the other knee after 8 repetitions to balance the load on the knees.

Re: Squats and Lunges: If you have a problem knee, take the body down only 1/4 of the way versus 1/2 way down traditionally. In either case, knees must not go over the ankle in a lunge and knees must not go over the toes in a squat. Many times it's the form of the squat or lunge that contributes to knee pain not the squat or lunge itself. This is another very common observation as well. Use the mirrors at your side to view your knee placement. The fix on a lunge is to extend your back leg further to avoid allowing the front knee to go over the ankle. The fix on a squat is to be sure your glutes go way back behind you to avoid allowing the knees to go over the toes.

### **BACK:**

Quick turns should be avoided for those with bad backs. Rather, move into the turn slowly or keep your movement centered. Same applies for plyometric jumping - rather than jumping, proceed down and up into a basic squat to lessen the impact on the lower lumbar and knees. When hopping side to side, hop on one leg versus two to reduce the impact. It's also highly advisable to maintain a neutral spine throughout the movements regardless if one has a bad back or not. Avoid either an anterior pelvic tilt in which the abdominals stick out or a posterior pelvic tilt in which the glutes stick out. Both positions will lead to unwanted tension in the back muscles and lead to potential back injury. Rather find your neutral spine position that is in-between these two extreme positions. Maintaining a neutral spine while exercising as well as through functional daily movement will strengthen the core muscles and prevents injury.

### **SHINS:**

By working on the ball of your foot during latin moves versus working primarily on your toes, you will prevent shin splints. It's best to relax the foot and move it naturally up and then down throughout the movement so the foot does not stay elevated for extended periods of time. If jumping, it's important to land toe-ball-heel to absorb the impact. Also typically improper footwear and not enough stretching can lead to shin splints.

### **ELBOWS:**

Never lock out the elbow in any upper body movement. Always maintain a 10 degree bend in the elbow to avoid hyperextension. No force should be applied as you extend your arm. Soft extension with control is necessary. Remember 'be kind' to your joints!

### **SHOULDERS/NECK:**

Ah... relax your shoulders. Nothing will create more tension in the neck and shoulders even the smaller back muscles than hunched up shoulders. Many times we can tense our shoulders without even realizing it since we're concentrating on the move or other things. So deliberately pay attention to relaxing your shoulders downward to provide comfort during and after your exercise.

### **FEET:**

I save the FEET for last because truly... *Your feet are the foundation to good health all the way up the body.* If your feet hurt, everything will hurt. Take care of your feet! It starts with proper footwear. It's so important to obtain sneakers appropriate for the exercise activity. To prevent a variety of foot ailments, choose sneakers that have ample room in the toe-box. Sneakers that are too tight and narrow at the toes will cause many problems later on such as neuromas, calluses or hammer toes. Wider is better; it's more natural as the way our toes are meant to spread out as when barefoot.

If there are congenital foot issues such as flat feet (fallen arches), over-pronation, over-supination, too high arches, most likely you will need custom orthotics to provide relief and comfort in all your activities. All foot ailments such as plantar fasciitis, heels spurs, achilles tendonitis and more can also be improved with adequate stretching. There truly is solution for your feet issues! If you need a good podiatrist, contact Dr. Daniel Margolin located at 550 Kinderkamack Road, Suite 202, Oradell, NJ 201-261-9445.

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For more specific injury prevention, injury management and specific treatments for plantar fasciitis or back problems, please retrieve handouts at studio reception area or pull down from our website on our [schedule page](#) under [Health File Library](#) on the right.

Lastly, myself or any instructor would be more than happy to evaluate your form or provide additional help if you ask us before or after class. In addition, if you are receiving personal training, it's very important to ensure that your training as well as your trainer are properly certified to prevent injuries as well as receive optimal results. It's a question worth asking.

With your safety in mind...

Bessie