



Time to make your move!

Balance and Stability with Medicine-Balls.

By Darryl Leech

As a martial artist you move. But when our training moves from the training hall and to the gym a lot of us stop moving and sit. Seated pin loaded machines are a waste of time for the martial artist – they are a waste of time for anyone who wants a strong and functional body. They discourage core activation and movement and encourage joint pain and faulty recruitment patterns. It's time get out of the mind set that all those seated leg extensions are going to make you kick harder and that all those seated shoulder presses are going to make you punch faster – it's time to get moving!

Seated machines...

Most gym programs designed for martial artists don't seem to keep in mind that they need their bodies to move. The programs are no where near thorough enough for a martial artist and usually work with the mindset of 'well if I need to kick faster I need to work my legs', the body doesn't function like this. When the body moves all of its muscles and joints work together to stabilize and provide power, no single muscle group is isolated like what happens when you use machine weights. If martial arts had started with most of today's conditioning programs it'd be safe to say that it would be non existent. All the founding martial artists would have suffered from deteriorating joints and bad backs instead of laying the foundations for the styles we practice today.

Pin loaded machines are typically designed with muscle hypertrophy (increasing muscle size) in mind (free standing cable machines are an exception), as they isolate specific muscle groups and do not encourage core function. When a strong, functional body moves it initiates movement from the core (the stabilizing muscles of the hip and spine) and as it moves it activates the most efficient order of muscle recruitment to avoid injury and maintain balance. When a muscle in this order of muscle recruitment is over regulated – quadriceps from too many leg extensions, for example – it will alter the order in which the muscles activate and slowly begin to pull the supporting structures of the body out of alignment. This is where the importance of maintaining movement over muscle hypertrophy is realized. Training programs using machines do not give a martial artist the coordination and spatial awareness needed to maximize their performance. So to finish - machine weights aren't the best approach for martial artists.

When you go to see the Shaolin monks do you see one of them get tied to a chair, switch off their core and lift a boulder with their feet as part of their display of strength? No, you see them do things like balance on one leg on a pole or hold a deep squat while holding a log in front of them, things that have them moving and balancing in free space.

Medicine-balls.

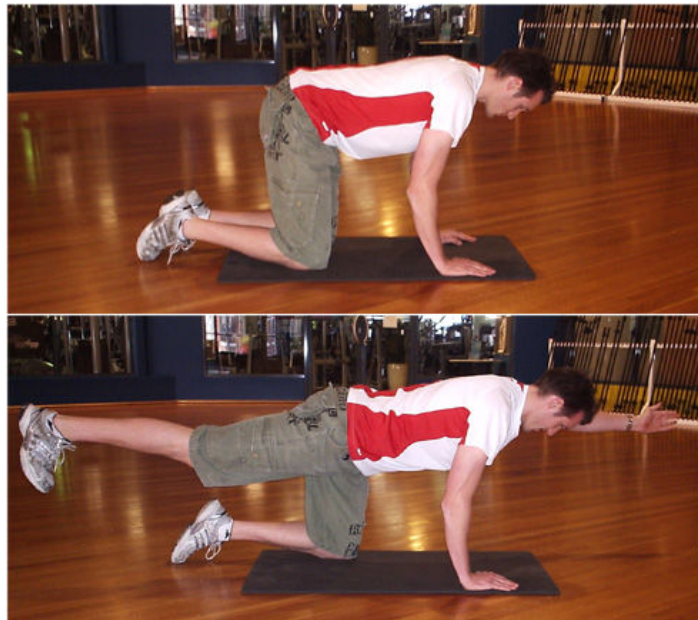
You've no doubt seen these at your gym or training studio, if used correctly they can be a great training tool to complement any form of martial arts training. Using medicine balls in your workout can not only help with core activation and stimulation of the body's neuromuscular system but also in increasing your mobility, overall strength and functionality. The world's leading strength and fitness professionals swear by them for training athletes and even for rehab work because

training in a functional way with medicine-balls will encourage coordination and force the body to overcome internal resistance.

Training in the right way with medicine-balls can see great improvements in balance, strength and stability but precautions must be taken. The exercises in this article are considered quite advanced so please take time to train your body before you attempt them. If you are unable to maintain postural stability or experience back pain while training then please take the time to master these 'Prerequisite Exercises'.

Prerequisite exercises:

4 Point Horse Stance: *The most basic of core activation exercises. Assume a position on all 4s, and maintain neutral spine – this can be tricky so spotting yourself in a mirror can help you get the hang of it. Draw your belly button into your spine and lightly tense your lower abdominals. From this position raise one arm out in front of you with your thumb up towards the ceiling – hold this position then perform on opposite side. Next raise your opposite hand and foot – hold and repeat on opposite side. Light tension should be felt through the lower abdominals. Accumulate 1 minute of time under tension for each hold.*



Pushup position: *Assume a standard pushup position with your hands directly under your shoulders. Maintain a neutral spine position and don't let your shoulder blades lift from your body. If you are holding this correctly you should feel tension build in the lower abdominals – not your shoulders or lower back. Try to hold this position for 2-3mins and stop if you start to shudder – this will mean that your stabilisers are tiring, you should stop and reset your posture.*



Forward Ball Roll: Place your elbows on top of the fitball and keep your chest over your elbows. Maintain a neutral spine and do not let your shoulder blades lift from your body. Brace through your core and move your elbows forward to the point where you feel tension through your lower abs and your posture doesn't deviate from neutral position. Bring your elbows back to start position if you begin to shudder, reset your position then move them forward again. Accumulate 1-2mins of time under tension.



VMO Squats: The VMO or 'Vastus Medialis Obliquus', is the stabilizing muscle on the medial side of the knee. Stand with your heels on an elevated surface (about an inch high) turn your toes and knees outwards. Squat down as low as you can go while keeping your knees turned out. At the bottom of your squat draw in your lower abdominals and push your body back to the start position – perform this movement slowly and take about 5-6secs to finish. Tension should be felt through the inner thighs and VMO of each leg. Again, if you're shuddering excessively this will indicate that your stabilisers aren't strong enough.



Prone Cobra: This exercise is used to decrease thoracic flexion – outward curve of the upper back. Lie flat on your stomach and tilt your hips so that your lower back flattens then lift your chest off the floor. Turn your palms outwards and squeeze your shoulder blades together. You should feel tension build between your shoulder blades and not in your lower back – discontinue if your lower back is doing all the work. Again, accumulate 2-3mins of time under tension.



These exercises will help in building a strong foundation for training with medicine-balls and if arranged correctly can be made into quite a tough workout. If you have trouble with the above exercises and begin to shudder and shake while performing them then this is an indication that your stabilizing muscles aren't strong enough to support you while under load, which means you have to spend time mastering these before moving on, 4-6 weeks should be sufficient.

Medicine Ball Exercises

Before you begin the following exercises make sure you know how to activate your core stabilisers and don't have any back, neck or shoulder pain. If you currently experience any kind of joint problem or muscle tension you can refer to my article in Vol. 21 No. 10 (Too Tense?) for some pointers or email me for some advice; darryl@activered.com.au

1. Squat & Press:

This is a good exercise to prepare the body for the following exercises. Remember to keep your heels on the floor and to push through them when squatting up from the ground.



2. Medicine Ball Squat:

This exercise is very difficult so be careful.

This is a great exercise to enhance balance and stability through the hips and ankles. If you have trouble standing on the medicine ball try holding onto something for support and become used to balancing.

To stand on the Medicine Ball place one foot on top of the ball and keep your weight in the foot still on the floor, then push this foot up on top of the ball (or other ball) and brace through your core.





3. Lunge & Twist:

The lunge and twist is a great exercise to integrate core activation into functional movement and complements just about every martial arts style. To really work those hip stabilisers try lunging in different directions; forward, back, side-to-side, diagonals. A hop can also be added to make the exercise more explosive and is also great for all those stand-up fighters as it will help with your quickness in exploding from one position to another.

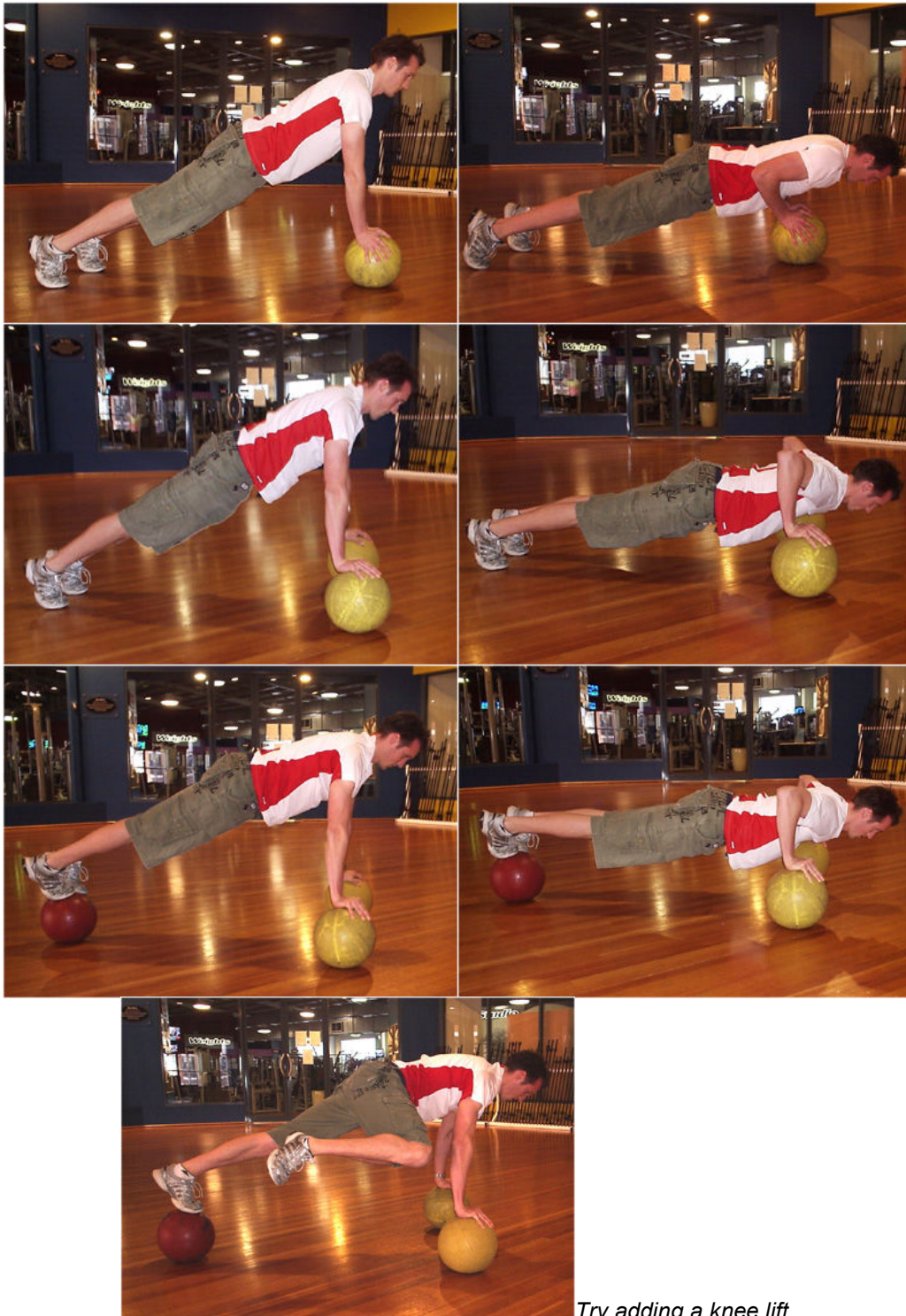
Remember to always plant through your heel to activate those glutes – you don't want to overwork the quadriceps.



Hopping forward and twisting to the side.

4. 1,2 & 3 Medicine-ball Pushup:

This is a great exercise as it encourages core activation and strength of the shoulder girdle. Also practice just holding the pushup position to activate you stabilisers.



Try adding a knee lift.

5. 2 Medicine Ball Forward pike:

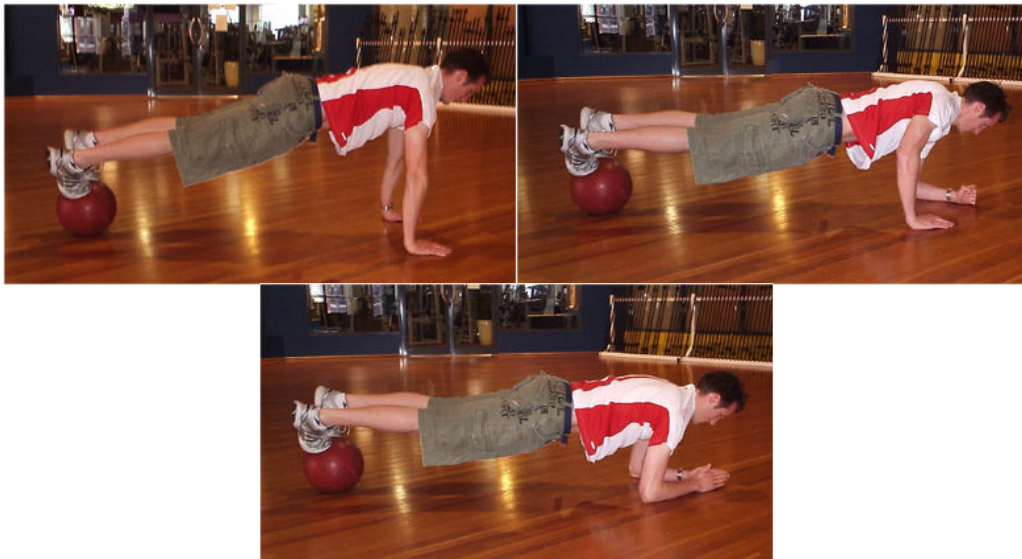
This is great for shoulder, hip flexor and core stability. It also helps with the strength of your wrists. Keep your chest up tall and don't let your shoulders bunch up to your neck. The beginner option is to try on a bench and keep knees bent. To progress slowly straighten your legs.



6. Push-outs:

These can be done with your feet on the floor but using the medicine-ball adds a new dynamic to the exercise. Start in a pushup position and lower down to your right elbow and then your left. Then from a prone bridge position push up with your right arm then left again, this will equal 1 rep. Perform 3-8 reps on each side.

Remember to maintain a neutral spine and don't let your hips twist excessively from side-to-side as you move – keep your body straight.



These exercises focus on strength and coordination of the core, hips and shoulders, which is beneficial for any martial art. You could put together quite an intense workout with the above exercises but if you are having trouble maintaining postural stability while performing them then try just adding one or a couple to your current gym routine or take time to build a solid foundation with the prerequisite exercises. Always realise your limitations when attempting a new exercise – don't continue with the exercise if you cannot maintain a neutral spine position.

Conclusion:

Medicine-balls are a great tool for increasing balance and coordination and complement martial arts training very well but this isn't to say that you should rule out traditional gym exercises (squats, lunges, pull-ups etc) all together. Although results gained from training with the medicine-balls will carry over quite well into your martial arts training, it is always important to keep up your skill levels high on stable surfaces as you train and are most likely to use your skills on a stable surface, although if you do end up having to fight while standing on two medicine-balls please let me know – that'd be cool. When training always choose exercises that are specific to the goal you wish to achieve, keep in mind variables such as what range of motion you need your body to go through, what surfaces you train on and of course – the desired outcome of the workout. If you are training to get big then a machine weight program may be beneficial, but as a martial artist you need your body to move so if you really want to maximize your gym efforts you'll get off your butt and get moving.