

## The Bad Ragaz Ring Method (BRRM) part 2

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In my previous blog I ended with a clinical consideration. The client had 5 goals:

- Stepping into a bus (high step)
- Walking at least 500 feet over a market without the right knee giving way
- Crossing a street quickly
- Being able to reactively use a stumble-strategy
- Standing and weight-shifting in front of the workplace in the kitchen for 10 minutes.

It's clear that one size (of strengthening exercise) cannot fit all objectives:

- Stepping into a bus needs power of e.g. the quads at probably 70% of the 1RM
- Walking 500 feet needs local endurance of the quads
- Crossing the street quickly needs power of the plantar flexors at probably 30% and a quick proactive knee extension in an open chain swing phase
- A reactive, protective step is a ballistic open chain movement of a leg followed by a quick eccentric contraction (catching weight) of the quads
- Weight-shifting for 10 minutes also needs local endurance with use of the elastic recoil properties of e.g. the patellar tendon.

BRRM will not be the most efficient and effective method for all mentioned properties. To our opinion, Bad Ragaz is especially suitable to address priming for stepping into the bus, the quick eccentric contraction during a protective step and weight-shifting. I shall only explain stepping into the bus and will use another pattern as in the previous blog.

Figure 1 and 2 show a pattern in the normal timing: the start – and the end-position of the bilateral asymmetrical reciprocal pattern flexion-abduction-internal rotation of the right isotonic leg and extension-abduction-internal rotation of the left isometric leg. The positions of the hands of the therapist are crucial to facilitate the right muscles in the right diagonal: the left hand must guide the right foot from inversion to pronation and the right hand must provide isometric resistance against eversion of the foot.



Fig. 1



Fig. 2

But when we want to address stepping into a bus, we need to change e.g. the isotonic pattern to isometric and the isometric pattern to isotonic, see figure 3



Fig. 3 Urs Gamper asks the client to isometrically hold the left leg in the position as shown. Client's foot is on his thigh and with his left hand he guides eccentric knee flexion followed by a fast knee extension. The amortization phase is as short as possible and should be sustained about 10-12 reps. (power at about 70% 1RM). The eccentric phase is slower than the concentric one. The knee extension is accompanied by extension-abduction-internal rotation in the hip.

In PNF terminology I described timing for emphasis, using a combination of isotonic approach. In exercise physiology terminology I described a stretch-shortening cycle, used as an adapted plyometric contraction. In the terminology of facial resilience, I described a rebounding (or bouncing) effect, training the elastic recoil properties of e.g. the patellar tendon and other structures of the serial extra-muscular fascia.

Both figure 2 and 3 do only show some 10 degrees of internal rotation, this is enough. The isotonic leg came from an external rotation position and even when the anatomical position shows hardly any internal rotation: internal rotators work. Both figures also show that the hip extension pushes the foot downwards to the bottom of the pool. Frequent errors are an exaggerated internal rotation and a foot of the extended leg above the water. Even more frequently, therapist's hands are not positioned well: chains will be wrong, the client loses balance and equilibrium reactions interfere with the intended muscular contractions.

Also to our opinion, BRRM cannot be used to e.g. prime the swing phase of the protective step when losing balance while stumbling. This is a ballistic open chain supporting reaction. BRRM is performed in (relatively) closed chains, is not ballistic and is proactive. Perturbation training, using Water Specific Therapy would be more appropriate

The website [www.badragazringmethod.org](http://www.badragazringmethod.org) contains also footages, showing how movements look like. We only provide passwords as aftercare for courses, but we have uploaded a few examples to YouTube: this link shows a leg pattern:

<https://www.youtube.com/watch?v=frhm42nNddg> . The next Bad Ragaz course in the USA will most probably be early 2026.

Fig 1 and 2 are from [www.badragazringmethod.org](http://www.badragazringmethod.org) , copyright by Urs Gamper and Johan Lambeck

Fig 3 is used in courses with informed consent of the client to be used for educational purposes.