

Training Document: **Strength Training** by Gale Bernhardt

Some of the training plans do not have strength training specified within the plan. If this is the case and you already have a strength training routine, you can continue to use your current program. Try to strength train on a day that is designated as a "day off" or on a day that has a less strenuous workout. If you find that your program makes you sore or leaves your legs or arms feeling "dead" for endurance workouts, you may want to reduce the sets and repetitions you are doing.

A number of the training plans have strength training days designated within the plan. You can continue to use your own routine or use the routine designated by the plan.

Before beginning your strength training workout, be sure to do a 10- to 30-minute aerobic workout as a warm-up. After each strength training session, an easy spin on a stationary bike for 5- to 10-minutes is a good cool down. Running as a cool down is not recommended.

Can you complete an aerobic workout (a scheduled swim, bike or run) before strength training and use that as the warm-up? Yes, however, doing a difficult aerobic session (hills or intervals) is not recommended before strength training.

If you want to implement a strength training routine, a list of exercises to consider follows:

Minimum Exercises

1. **Hip extension** (squat, leg press or step-up)
2. Standing bent-arm lat pull down (bent at the same angle as during freestyle swimming)
3. Chest press or push ups
4. Seated row
5. Abdominal curls (core body work)
6. Back extensions (core body work)

Recommended Additional Exercises (Depends on personal weaknesses, racing limiters, time and energy)

7. **Hip extension** (select a different exercise than #1 above)
8. Hamstring curl
9. Knee extension
10. Heel raise
11. Adductors
12. Abductors
13. Additional core body work

Continued **Strength Training** by Gale Bernhardt

The list of Minimal Exercises is for very busy athletes looking for efficiency. The Recommended Additional Exercises list is for athletes having more time to train or having personal weaknesses that limit race performance. The listed exercises are a start. Once you have an established routine, there are a number of strength training exercises that can be substituted to improve your sport and lifestyle strength. Those exercises are not covered in this document.

Each strength training phase is outlined below:

AA: Anatomical Adaptation: Complete 2 to 3 sets x 15 to 20 repetitions (reps) of exercises 1 through 6. Exercises 7 through 8 are optional.

MS: Maximum Strength: After the warm-up complete 4 to 6 sets of the bold-faced exercises. (Exercises 1 through 6 are the minimal exercise plan.) Begin with a light weight and 15 repetitions (reps), increase weight and 10 reps, increase and 8 reps, increase again and 1 to 3 sets of 3 to 6 reps. All other exercises, 2 to 3 sets of 12 to 15 reps.

ME: Muscular Endurance: Warm up aerobically, running or cycling for 10-20 minutes, then complete 2 to 4 sets x 40 to 50 reps of each hip extension, lat-pull down and seated row. All other exercises are 2 to 4 sets x 12 to 15 reps using a moderate weight.

PE: Power Endurance: Warm up cycling or running for 10 to 30 minutes. Do the same exercises you have been doing in MS, but reduce the weight and do 3 to 4 sets x 8 to 15 reps. The weight should feel "moderate" – not heavy and not light.

PE-Plyo: Power Endurance With Plyometrics: Warm up cycling or running 10 to 30 minutes. Complete the designated plyometric workout, then lift weights. Do the same exercises you have been doing in MS, but reduce the weight and do 3 to 4 sets x 8 to 15 reps. The weight should feel "moderate" – not heavy and not light.

SM: Strength Maintenance: Warm up cycling or running 10 to 30 minutes. For your hip extension exercise complete 1 set of 20 reps at a light weight, increase the weight and do 1 to 2 sets x 12 reps (moderate weight), increase the weight and do 1 to 2 sets x 6-8 reps (difficult, but not gut-busting hard.) For the remaining exercises, complete 2-3 sets of 12 to 15 reps. Decrease the sets and weight in heavy racing periods.

For photographs of the exercises, see the book *Triathlon Training Basics*.