Concurrent Training

Readings:
- None in textbook

What is concurrent training?
Training that involves:

_______________________
And

_______________________

Who should do concurrent training?

Athletes:
- Very few sports use only endurance or strength.
- Outside of running long distances on a flat surface and power-lifting, practically all sports require some combination of endurance and strength.

Source: Using Molecular Biology to Maximize Concurrent Training
Sports Medicine, 2014 10.1007/s40279-014-0252-0, Keith Baar

Nonathletes:
- Everybody needs endurance and strength for health and activities of daily living (ADLs).
What is the MAJOR ISSUE OF CONCERN regarding concurrent training?

- Endurance and strength can be developed simultaneously to some degree.
- But, the development of a high level of endurance seems to prohibit the development or maintenance of muscle mass and strength.
- This interaction between endurance and strength is called the concurrent training effect.

2 + 2 ≠ 4

Concurrent training program design

Program design is not well developed and established as for aerobic and resistance training only literature.

Guidelines suggested are based on recent review paper:
Using Molecular Biology to Maximize Concurrent Training, Sports Medicine, 2014 10.1007/s40279-014-0252-0, Keith Baar
Summarized in infographic by:
http://ylmsportscience.blogspot.com/
twitter at @YLMSportScience

Concurrent training program design

1. Any high-intensity endurance training sessions should be performed early in the day. Then, a period of recovery of at least 3 h should be given before resistance exercise is performed to limit molecular interference at the muscle level.

2. Resistance exercise should be supported by readily digestible, leucine-rich protein as soon as possible after training to maximize muscle protein synthesis (e.g. whey protein).

3. Since resistance exercise is performed later in the day, it becomes even more important to also consume protein immediately prior to sleep to maximize the synthetic response overnight.
Concurrent training program design

This idea also supported in Magness & Marcus podcast (episode 3) on resistance training for runners. Weights post running stimulates hormonal response to enhance endurance adaptation

More info on programming concurrent training at:
http://bretcontreras.com/how-to-maximize-concurrent-training/