

Purposeful Dryland

In the last 20 years, dryland training for swimmers has become a conventional facet of most programs. Some of these programs apply it to great advantage while for others it may be little more than window dressing.

The purpose of our dryland program is to develop more durable athletes as characterized by improved lean body mass and strength-to-weight ratios; greater cardiorespiratory capacity; increased muscular endurance and power; enhanced flexibility; improved tissue integrity; and more balanced musculature. Secondary benefits of a well-planned dryland regimen include variety; the chance for different athletes to excel; improved body-image; exposure to other types of fitness activity and other fitness dimensions; opportunities to interact with teammates and learn team skills; enhanced self-confidence; and reduced incidence of injury.

How are these manifold benefits achieved? Through the rigorous and exacting application of a variety of activities including running; skipping, bounding, and other plyometrics; traditional calisthenics and body weight exercises such as pull-ups and push-ups; throwing, bouncing, and held medicine balls; stretch cords; weighted jump ropes; traditional weights; kettlebells; stretching; gymnastics; and aerobic games such as soccer, rugby, and Ultimate.

Just as in the swimming pool, sloppy execution often limits the yield of even a carefully conceived dryland program. This sloppy execution can derive from bad planning, inadequate instruction, insufficient or non-specific feedback, or an athlete's refusal to embrace the challenge. However, the most common cause of sloppy execution isn't among those listed but rather derives from all organisms' innate drive to minimize stress and conserve energy.

Rats placed in a tub of water will always rat-paddle directly to the edge and attempt to scramble up the side to escape this unwelcome exercise opportunity. Similarly, humans placed in a pool of deep water will immediately grab the nearest gutter or lane line rather than to do the minimal work of treading water, even when they have received clear instructions beforehand and repeated admonitions during this activity to refrain from hanging on either lane line or gutter. Such behavior is rarely a manifestation of conscious obstinance but rather reflects our DNA-driven instinct to conserve energy so that we can capture more resources or avoid predation another day.

However, unlike the kill-or-be-killed conditions faced by our ancestors, we in developed countries rarely face the same paucity of resources or potential surfeit of physical demands in our daily routines. These different conditions thus call for different strategies to overcome this instinctive drive to conserve energy. There are three basic approaches: bribes (appreciated by the recipient but offer only a short-term correction while reducing the recipient's intrinsic motivation); threats (resented by the recipient—and his or her parents--and thus offering equally short-term benefits before the inevitable insurrection occurs); and what we call "conscious override," the athlete's informed and rational decision to ignore the biological imperative of energy conservation for the pursuit of higher but deferred goals such as improved skills, enhanced fitness, faster swimming, greater self-confidence, and other life skills that derive from the relentless and intentional pursuit of sport-specific goals.

However, unlike in the pool, where performance is ultimately objective (athletes cover a given distance in a given time and the fastest time wins), performance on dryland activities is harder to measure and thus it is easier for athletes to adopt the rat-in-a-tub approach at the expense of achieving the purpose of the activity. For example, when we ask the athletes to throw medicine balls against a wall, catching each rebound and repeating in rapid, explosive succession through a stipulated movement sequence, range of motion, and number of repetitions, they often unconsciously arrive at the least energy costly—and thus, also, least effective way to perform this movement. A few common methods of achieving this rat-in-a-tub approach include using the lightest ball available; altering the stipulated movement sequence, range of motion, or speed of movement; completing fewer reps; or standing too close to the wall.

Legendary UCLA basketball coach, John Wooden, cautioned that one should never “confuse activity with achievement,” an insight that has direct relevance to how and why we structure and monitor dryland training as a critical component of our overall program. Our purpose is not simply to check a box or record a given number of repetitions but rather to use conscious override to execute challenging tasks with power and precision in the face of growing fatigue and the corresponding urge to slow or stop. Only by such repeated rigor are swimmers likely to realize the transformative effects of passionate and purposeful practice.