



## Strength Training's Bottom Lines

By Ken Mannie, Head Strength/Conditioning Coach, Michigan State University

**K**im Wood, one of the original strength and conditioning coaches in professional sports, has always provided both the young and old in the field with the little gems of professional wisdom worth tucking away in the memory banks.

Wood, the now retired, 28-year veteran of the Cincinnati Bengals, still has a great knack for putting an often-complicated discipline into proper perspective.

One of his favorite one-liners continues to stick with me: "Strength training is as much an art as a science."

As I get older, the wisdom in that statement continues to gain

momentum.

**Make no mistake:** There is, without question, a great deal of ever-evolving scientific data being disseminated in the strength-training arena. Enough, in fact, to overwhelm young coaches who have been assigned to the weight room with little or no experience. The ability to see the forest through the trees is the point that Kim is continuing to make.

Let's put the fire-storm of rep speed, sets, and exercise selection on the back burner for this discussion: How the underpinnings of a sound, practical, strength training program works regardless of philosophy nuances – strength training's bottom lines.

### SUPERVISION AND MOTIVATION

If you're not careful, it can be easy to drown in the sea of guru methodologies and lose sight of these two extremely vital components. Supervision and motivation will do as much – if not more – for the success of your program as anything else you can imagine.

Supervision serves as a segue to consistent gains and is a requisite from a liability standpoint. Even after several years of teaching and indoctrination, a coach should never assume that all of the athletes under his watch have mastered the training protocols and possess the desire to attack them

with commitment and dedication.

Additionally, it is our duty as coaches to direct all weight room operations with a keen eye focused on safety considerations.

**Here are some vital cues we stress to our staff and to each athlete in terms of being a good training partner:**

**1. “Coach” the athlete for the entire duration of the set.**

It is the coach’s/partner’s responsibility to make sure that all of the techniques and important safety guidelines are constantly emphasized. Don’t let your guard down with the attitude that “they know what to do.”

Communication must be a mainstay over the course of the entire workout and a staple in all weight-room activities

**2. Find and use the right motivational “buttons.”**

Athletes respond differently to various motivational strategies. It may take a while, but you must eventually unearth the approach that gets each athlete’s motor running in high gear.

**3. Assist, but don’t perform any unnecessary work for the lifter.**

Allow the lifter to do the brunt of the task at hand and only offer as much physical help as is needed to safely complete the set. This applies to movements where spotter assistance is both applicable and practical (e.g., bench press, squats, dumbbell movements, various machine modalities, etc.).

**4. Don’t invade the lifter’s space unless it’s absolutely necessary.**

In most exercises, there is little need for the spotter to attach himself to the lifter like a hood ornament. Step in and assist when necessary, but give the lifter room to operate. And when it is time to step in, do so with focus and positive reinforcement.

For the athletes, learning to become a competent training partner will give them greater insight into their own strength training and enable them to devise better strategies for everyone involved.

Competent supervision and motivational methods cultivate enthusiasm and heighten the concentration and intensity put forth in the workout. Even highly motivated, “self-starter” types benefit from a teammate who exhibits a genuine interest in the betterment of everyone in the room.

Going back to Kim’s statement, motivation is truly an art form. Enthusiasm is contagious, and the best way to motivate others is to be motivated yourself and bring that energy to every aspect of the training program. It doesn’t necessarily require any special training or a guest speaker presentation to get the message across – just a true, heartfelt belief in what you’re doing and the determination to help others be successful.

If every single athlete trains with passion and purpose – and brings both of those qualities when spotting his partner – an infrastructure of trust, unity, and credibility is quickly built within the team.

**CHOOSING TO WIN**

While there are certainly enough factors in physical improvement that are out of our control (e.g., genetically-based road blocks), there are enough controllable variables for us to corral and use to our benefit.

Here is just a short list of manageable criteria for success:

**• Working hard and smart.**

My grandfather used to tell me, “When you are thirsty, don’t sit around and wait until someone brings you a cup of water. Get yourself a good shovel and go help him dig a well!”

There is no substitute for hard work. We tend to lose sight of that key principle in this age of quick

fixes, mystical powders, wonder pills, and magical elixirs.

Sure, do it the right way – with integrity, a great plan, and excellent troubleshooting savvy – but be willing to roll-up your sleeves and attack the task with the great passion and enduring purpose previously mentioned.

**• Comprehensive training.**

Whether you choose to perform total body workouts, or have an affinity for split, upper/lower scripts, a blueprint must be established for training all of the body’s important muscle compartments. Even if it is done gradually over the course of a week or so, it is important to cover all bases from the neck to the ankles.

**• Commitment to consistent training habits and a healthy lifestyle.**

Living “right” is as close to being the zenith of successful training requirements, as you will find. Athletes cannot train with the required intensity and progressive work increments, while at the same time engaging in activities (e.g., alcohol, illicit drugs, late-night partying, etc.) that serve only to eventually destroy them as both athletes and people.

Additionally, a well-planned and properly balanced nutritional strategy is vitally important to the success of any training program. The body needs a constant supply of the proper nutrients for fuel, recovery, and growth. We’ve provided suggestions and tips in Powerline for adhering to a high-performance nutritional plan, and we will continue to do so in the future.

**• Rest and recover as needed.**

As difficult and challenging as a sound strength program may be, everyone involved must understand the importance of allowing the body an appropriate recovery period. **Allowances must be made over the course of the entire training calendar for these respites with considera-**

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tion given to the following paramount factors:

1. Weekly lifting schedule, frequency, duration, and intensity.
2. Weekly running schedule, frequency, duration, and intensity.
3. Practice schedule, frequency, duration, and intensity.
4. Competition schedule.

My advice is to pencil-in the "rest" periods on your staff calendar to emphasize their importance as an integral part of the overall program. Then, stick to them with the realization that a little time off may be just what the doctor ordered to recharge the players' batteries and get their competitive juices flowing again.

## FINAL REP

Motivation, comprehensive training, well-planned overload strategies, recovery allotments, and healthy lifestyle habits will yield high returns on the investment when they are con-

solidated into a workable scheme.

Strength training truly is as much an art as it is a science. And with a little extra time and effort, it can paint an absolutely beautiful picture.

## TIP FROM THE TRENCHES

### FUELING THE BODY:

**High-octane suggestions from the experts** – Following are some great nutrition tips from my two go-to guys on the subject, Scott Sehnert, MS, RD, and Joe Carlson, PhD, RD, who work daily with our Spartan athletes on all sports nutrition matters:

### PRE-TRAINING/GAME MEALS.

These meals should be eaten 3-5 hours before the event and should be high in carbohydrate (at least half of the total calories), moderate in protein, and low in fat (especially saturated fat).

Everyone is different with respect to the exact types and amounts of food they can tolerate prior to high-

intensity activities such as games and training sessions, but each athlete will eventually learn what works best for him/her. Consuming adequate fluids (at least 16-24 ounces) with the meal is vitally important.

### PRE-WORKOUT SNACKS.

These are highly recommended, particularly before a strenuous or long duration affair, or when two workouts per day are on the docket. A small snack is recommended 30-60 minutes before the training session that consists primarily of carbohydrate (30-50 grams), a modest amount of protein (7-10 grams), and very small amount of fat.

### RECOVERY AND MUSCLE BUILDING.

Eating after an intense workout or game is essential for recovery and preparation for the next workout/practice. Doing so helps replace carbohydrate stores in muscle tissue (glycogen), aids in repairing damaged muscle, and assists in building new muscle mass.

This is especially true during "two-a-days" and other situations when there is minimal recovery time between training sessions. If you do not eat a snack or meal after an arduous workout or game, the body tends to breakdown muscle for energy, which can result in muscle degradation.

Try to eat within 60 minutes of the completion of the session/contest, with an emphasis on carbohydrates (70-100 grams) and attention to quality protein consumption (20-30 grams).

Fluid intake, as a rule, should include at least three 8-12 ounce cups of water per pound of body fluid (as indicated by the scale) lost during the activity. – **Ken Mannie; [mannie@ath.msu.edu](mailto:mannie@ath.msu.edu)** ■

