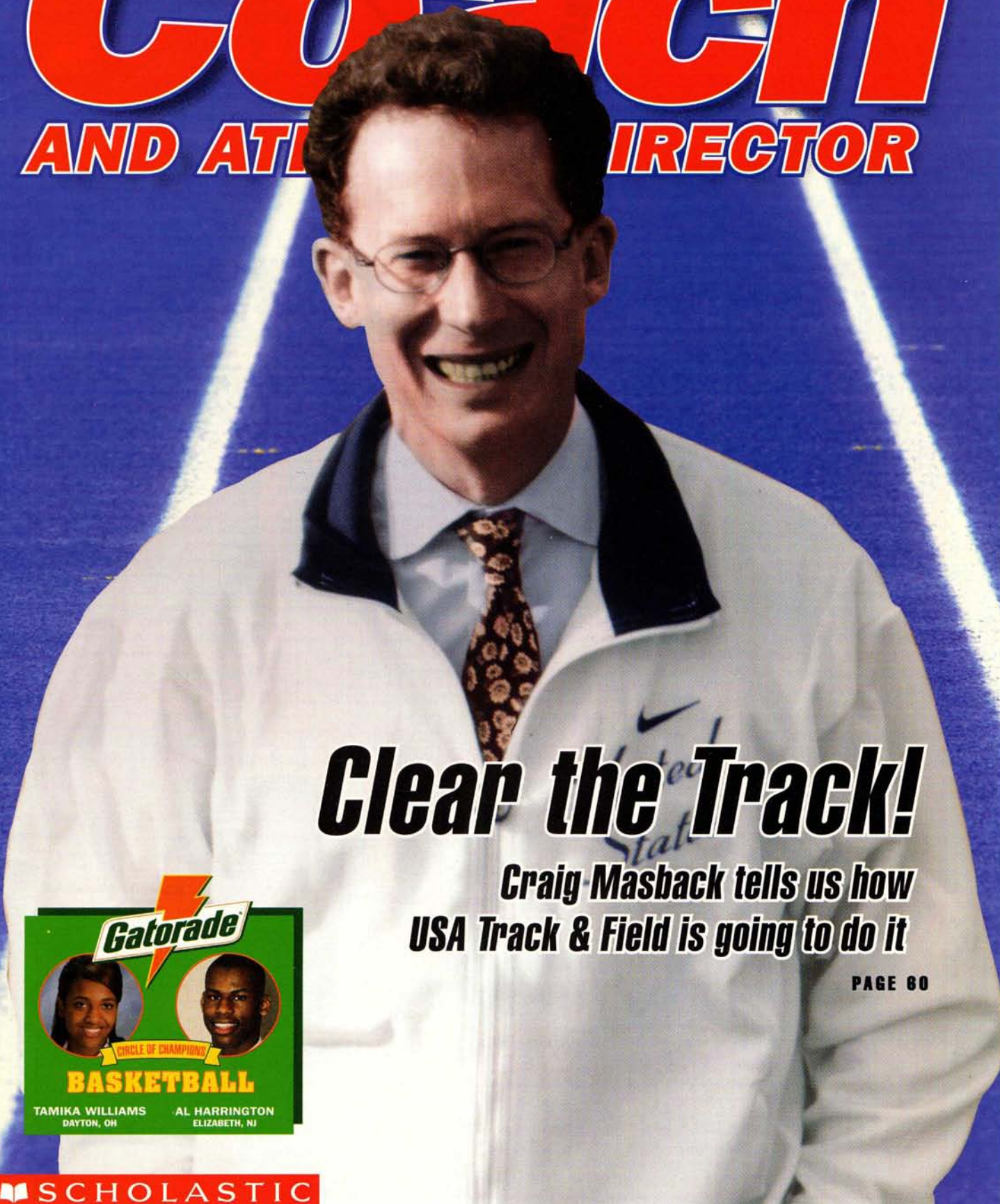


Coach



AND ATHLETIC DIRECTOR



Clear the Track!

**Craig Masback tells us how
USA Track & Field is going to do it**

PAGE 60



CIRCLE OF CHAMPIONS

BASKETBALL

TAMIKA WILLIAMS
DAYTON, OH

AL HARRINGTON
ELIZABETH, NJ

Strengthen Your Neck for Function & Safety

Since the neck is not a “show” muscle like the biceps and triceps, neck exercises are typically deemphasized or neglected altogether, except, of course, in the combative sports such as football and wrestling where a strong, thickly muscled neck is especially important in protecting the cervical area from traumatic injury.

In these two sports, the neck muscles are as indigenous to function and safety as any of the other muscles in the body. From a performance standpoint, it might also make sense to strengthen the neck in soccer, where heading is a major technique.

Injuries primarily occur whenever an outside force momentarily exceeds the structural integrity of the joint for which the activity is intended—a force that extends the muscle beyond its normal range of movement.

To reduce the potential for neck injury, coaches must require their athletes to strengthen the neck musculature.

ANATOMY/MUSCULAR FUNCTION

The primary muscles of the neck, namely the sternocleidomastoideus and the trapezius, provide support and produce a variety of different movements.

The sternocleidomastoideus has two parts, or “heads,” located on each side of the neck. They originate behind the ears and run down to the sternum (breastbone, and clavicles (collarbones). When both sides contract at the same time, the sternocleidomastoideus flexes the neck forward, bringing the head down toward the chest.

Whenever one side acts singly, it flexes the neck laterally toward the shoulder or rotates the neck to the side.

The trapezius is a kite-shaped muscle that covers the uppermost

region of the back and the posterior section of the neck. Its primary functions are to elevate the shoulders (as in shrugging), to adjust the scapulae (pinch the shoulder blades together), and to extend the neck in eight different ways: (1) flex the neck forward, (2) extend the neck backward, (3-4) flex the neck laterally to the left and the right, (5-6) rotate the neck to the left and the right, (7) elevate the shoulders, and (8) adduct the shoulder blades.

To develop the neck properly, the conditioner will have to prescribe for as many of the various functions as possible.

NECK EXERCISES

The four primary movements for exercising the neck muscles are:

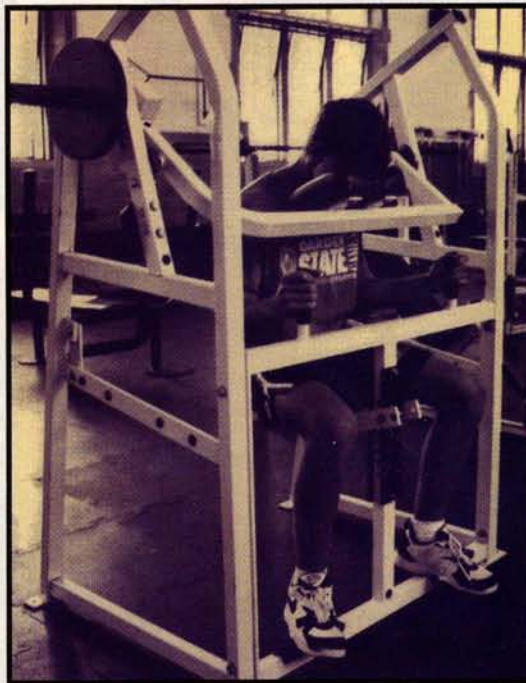
1. Neck Extension: this exercise works the sternocleidomastoideus (both sides acting together). It is most often performed on machines (selectorized and plate-loading) or with manual resistance.

2. Neck Flexion: Targets the trapezius and neck extensors. Usually performed on machines (selectorized and plate-loading) or with manual resistance.

3. Neck Lateral Flexion: The sternocleidomastoideus (one side acting singly) is utilized during this movement. The exercise is most often done on machines (selectorized and plate-loading).

4. Shoulder Shrug: The best exercise for isolating the trapezius muscle. It can be performed with a barbell, dumbbells, trap bar or machines (selectorized and plate-loading).

Though it's difficult to find a device that can exercise the neck in a rotary fashion, the same machine used for performing the lateral flexion of the neck may be used for this exercise. (See No. 3.)



By Matt Brzycki, Coordinator of Health Fitness,
Strength & Conditioning, Princeton University

General Guidelines

1 Exercise the neck at the beginning of the workout, devoting the full attention to the exercises for the cervical area. Avoid doing it at the end of a workout, almost as an afterthought. The neck exercises should be done while the athletes are fresh both physically and psychologically.

2 Focus on raising the reps with proper technique—raising the resistance (without using the momentum) in about 1 to 2 seconds, pausing distinctly in the contracted (or mid-range) position, and lowering the resistance under control in about 3 to 4 seconds.

What you are doing, in short, is raising the resistance with the targeted muscles rather than with the momentum, and minimizing the risk of injury.

Each repetition should be performed throughout the full range of motion, allowing you to maintain or perhaps improve your flexibility and to exercise the entire muscle, not just a portion of it.

3 Fatigue the neck muscles with 8 to 12 reps or 40 to 70 seconds. A desirable level of fatigue is achieved when the muscles are exhausted to the point that you cannot literally perform another rep. Sets of less than 8 reps significantly increase the risk of injury. Whenever the set exceeds 12 reps, it becomes a test of endurance rather than strength.

4 Overload the neck muscles by steadily and systematically increasing the work load throughout the course of the strength-training program.

To overload the muscles, athletes must attempt to increase either the resistance or the reps performed in their previous workout. Each time the maximum number of reps is attained, the resistance should be increased (in the next workout).

Whenever the maximum number of reps cannot be achieved, the athlete must use the same resistance in his next workout, but make the effort to increase the number of reps.

5 Record the amount of resistance and the number of reps in the workouts. In short, make up a history of what the athletes accomplished during each and every exercise in the strength session. This data can become an extremely valuable tool in monitoring progress and making the workout more meaningful.

The workout card can also be used to identify exercises in which athletes have reached a plateau, as well as gauge the effectiveness of a rehabilitative process in case of injury by furnishing a record of the pre-injury strength levels.

6 Exercise the neck 2 to 3 times per week on alternative days 3 times out of season and 2 times in season (but not within 48 hours of a competition). Neck exercises should never be done immediately before a practice session or a competition.

Coaches of combative sports who do not have a mandatory neck-exercise program are exposing their athletes to traumatic injury. The potential for injury can be greatly reduced with a little effort. ■

The Lifeline[®] Leaper[™]



"The most explosive vertical jump trainer on the market!"

Steve Myrland - Head Strength Coach
at a Big 10 University

The Leaper is the ONLY...

- ▶ Stationary & PORTABLE jump machine in one
- ▶ Training tool that instantly changes workload for improved sports performance.

You will improve...

- ▶ Vertical jump 8-14 inches
- ▶ Power and agility
- ▶ 40 yd dash time by .2 seconds

The Portable Leaper...

- ▶ Resistive jumping or running movement anywhere, anytime
- ▶ Increase vertical 5-10 inches
- ▶ Improve power, agility & speed

Complete
Lifeline Leaper Pkg.
**JUST
\$195⁹⁵**

The Portable
Leaper is also
available by itself
for only \$29.95
ORDER TODAY!

1-800-553-6633

Website <http://www.lifeline-usa.com>