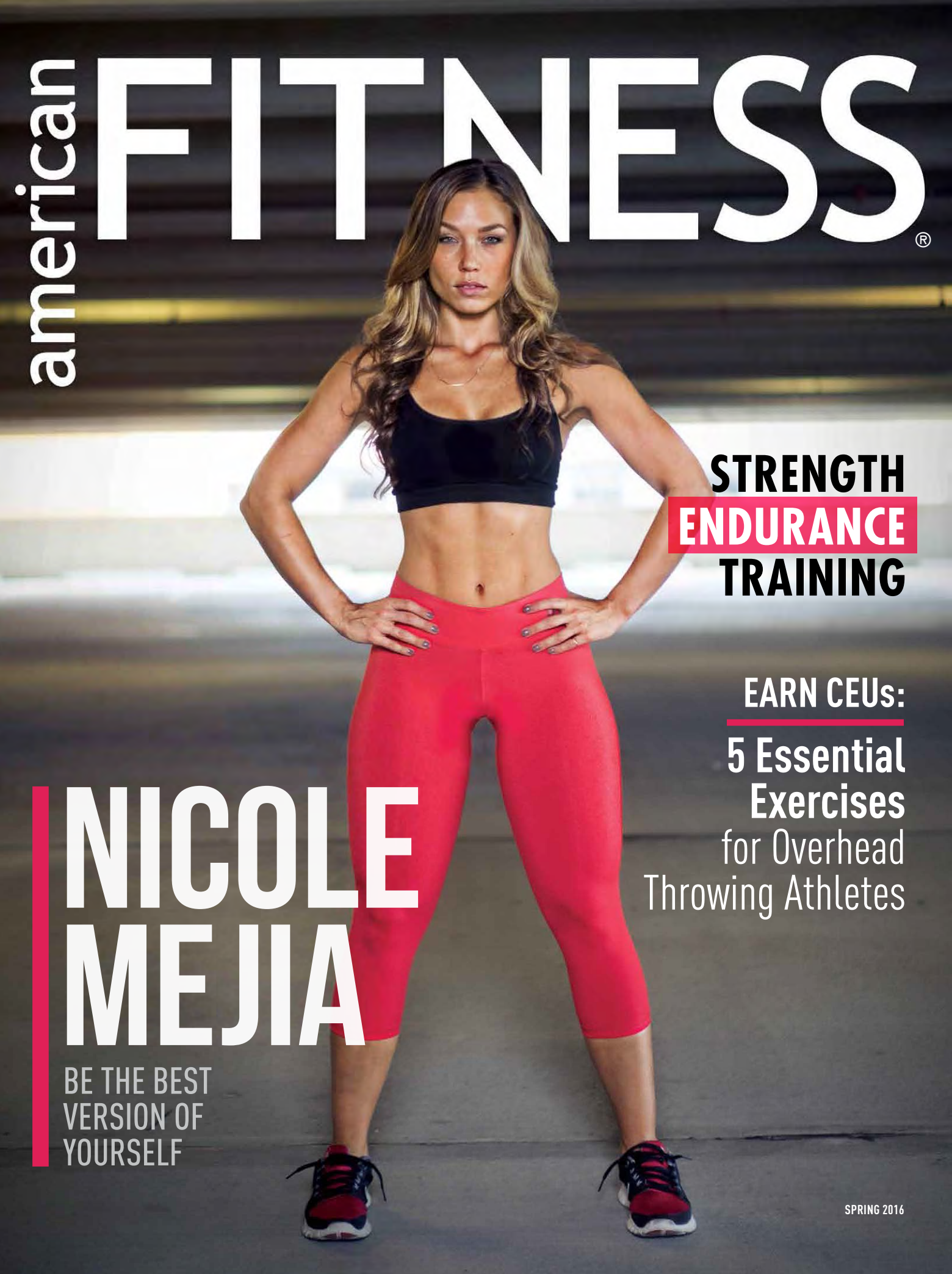
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AF Q+A

BY MATT BRZYCKI

WHAT EFFECT DOES ACTIVE VIDEO GAMING HAVE ON APPETITE?

Active gaming—aka "exergaming"—simulates playing sports or doing activities. This allows kids to get "screen time," yet be active. But how much does it really increase caloric expenditure?

In one study, researchers randomly assigned 26 boys (average age 14.5) to three conditions on three separate occasions: rest, seated game play and active game play. Prior to each condition, the subjects received a standard breakfast. Each condition lasted one hour followed immediately by lunch in which the subjects were free to eat as much as they wanted.

The subjects used significantly more calories during active gaming than the other two conditions. However, there was no significant difference in calorie intake at lunch or after 24 hours.

But let's not kid ourselves. Although active gaming uses more calories than sedentary gaming, nothing can take the place of actually participating in a real sport or activity. Parents should understand that active gaming isn't a license to grant more screen time.

IS IT BETTER TO EXERCISE IN THE MORNING OR EVENING?

For many years, it has been thought that physical performance is always greatest in the evening. Recent research has uncovered findings to the contrary.

In a study, 26 swimmers (average age 32.6) were randomly assigned to swim 200 meters as fast as possible on two separate occasions, once at 6:30 in the morning and once at 6:30 in the evening. The two conditions were separated by at least three days.

The researchers found that, on average, performance differed between the morning and evening by a little less than one-third of a second. In looking more closely, 14 subjects swam 2.3 seconds faster in the morning and 12 subjects swam 3.2 seconds faster in the evening. Nonetheless, there was no significant difference between the two performances.

Interestingly, the subjects who had a morning "clock gene" and habitually trained in the morning swam faster in the morning condition while the subjects who had an evening "clock gene" and habitually trained in the evening swam faster in the evening condition.

ARE SPLIT ROUTINES BETTER THAN TOTAL-BODY ROUTINES?

Split routines and total-body routines represent two ways in which fitness enthusiasts organize their training. With a split routine, different muscles are trained on different days; with a total-body routine, all muscles are trained on the same day.

Researchers randomly assigned 20 men (average age 23.5) to two groups: One group did three workouts per week, focusing on two or three muscle groups per workout; the other group did three workouts per week, addressing all muscle groups in each workout. Over the course of a week, both groups performed the same 21 exercises for an identical number of sets and reps.

After eight weeks, there were no significant differences between the groups in maximum strength in the bench press and squat, nor muscle thickness of the forearm extensors and thigh. However, those doing a total-body routine had a significantly greater increase in muscle thickness of the forearm flexors.

Bottom line: Split routines are no more effective than total body routines and, in at least one area, the opposite appears to be true.

MATT BRZYCKI *is the Assistant Director of Campus Recreation, Fitness at Princeton University. He has more than 30 years of experience at the collegiate level and has authored, co-authored and edited 17 books.*

REFERENCES:

GRIBBON, A., ET AL. "ACTIVE VIDEO GAMES AND ENERGY BALANCE IN MALE ADOLESCENTS: A RANDOMIZED CROSSOVER TRIAL." *THE AMERICAN JOURNAL OF CLINICAL NUTRITION*, 101, NO. 6 (2015): 1126-34.

RAE, D.E., STEPHENSON, K.J. AND RODEN, L.C. "FACTORS TO CONSIDER WHEN ASSESSING DIURNAL VARIATION IN SPORTS PERFORMANCE: THE INFLUENCE OF CHRONOTYPE AND HABITUAL TRAINING TIME-OF-DAY." *EUROPEAN JOURNAL OF APPLIED PHYSIOLOGY*, 115, NO. 6 (JUN 2015): 1339-49.

SCHOENFELD, B.J., ET AL. "INFLUENCE OF RESISTANCE TRAINING FREQUENCY ON MUSCULAR ADAPTATIONS IN WELL-TRAINED MEN." *JOURNAL OF STRENGTH AND CONDITIONING RESEARCH*, 29, NO. 7 (JUL 2015): 1821-29.