

Quiz Policies

Eligibility

The NCSF online quizzes are open to any currently certified fitness professional, 18 years or older.

Deadlines

Course completion deadlines correspond with the NCSF Certified Professionals certification expiration date. Students can obtain their expiration dates by reviewing either their certification diploma or certification ID card.

Cancellation/Refund

All NCSF continued education course studies are non-refundable.

General Quiz Rules

- You may not have your quiz back after sending it in.
- Individuals can only take a specific quiz once for continued education units.
- Impersonation of another candidate will result in disqualification from the program without refund.

Disqualification

If disqualified for any of the above-mentioned reasons you may appeal the decision in writing within two weeks of the disqualification date.

Reporting Policy

You will receive your scores within 4 weeks following the quiz. If you do not receive the results after 4 weeks please contact the NCSF Certifying Agency.

Re-testing Procedure

Students who do not successfully pass an online quiz have the option of re-taking. The fees associated with this procedure total \$15 (U.S) per request. There are no limits as to the number of times a student may re-test.

Special Needs

If special needs are required to take the quiz please contact the NCSF so that appropriate measures can be taken for your consideration.

Quiz Rules

What Do I Mail Back to the NCSF?

Students are required to submit the quiz answer form.

What do I Need to Score on the Quiz?

In order to gain the .5 NCSF continued education units students need to score 80% (8 out of 10) or greater on the CEU quiz.

Where Do I Mail My Quiz Answer Form?

You will mail your completed answer form to:

NCSF

Attn: Dept. of Continuing Education

5915 Ponce de Leon Blvd., Suite 60

Coral Gables, FL 33146

How Many CEUs Will I Gain?

Professionals who successfully complete the any continuing education quiz will gain .5 NCSF CEUs per quiz.

How Much does each quiz cost?

Each quiz costs the student \$15.00.

What Will I Receive When The Course Is Completed?

Students who successfully pass any of the NCSF online quizzes will receive their exam scores, and a confirmation letter.

How Many Times Can I Take The Quizzes For CEUs?

Individuals can take each NCSF quiz once for continuing education credits.

Wii Fitness

Competition is heating up as other companies enter the active video gaming (AVG) sector to challenge the Wii. Children and adults alike have taken to the fun associated with physically interactive games. In fact, manufacturers suggest that these games may be an important part of modern lifestyle activities. Several recent research studies have explored the actual contribution these games have on daily energy expenditure with mixed reviews. *The Journal of Science and Medicine in Sport (2010)* examined gaming outcomes in energy expenditure for 11 and 12 year old boys (n=26). Subjects participated in both sedentary (resting, watching television and sedentary gaming), and active playing activities on the Nintendo Wii (Bowling, Boxing, Tennis, and Wii Fit Skiing and Step), as well as performed traditional walking and running, including a maximal fitness test.

The active video gaming resulted in statistically significant higher energy expenditure when compared to the sedentary activities. Interestingly, researchers found no significant differences in energy expenditure between the most active video games and normal walking. Researchers concluded, that although boys expend more energy during active gaming compared to sedentary activities, the actual energy expenditure is video game-specific and even the most active of the games tested were not intense enough to contribute toward the recommended 60 minutes of daily moderate-to-vigorous physical activity.

In a related review published in the *Archives of Pediatric and Adolescent Medicine (2010)*, researchers reviewed the literature to identify the levels of metabolic expenditure and changes in activity patterns associated with active video game play in children. Investigators analyzed twelve studies of energy expenditure during

AVG play compared with rest and six studies of activity associated with AVG exposure. Activity levels varied among AVG game play. Energy expenditure was significantly lower for games played primarily through upper body movements compared with those that primarily engaged the lower body. Researchers concluded that active video gaming can elicit light to moderate physical activity, but that there was not enough evidence to draw conclusions on the long-term efficacy of AVGs for adequate physical activity promotion.

Active video gaming is not just for kids. To demonstrate the potential impact of AVG on adults, researchers from National Institute of Health and Nutrition, Tokyo, Japan analyzed the energy expenditure of adults while participating in Wii Fit Plus and Wii Sports game activities. The research published in *Medicine and Science in Sports and Exercise (2010)* used twelve adult men and women. Each performed five activities of Wii Sports (golf, bowling, tennis, baseball, and boxing) and 63 activities of Wii Fit Plus (yoga, resistance, balance, and aerobic exercises). Each activity was continued for at least 8 minutes while energy expenditure was assessed in an open-circuit indirect metabolic chamber. Investigators calculated MET value from resting and steady-state energy expenditure during each activity. The mean MET values of all 68 activities ranged widely, from 1.3 METs (yoga) to 5.6 METs (resistance). The mean MET values in Wii Fit Plus was 2.6, with resistance training and aerobic activities demonstrating the highest yield, while the mean of Wii Sports was 3.0 METs. Of all the activities examined, 46 averaged less than 3 METs, and were classified as light intensity, and 22 activities were classified as moderate intensity (defined by a measure between 3.0-6.0 METs). No activities reached the vigorous-intensity level (>6.0

METs). Researchers concluded that adults may use the most physically demanding activities of AVG as part of a strategy to meet the goal of at least 30 minutes of moderate exercise five days a week.

Although the AVG activities are relatively low in intensity they still are associated with a risk for injury. A review of the literature demonstrates that active video gaming increases one's risk for soft tissue injury and even the potential of fractures. It is unclear whether it is a matter of overuse or overexertion but recent peer articles including studies published in *Informatics in Primary Care (2009)* and *Physician and Sports Medicine (2009)* demonstrate the plausible concern for AVG injury. Researchers reviewed the database of self-reported Wii related injuries and categorized the data by type of injury and game-related injury to investigate if there were any identifiable injury patterns associated with Wii use. Although the likelihood of injury being reported is very low, 39 Wii related injuries were documented over a two-year span (2007-2009). A particularly high percentage (46%) occurred while playing the Wii Sports Tennis. In addition, investigators found 14 distinct injury patterns (including laceration) were sustained during AVG play. According to the National Electronic Injury Surveillance System (NEISS) for 2007, results indicated that females were more prone to injuries and the mean age for injury was 16 years. Consistent with the aforementioned, the NEISS stated most injuries were soft tissue in nature and located in the shoulders, hands and fingers, face and neck region although Wii knee, Wii shoulder, and Wii elbow have been discussed in the literature.

Even with the possible risk of overuse/exertion the active video games have demonstrated positive outcomes for (ironically) the elderly population. In a study published in the *Health Promotion Journal of Australia (2010)*

researchers interviewed direct care staff in 54 centers that used the Wii technology. Based on responses researchers found those considered "more able" clients easily mastered the Wii activities with minimal risk. Additionally respondents reported that the active gaming activities provided health promoting physical benefits including improvements in mobility, range of motion, dexterity, coordination, distraction from pain along with psychosocial gains such as social engagement, self-esteem, mastery, and ability to pacify challenging behaviors. Caretakers reported the active games were a useful adjunct to other care practices within these aged-care and disabilities services. The authors concluded based on staff interview that "Wii activities provided purposeful and meaningful opportunities to promote wellbeing for aged and disabled clients within an aged-care and disability service." The caretakers though suggested those clients who had significant cognitive and/or physical disabilities did not find the same success. These outcomes are likely associated with the MET levels identified in the previous studies, as light exercise is known to be better tolerated by those with higher faculties in an assisted care environment.

Based on the findings it seems that AVG activities provide benefit when they replace sedentary behavior and may be a suitable adjunct for those in assisted living facilities. Adults and children alike may enjoy the activities on a routine basis with limited risk based on the literature, but warning of risks related to overuse or over exertion are increasing in anecdotal reports and practical environments. Any physical activity is a move in the right direction and video gaming can certainly play a role, but as it stands, active video games have not replaced the need for routine exercise. If video games are a part of a strategy for increased physical activity a variety of actions should be employed to prevent overuse injuries and balance health related components of fitness.

Wii Fitness CEU Quiz

1. Based on the reported findings from the article, active gaming resulted in a statistically _____ energy expenditure compared to sedentary activities.
 - a. Insignificant
 - b. Higher
 - c. Lower
 - d. Comparable
2. True or False. There was no significant difference between the energy expenditure of normal walking and that experienced with the most active video gaming.
 - a. True
 - b. False
3. Which is true of actual energy expenditure from children engaged in active gaming?
 - a. The intensity was too low to contribute to the recommended 60 minutes of daily moderate-to-vigorous physical activity.
 - b. The intensity was high enough to contribute to the recommended 60 minutes of daily moderate-to-vigorous physical activity.
 - c. The intensity was so high it contributed to the suggested 30 minutes of vigorous physical activity per day.
 - d. None of the above are correct.
4. Active gaming that utilized primarily upper body movements resulted in significantly _____ energy expenditure than gaming that used primarily lower body movements.
 - a. Less
 - b. More
 - c. The same

5. According to published research how many activities from the Wii Fit Plus and Wii Sports games were able to elicit >6.0 METs, meeting requirements for vigorous intensity physical activity?
 - a. 0
 - b. 22
 - c. 46
 - d. 68

6. For the adult population, utilizing the most active Wii games _____.
 - a. Is not enough to help increase energy expenditure
 - b. Is an effective way to maximize muscle mass
 - c. Can help meet the recommended goal of at least 30 minutes of moderate exercise five days/week
 - d. Is all they need to do to lose weight effectively

7. According to the published literature, active gaming _____ one's risk of soft tissue injury and fractures.
 - a. Decreases
 - b. Increases
 - c. Does not affect
 - d. Minimizes

8. Of the reported injuries from Wii gaming from 2007-2009, approximately _____ occurred as a result of Wii Tennis.
 - a. 20%
 - b. 46%
 - c. 55%
 - d. 76%

9. According to the National Electronic Injury Surveillance System (NEISS) who is most likely to be injured as a result of active gaming?
 - a. Older males (>55 years old)
 - b. Adolescent females (average age 16)
 - c. Young girls (8-12 years old)
 - d. Seniors (>65 years of age)

10. Which of the following benefits was observed in the older adult population that engaged in Wii active gaming?
- a. Improvements in mobility
 - b. Greater range of motion (ROM)
 - c. Improved dexterity and coordination
 - d. All of the above

Quiz Answer Form

FIRST NAME _____ LAST NAME _____ M.I. _____

TITLE _____

ADDRESS _____ APT. _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

COUNTRY _____ POSTAL CODE _____

CERTIFICATION NO. _____ CERTIFICATION EXP. ____/____/____

MEMBERSHIP NO. _____ MEMBERSHIP EXP. ____/____/____

Quiz Name	Member Price	Total
	\$15	



Discover



Visa



Mastercard



Amex



Check/Money Order

Account No. _____

Exp. Date _____

Security Code _____

Signature _____

Date _____

Quiz Answers

- | | |
|----------|-----------|
| 1. _____ | 6. _____ |
| 2. _____ | 7. _____ |
| 3. _____ | 8. _____ |
| 4. _____ | 9. _____ |
| 5. _____ | 10. _____ |

Fill in each blank with the correct choice on the answer sheet. To receive 0.5 CEUs, you must answer 8 of the 10 questions correctly.

Please mail this Quiz answer form along with the proper enclosed payment to:

NCSF
5915 Ponce de Leon Blvd., Suite 60
Coral Gables, FL 33146

Questions? 800-772-NCSF