

2013 Physical Fitness and Motor Skills Test Overview

5 Overview of Survey Results

(1) Trends in Physical Fitness and Motor Skills with Age (Figures 1–1~8)

The three categories of: Grip Strength (muscle strength), Sit-ups (muscle strength/endurance), and Sit & Reach (flexibility) are tested for ages 6to79 years, and the three categories of Side Step (agility), 20 Meter Shuttle Run (full body endurance), and Standing Long Jump (muscle power) are tested for ages 6to64 years.

Trends accompanying aging are shown in figures 1–1 to 1–8 for: Grip Strength, Sit-ups, Sit & Reach, Side Step, 20 Meter Shuttle Run, Standing Long Jump, and well as for overall scores in the New Physical Fitness Test.

- There is variation depending on the category, but as an overall trend for both males and females the level of fitness when aging has increased. For males in their youth (6to19), their peak fitness is reached at 17 years old; for females that peak is at 14 years old. For both males and females 20 years and older, the change in fitness level that accompanies aging shows a slow, gradual declining trend. In the case of grip strength (muscle strength), males reach their peak at 30to34 years old and females at 40to44 years.

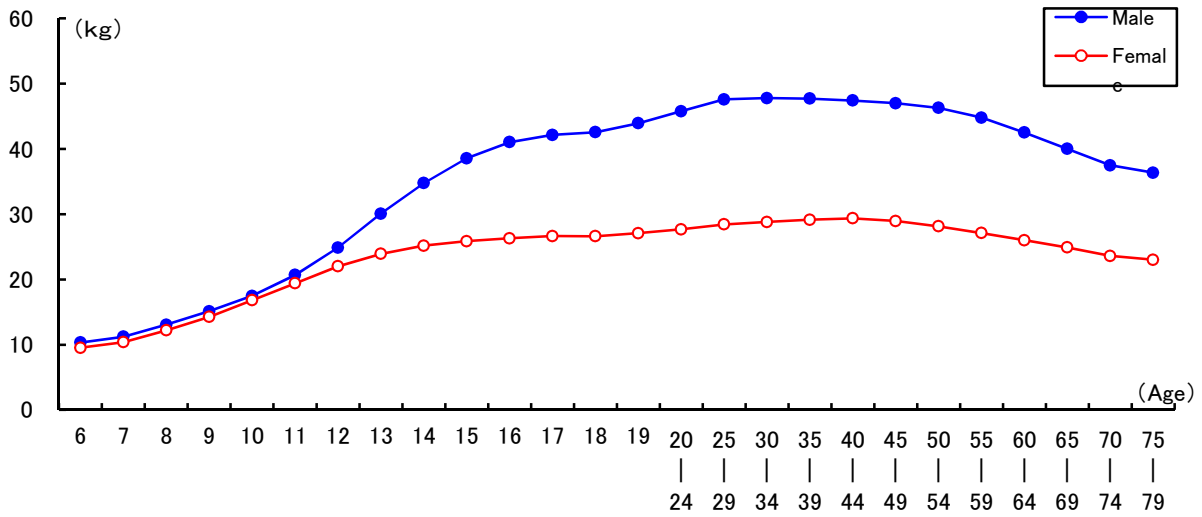


Figure 1-1 Changes in Grip Strength with Age
 (Note:) Figure simplifies data using 3 point moving average method.

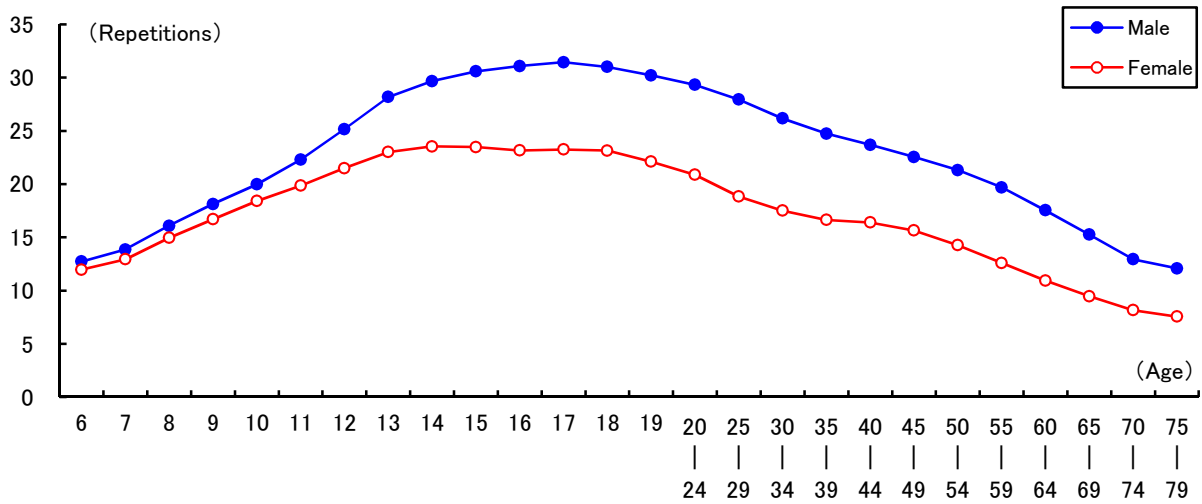


Figure 1-2 Changes in Sit-ups with Age
 (Note:) See note for Figure 1-1.

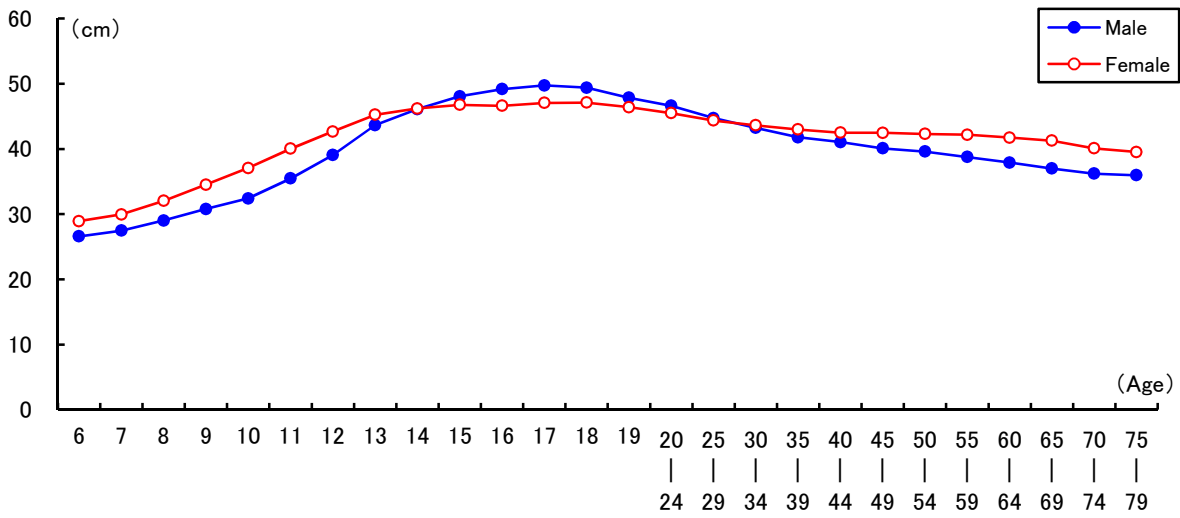


Figure 1-3 Changes in Sit & Reach with Age
 (Note:) See note for Figure 1-1.

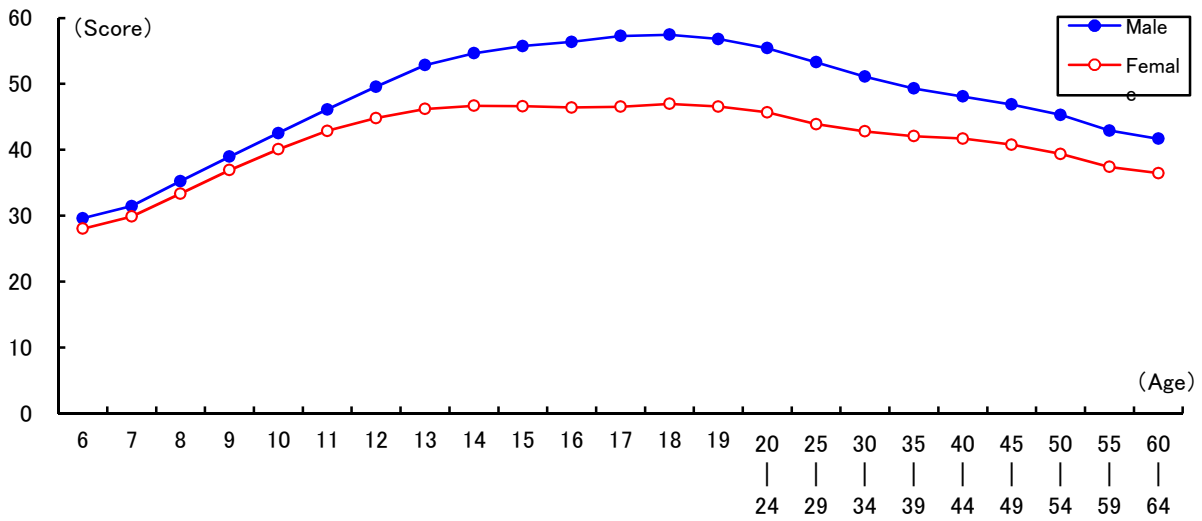


Figure 1-4 Changes in Side Step with Age
 (Note:) See note for Figure 1-1.

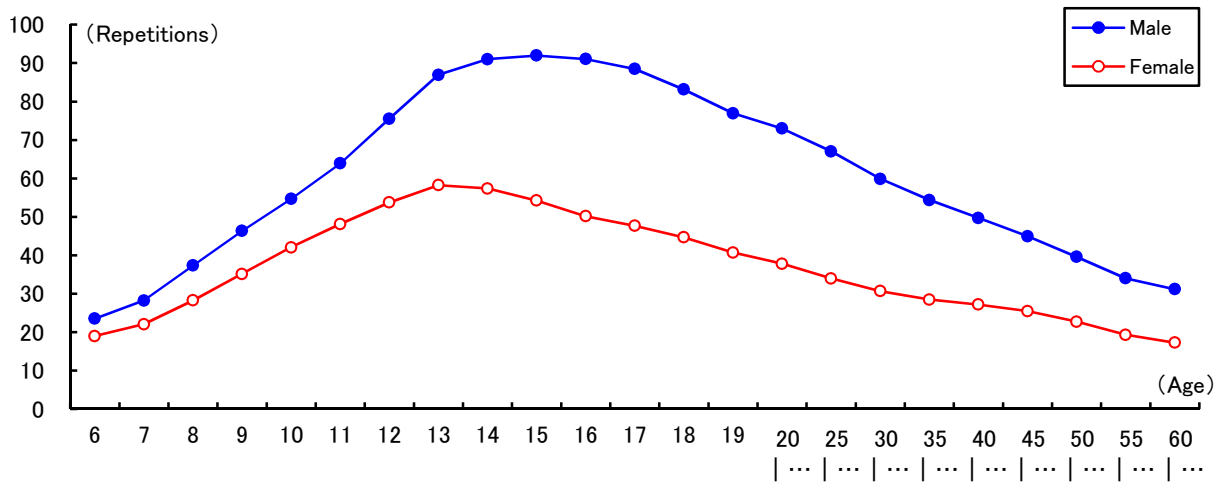


Figure 1-5 Changes in 20 Meter Shuttle Run (Endurance Shuttles) with Age
 (Note:) See note for Figure 1-1.

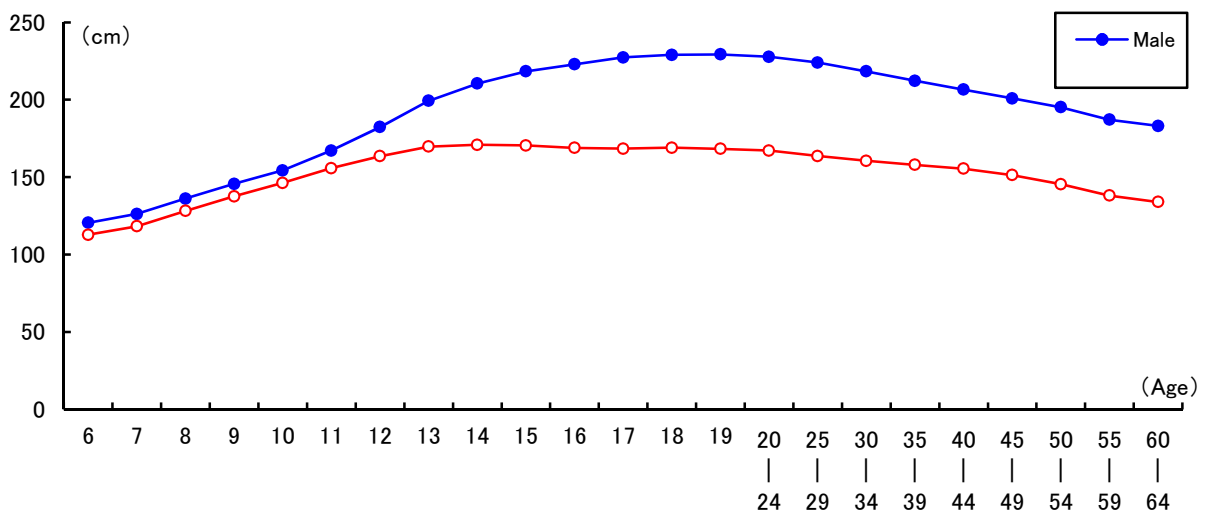


Figure 1-6 Changes in Standing Long Jump with Age
 (Note:) See note for Figure 1-1.

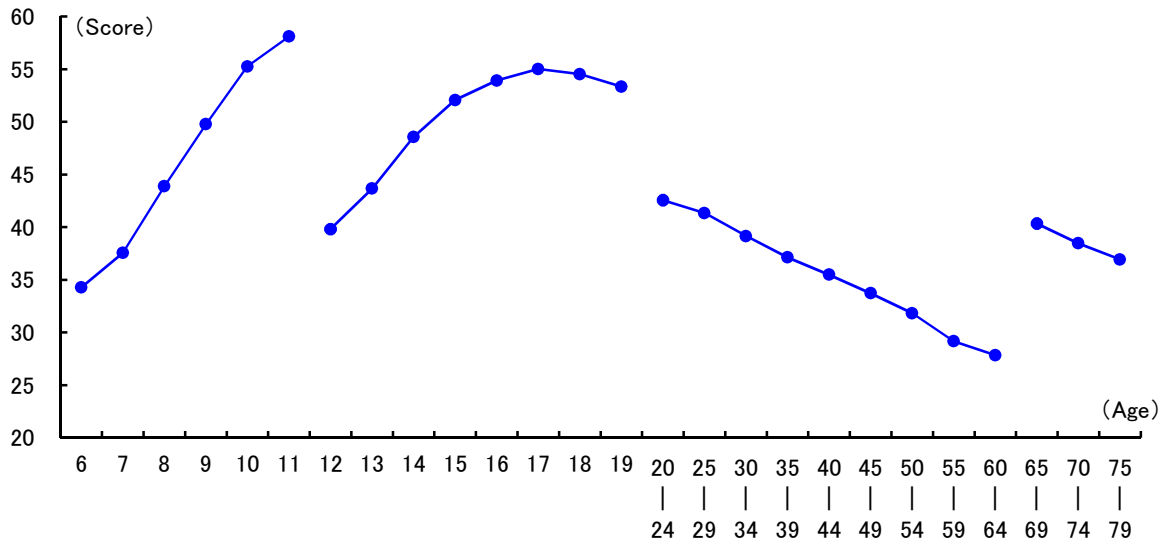


Figure 1-7 Changes with Age in Overall Scores for New Physical Fitness Test (Males)

- (Note:)
1. Figure simplifies data using 3 point moving average method.
 2. Overall scores are based on the "Scores by Category" Figure for the New Physical Fitness Test's evaluated categories.
 3. Score measurement scale varies for age groups: 6-11yrs, 12-19yrs, 20-64yrs, and 65-79yrs.

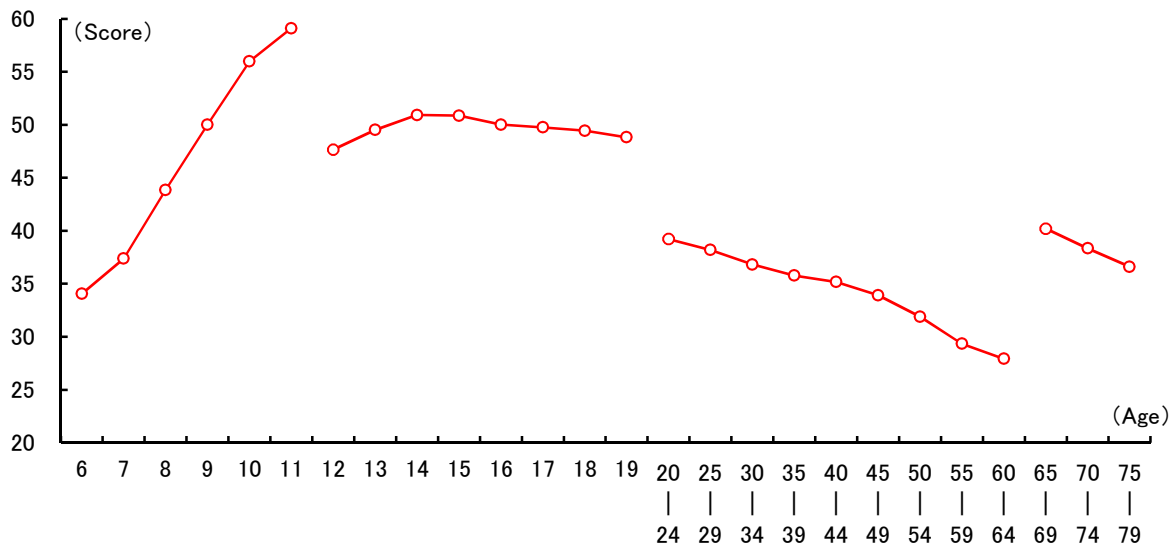


Figure 1-8 Changes with Age in Overall Scores for New Physical Fitness Test (Females)

(Note:) See note for Figure 1-7.

(2) Yearly Trends in Physical Fitness and Motor Skills

1. Youth (6 to 19 years old) (Figures 2–1~20)

Figures 2–1 to 2–10 show data for categories measuring basic motor fitness for which long term trends can be compared, such as grip strength and running (50 Meter Run/Endurance Run), jumping (Standing Long Jump), throwing (Softball Throw/Handball Throw), etc. In addition, figures 2–11 to 2–20 show yearly trends for Sit-ups, Sit & Reach, Side Step, 20 Meter Shuttle Run, and overall scores for the New Physical Fitness Test.

- Looking over the long term, categories involving grip strength and running, jumping, and throwing skill—with the exception of junior high school males' 50 Meter Run and Handball Throw and high school males' 50 Meter Run—are all at a lower-than-ever level compared with the period around 1985.
- Looking at basic motor fitness in the 16 year period since the implementation of the New Physical Fitness Test, the following categories involving running, jumping, and throwing show static or improved scores except in some age groups: Endurance Run, 20 Meter Shuttle Run, 50 Meter Run, Standing Long Jump, and Softball/Handball Throw.
- Looking at yearly trends in overall scores in the 16 year period since the implementation of the New Physical Fitness Test, one can see slow, mild improvement in most age groups.

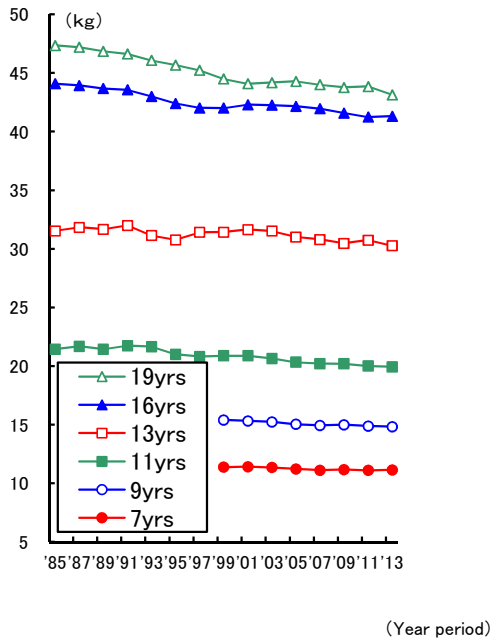


Figure 2-1 Grip Strength Yearly Trends (Males)
 (Note:) Figure simplifies data using 3 point moving average method.
 Seconds
 Year period

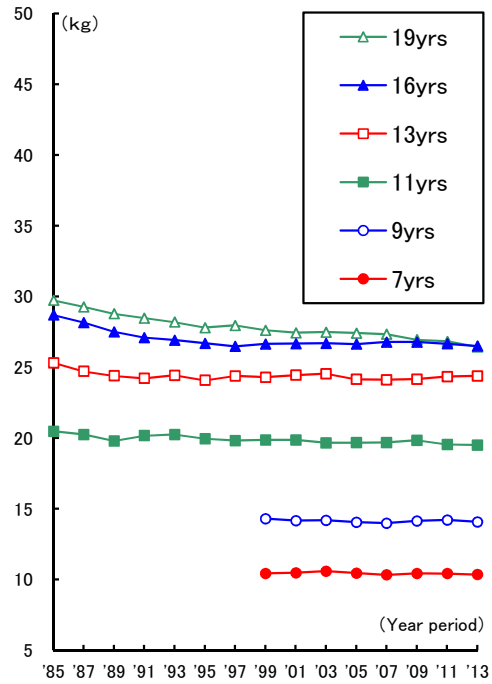


Figure 2-2 Grip Strength Yearly Trends (Females)
 (Note:) See note for Figure 2-1.

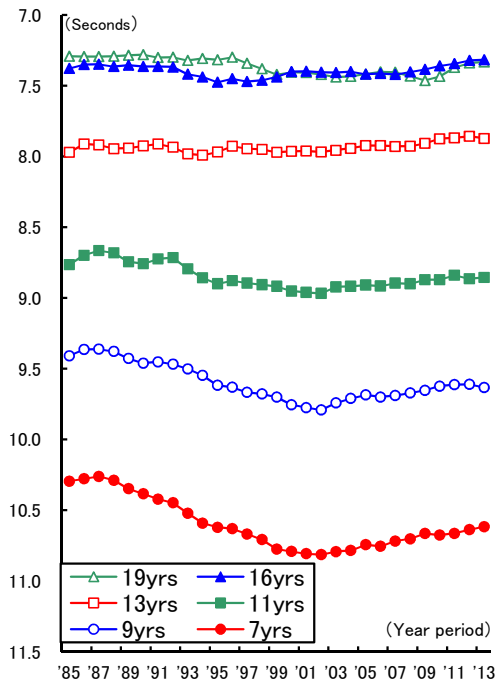


Figure 2-3 50 Meter Run Yearly Trends (Males)
 (Note:) See note for Figure 2-1.

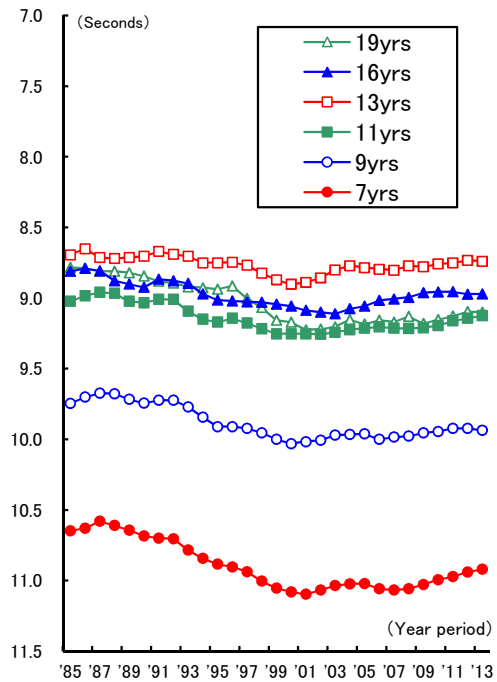


Figure 2-4 50 Meter Run Yearly Trends (Females)
 (Note:) See note for Figure 2-1.

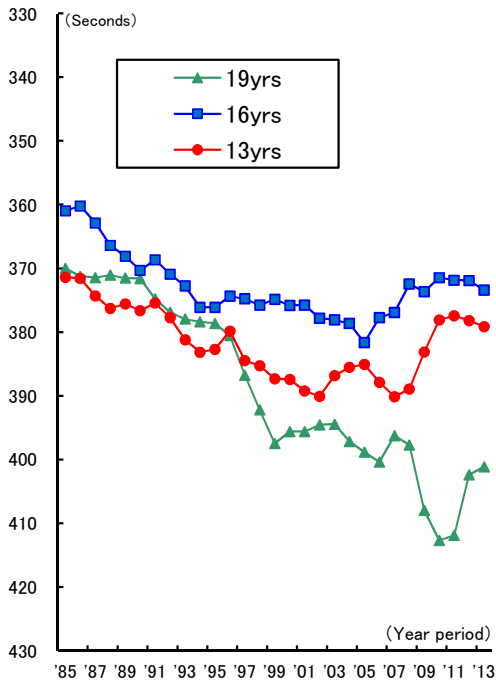


Figure 2-5 Endurance Run (1,500m) Yearly Trends (Males)
(Note:) See note for Figure 2-1.

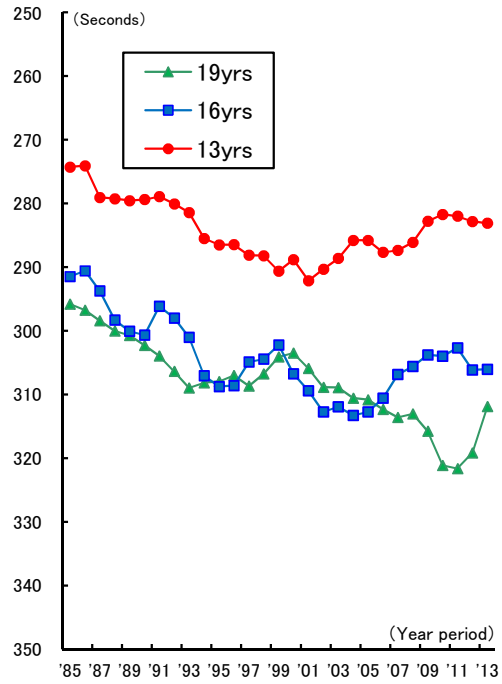


Figure 2-6 Endurance Run (1,000m) Yearly Trends (Females)
(Note:) See note for Figure 2-1.

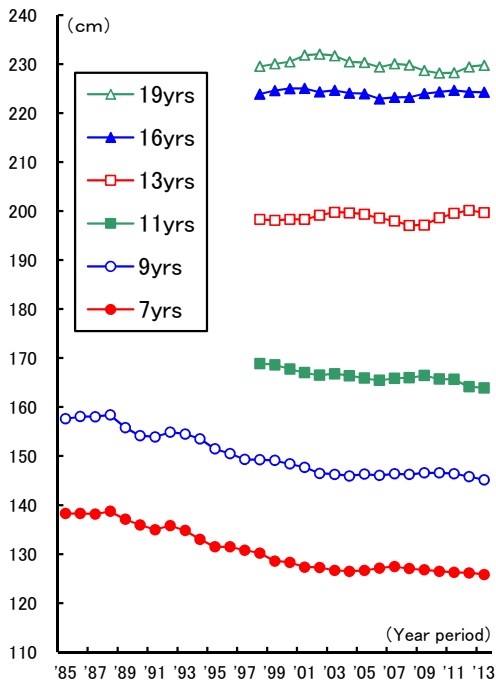


Figure 2-7 Standing Long Jump Yearly Trends (Males)
(Note:) See note for Figure 2-1.

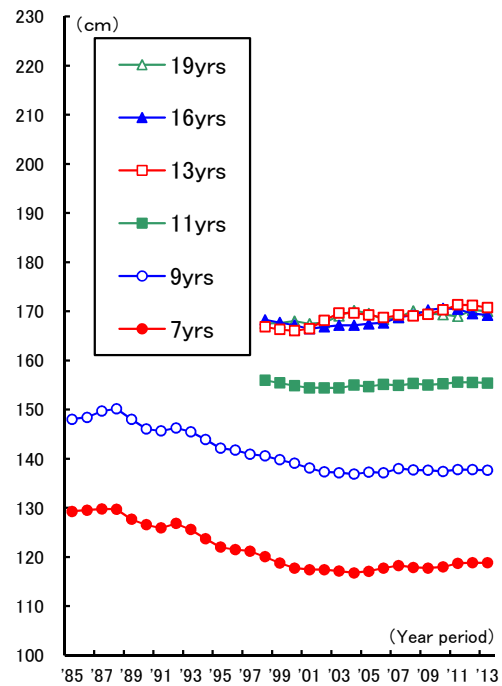


Figure 2-8 Standing Long Jump Yearly Trends (Females)
(Note:) See note for Figure 2-1.

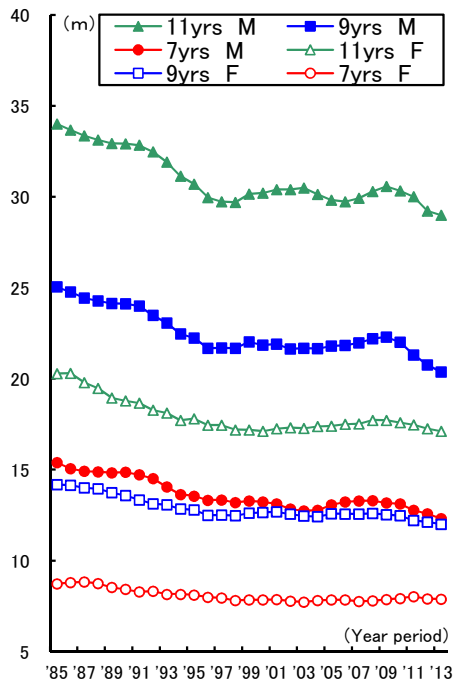


Figure 2-9 Softball Throw Yearly Trends
(Note:) See note for Figure 2-1.

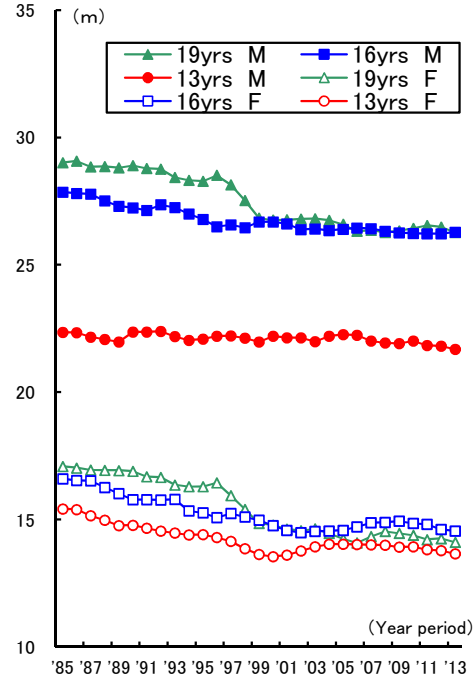


Figure 2-10 Handball Throw Yearly Trends
(Note:) See note for Figure 2-1.

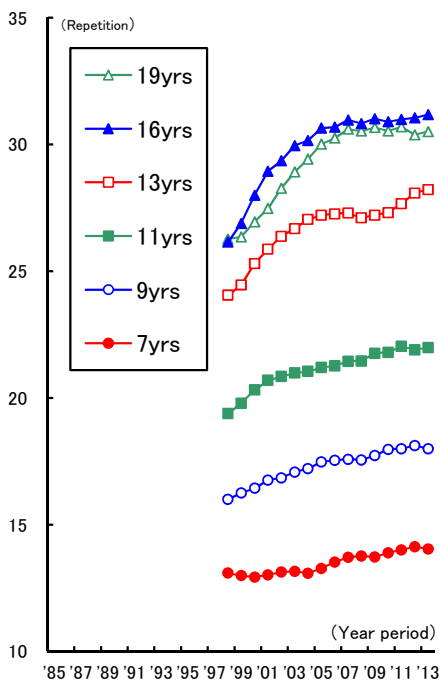


Figure 2-11 Sit-ups Yearly Trends (Males)
(Note:) See note for Figure 2-1.

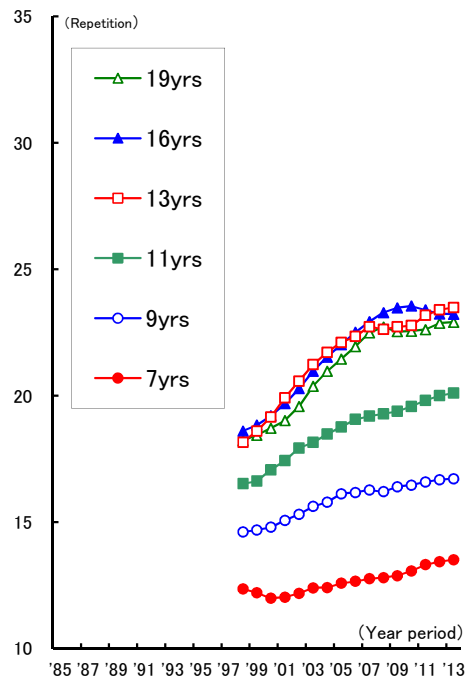


Figure 2-12 Sit-ups Yearly Trends (Females)
(Note:) See note for Figure 2-1.

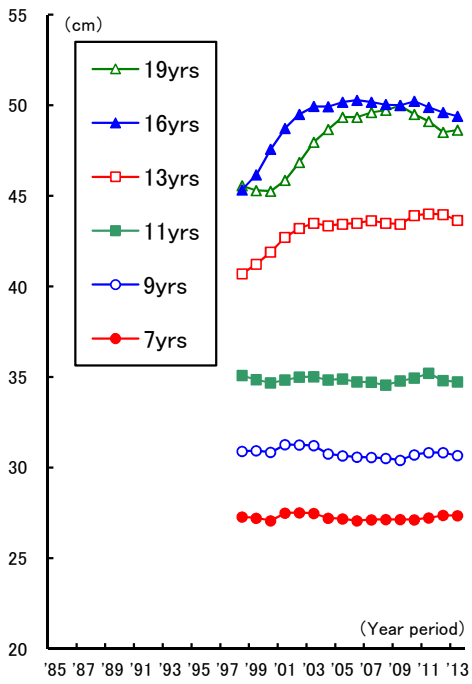


Figure 2-13 Sit & Reach Yearly Trends (Males)
 (Note:) See note for Figure 2-1.

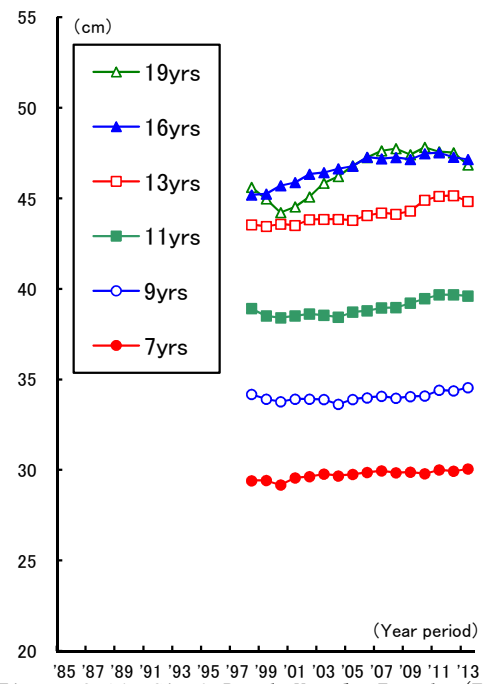


Figure 2-14 Sit & Reach Yearly Trends (Females)
 (Note:) See note for Figure 2-1.

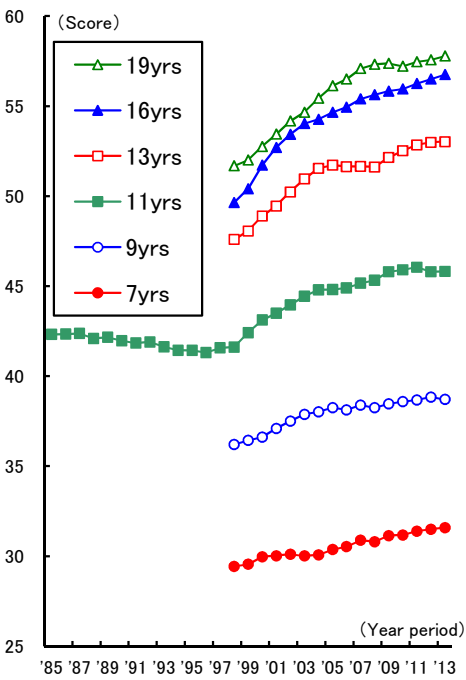


Figure 2-15 Side Step Yearly Trends (Males)
 (Note:) See note for Figure 2-1.

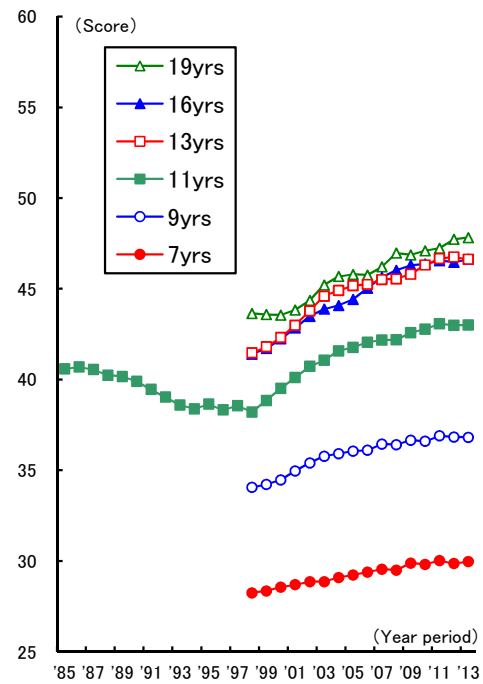


Figure 2-16 Side Step Yearly Trends (Females)
 (Note:) See note for Figure 2-1.

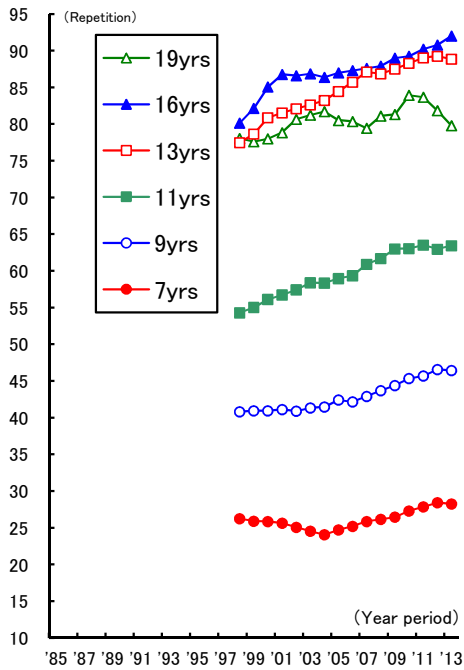


Figure 2-17 20 Meter Shuttle Run Yearly Trends (Males)
 (Note:) See note for Figure 2-1.

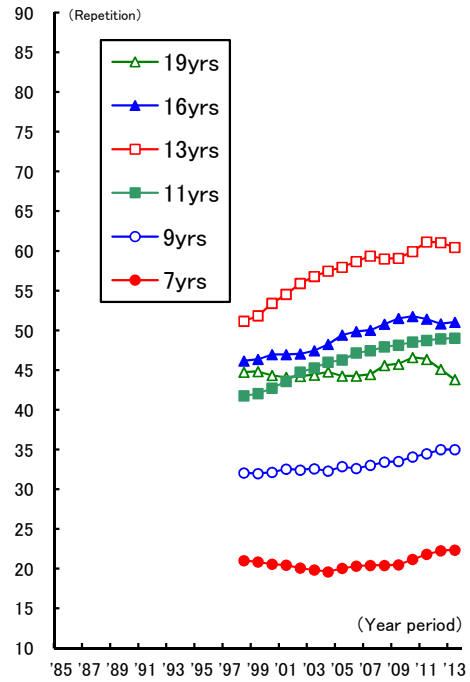


Figure 2-18 20 Meter Shuttle Run Yearly Trends (Females)
 (Note:) See note for Figure 2-1.

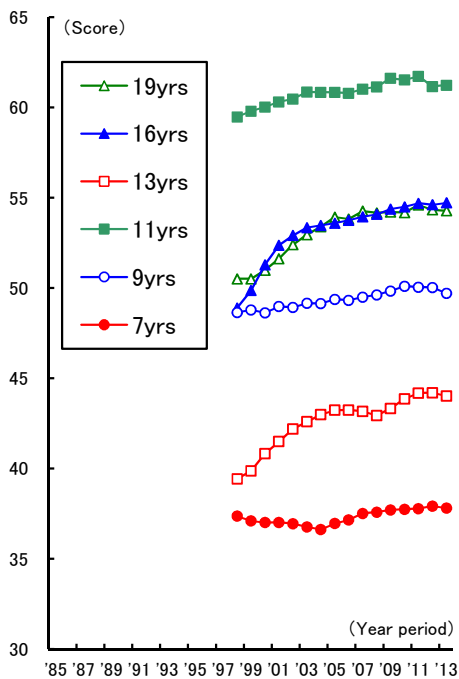


Figure 2-19 Yearly Trends in Overall Scores for New Physical Fitness Test (Males)

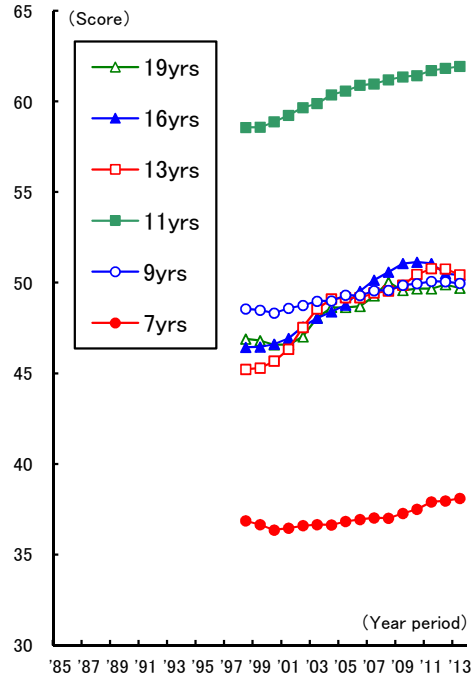


Figure 2-20 Yearly Trends in Overall Scores for New Physical Fitness Test (Females)

(Note:) 1. Figure simplifies data using 3 point moving average method.

(Note:) See note for Figure 2-1.

- 2. Overall scores are based on the "Scores by Category" Figure for the New Physical Fitness Test's evaluated categories.
- 3. Score measurement scale varies for age groups: 6-11yrs and 12-19yrs.

2. Adults (20to64 years) (Figures 3-1~9)

For adults, figures 3-1 to 3-4 show data for categories for which long term trends can be compared, such as Grip Strength, Side Step, and Fast Walk. Additionally, figures 3-5 to 3-9 show yearly trends for Sit-ups, Sit & Reach, 20 Meter Shuttle Run, Standing Long Jump, and overall scores for the New Physical Fitness Test.

- Looking over the long term, no particular trend can be identified in Grip Strength and Fast Walk, but in Side Step there has been an improvement.
- In the 16 year period since the implementation of the New Physical Fitness Test, scores for males in 20 Meter Shuttle Run have trended upward, but no particular trend can be identified for females. There has been almost no change in Fast Walk scores for any age group. There has been a slow, gradual trend in improvement in Side Step except for females in their 30s. Most age groups show improvement in Sit-ups, but there is a declining trend in Sit & Reach. There is a downward trend in scores in Grip Strength and Standing Long jump in the 20to40 year-old age bracket, but an upward trend for those 50to60 years old.
- Looking at overall scores in the 16 year period since the implementation of the New Physical Fitness Test, there is a downward trend for both males and females in their 30s, but there is a slow, gradual upward trend for both males and females 50 years or older.

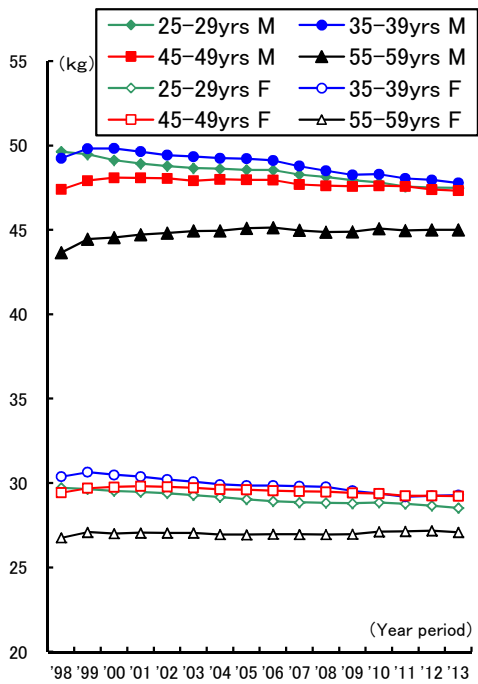


Figure 3-1 Grip Strength Yearly Trends
 (Note:) Figure simplifies data using 3 point moving average method.

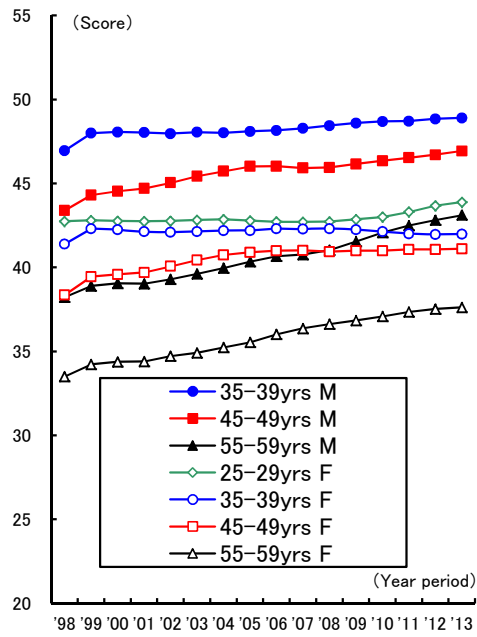


Figure 3-2 Side Step Yearly Trends
 (Note:) See note for Figure 3-1.

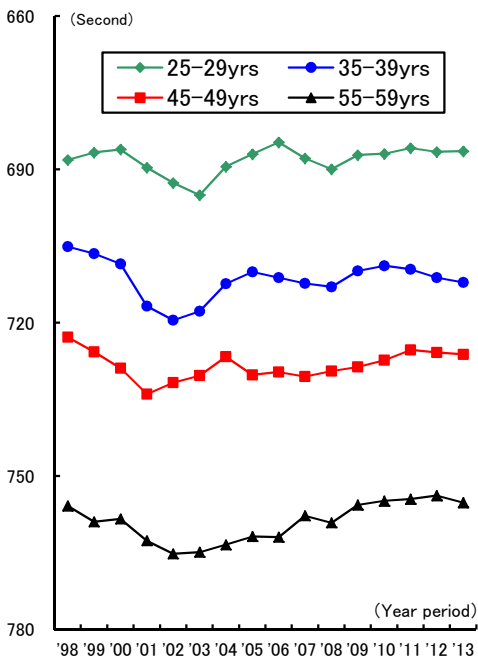


Figure 3-3 Fast Walk Yearly Trends (Male 1,500m)
 (Note:) See note for Figure 3-1.

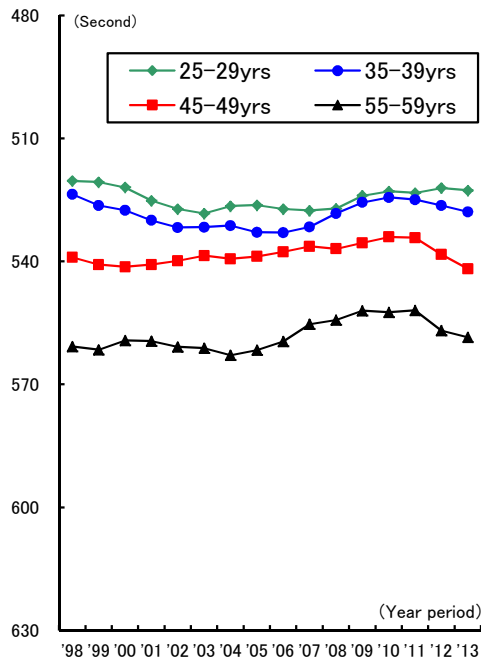


Figure 3-4 Fast Walk Yearly Trends (Female 1,000m)
 (Note:) See note for Figure 3-1.

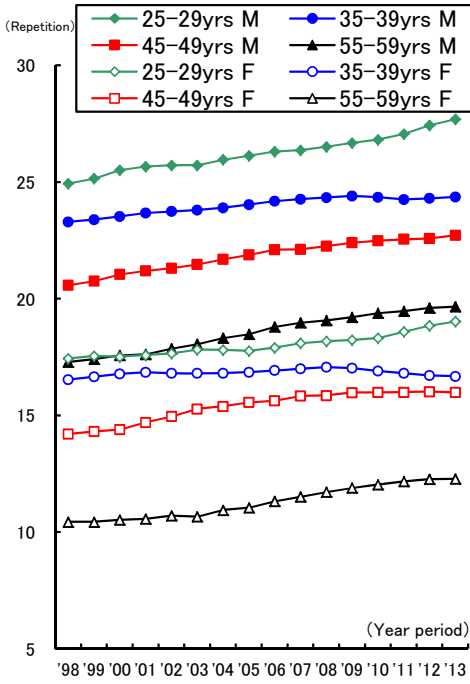


Figure 3-5 Sit-ups Yearly Trends
(Note:) See note for Figure 3-1.

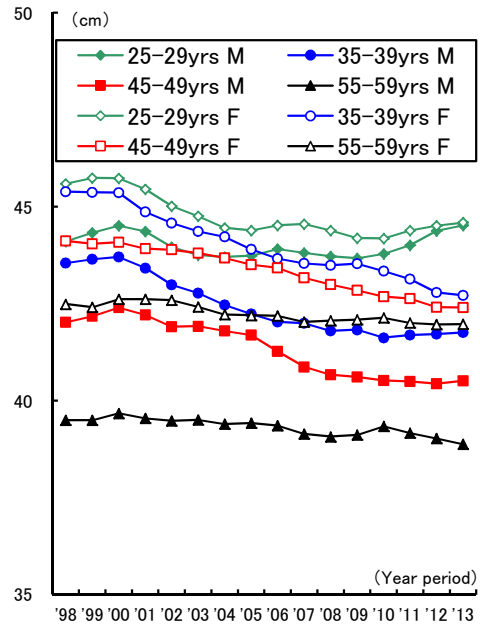


Figure 3-6 Sit & Reach Yearly Trends
(Note:) See note for Figure 3-1.

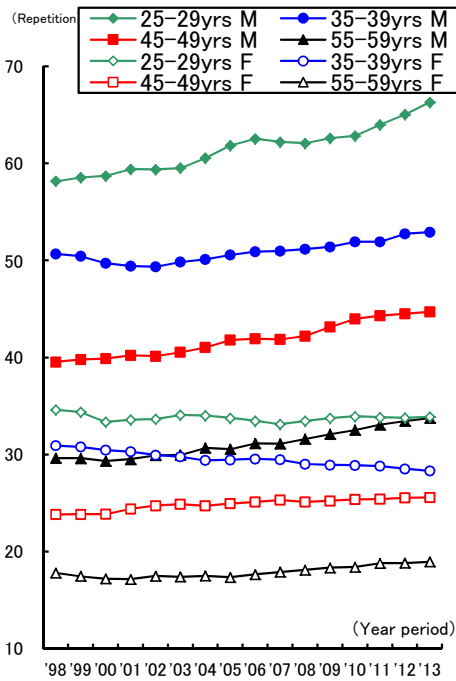


Figure 3-7 20 Meter Shuttle Run Yearly Trends
(Note:) See note for Figure 3-1.

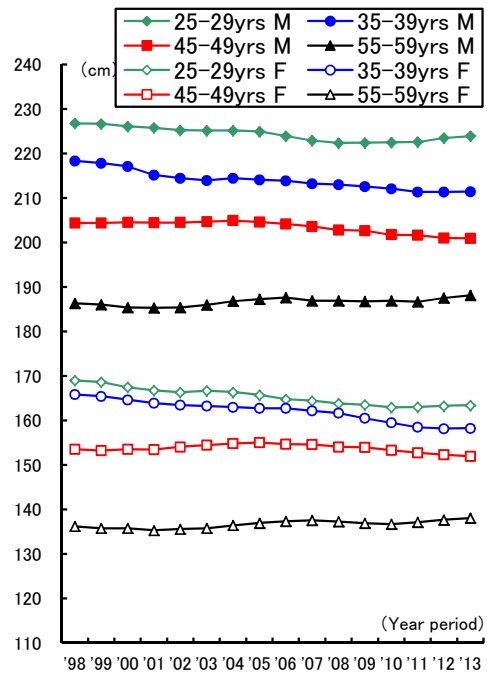


Figure 3-8 Standing Long Jump Yearly Trends
(Note:) See note for Figure 3-1.

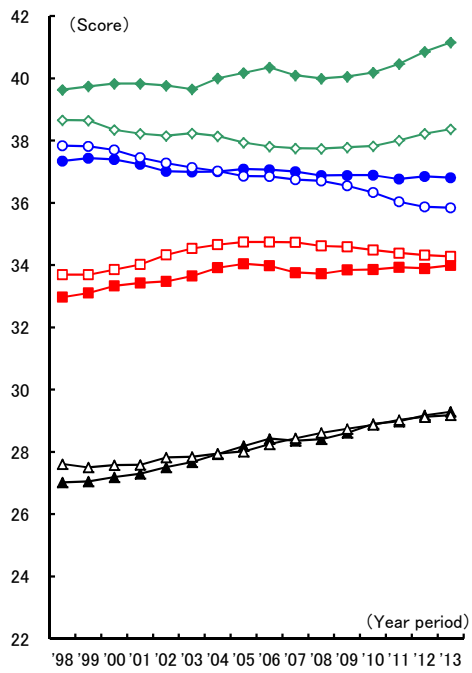


Figure 3-9 Yearly Trends in Overall Scores for New Physical Fitness Test
 (Note:) 1. Figure simplifies data using 3 point moving average method.
 2. Overall scores are based on the "Scores by Category" Figure for the New Physical Fitness Test's evaluated categories.
 3. Score measurement scale varies by gender.

3. Seniors (65~79) (Figures 4-1~7)

Yearly trends in seniors' scores in overall scores for the New Physical Fitness Test in addition to those for Grip Strength, Sit-ups, Sit & Reach, Eyes Open One Leg Stand, 10m Obstacle Walk, and 6 Minute Walk are shown from Figure 4-1 to Figure 4-7.

Scores show an upward trend overall and in almost every category.

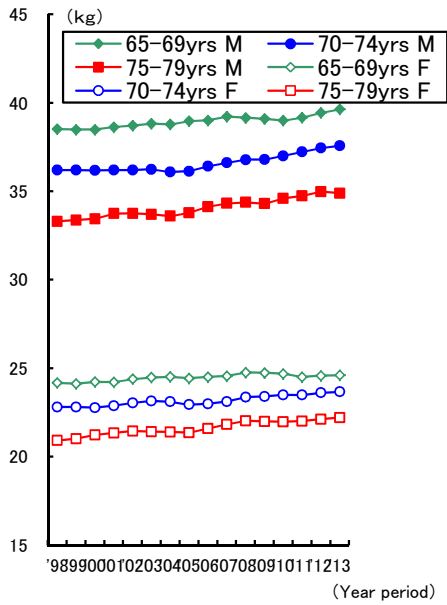


Figure 4-1 Grip Strength Yearly Trends
 (Note:) Figure simplifies data using 3 point moving average method.

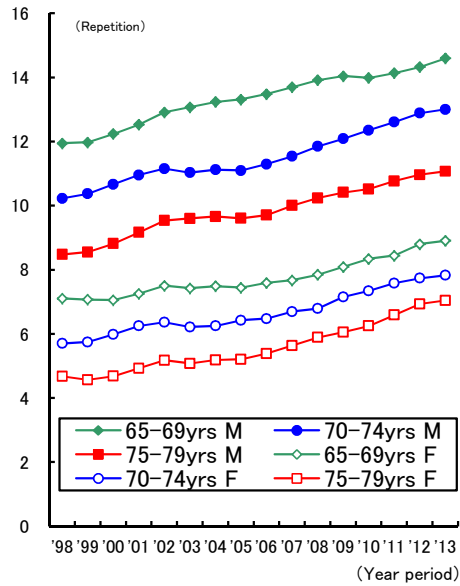


Figure 4-2 Sit-ups Yearly Trends
 (Note:) See note for Figure 4-1.

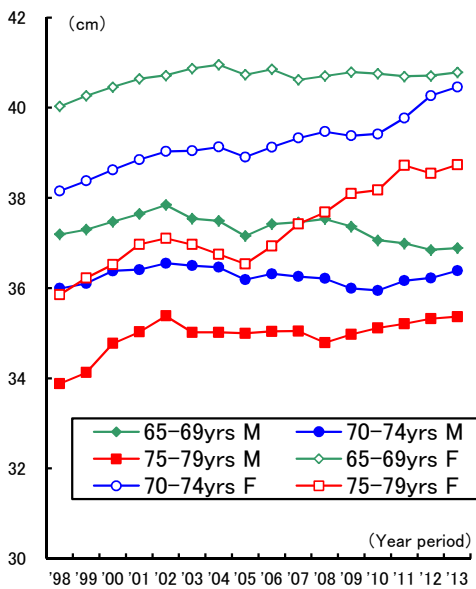


Figure 4-3 Sit & Reach Yearly Trends
 (Note:) See note for Figure 4-1.

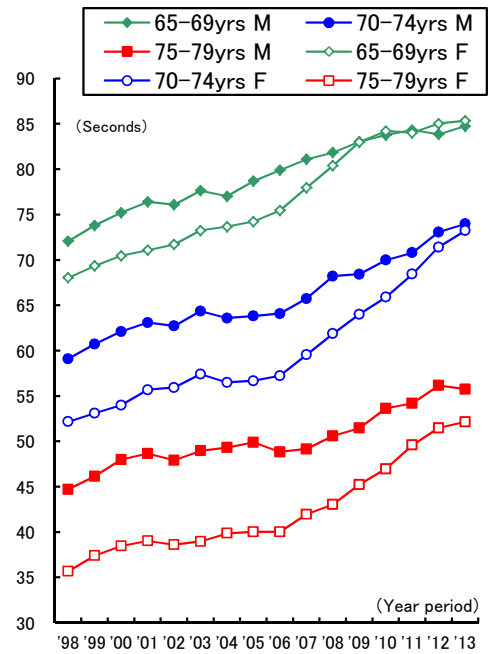


Figure 4-4 Eyes Open One Leg Stand Yearly Trends
 (Note:) See note for Figure 4-1.

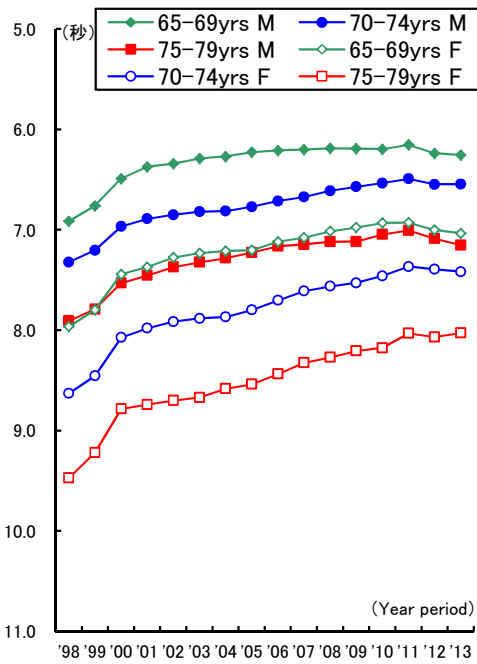


Figure 4-5 10m Obstacle Walk Yearly Trends
(Note:) See note for Figure 4-1.

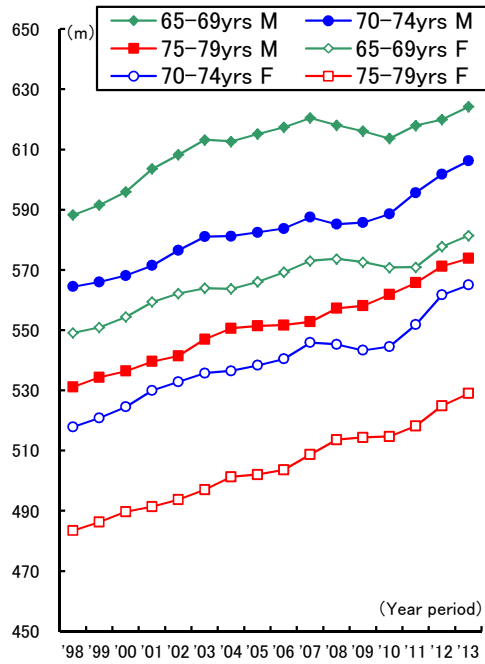


Figure 4-6 6 Minute Walk Yearly Trends
(Note:) See note for Figure 4-1.

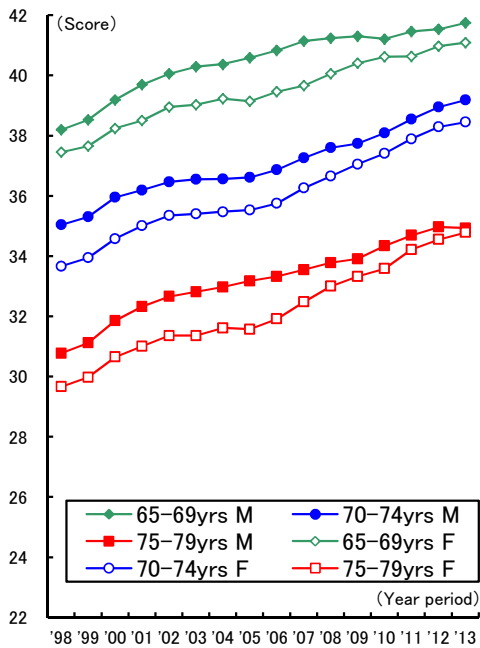


Figure 4-7 Yearly Trends in Overall Scores for New Physical Fitness Test
(Note:) 1. Figure simplifies data using 3 point moving average method.

2. Overall scores are based on the "Scores by category"
Figure for the New Physical Fitness Test's evaluated categories.
3. Score measurement scale varies by gender.