# Active Role of Women in Sports and Men and Women's Health Support 

From the "White Paper on Gender Equality 2018"

## Summary

Cabinet Office, Government of J apan June 2018

The Cabinet annually submits to the Diet a report on the state of formation of a gender-equal society and policies implemented by the government (the White Paper on Gender Equality).

Please see the White Paper (in Japanese) for more detailed information on sources cited.

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## I - Progress of Efforts for the Formation of a Gender Equal Society 2017

## Special Feature - Active Role of Women in Sports and Men and Women's Health Support

## Section 1 -Active Role of Women in Sports

## (Tracing the Path of Female Athletes: Olympic Games)

The (worldwide) proportion of female athletes participating in the Olympics is increasing with each summer and winter games. In addition, the proportion of female athletes on the Japanese Olympic Team has trended roughly around $50 \%$ in recent years at summer games, tallying 48.5\% at the 2016 Rio Summer Olympics. As for winter games, this number first exceeded $50 \%$ at the 2014 Sochi Winter Olympics, and reached a record high of $58.1 \%$ at the 2018 PyeongChang Winter Olympics (Figure I-SF-2).

Figure I-SF-2 - Proportion of Female Athletes Participating in the Olympics (Japan and Rest of World)

(Notes) 1. Prepared based on the ICC website and JoC website.
2. Due to Japan nissing the Summer Olympics in 1948 (London) and 1980 (Moscow) as well as the Wnter Olympics in 1948 (St. Monitr), these games were excluded from the Summer (Jap
3. Figures in the Summer (Worrd) graph are estimated by the Cender Equality Bureau based on the eercentage of femple athlets published by IOC, and may differ from the actual figures.

Looking at the number of Japanese medalists at the Olympics, at each of the most recent four summer games, there were more male medalists than female medalists, but there were more female gold medalists than male gold medalists. At winter games, female athletes won eight medals, including three gold medals at the 2018 PyeongChang Winter Olympics, marking a record high ${ }^{1}$ (Figure I-SF-3).

Figure I-SF-3 - Number of Medals and Medaling Rate of Japanese Athletes at the Olympics


[^0][^1]
## (Tracing the Path of Female Athletes: Paralympic Games)

The (worldwide) proportion of female athletes participating in the Paralympics is increasing with each summer games, but remains stuck around $20 \%$ for winter games. The proportion of female athletes on the Japanese Paralympic Team has trended roughly around $30 \%$ to $40 \%$ at recent summer games. As for winter games, this number reached a record high of $30 \%$ at the 2014 Sochi Winter Olympics, but fell to $13.2 \%$ at the 2018 PyeongChang Winter Olympics (Figure I-SF-5).

(Notes) 1. Prepared based on the IPC website and JPC website.
2. Calculated by excluding athletes of unspecified gender in the 1976 London Paralympics and 1980 Arnhem Paralympics
(1 athlete in 1976, 6 athletes in 1980)

Looking at the number of Japanese medalists at Paralympic Games, at summer games the number of medalists has declined sharply since the 2004 Athens Summer Olympics, remaining largely unchanged ever since. As for winter games, the Japanese Paralympic Team was unable to win a medal at the 2014 Sochi Winter Olympics, but won five medals at the 2018 PyeongChang Winter Olympics (Figure I-SF-6).

Figure I-SF-6 - Number of Medals and Medaling Rate of Japanese Athletes at the Paralympics

(Notes) 1. Prepared based on the IOC website, JOC website, and data from JSC.
2. Mixed gender competitions are excluded.
3. Percentage of medals won is calculated by dividing the number of medals won by Japanese athletes of each gender by the total number of medals won by gender.

## (Female Athlete Triad [FAT], etc.)

As more female athletes play an active role in sports, it has been pointed out that the syndrome called female athlete triad (FAT) (a syndrome in which low energy availability may (or may not) be caused by eating disorders, amenorrhea and decreased bone mineral density [osteoporosis] are present) is a sign of the major impacts on the longevity of female athletes in sports. Ignoring these signs can make it difficult to continue with life as an athlete due to stress fractures and other injuries (Figure I-SF-8).

Figure I-SF-8 - Female Athlete Triad

(Note) Prepared based on
Health Management for Female Athletes Ver. 3 (March 2018, Department of Obstetrics and Gynecology, The University of Tokyo Hospital) with input from Dr. Sayaka Nose, OBGYN at the University of Tokyo Hospital.

Past amenorrhea and stress fractures are often seen in sporting events that place great importance on weight management, such as aesthetic related events including rhythmic gymnastics, gymnastics and figure skating. On the other hand, the proportion of amenorrhea does not show any difference based on athlete level, while the proportion of athletes who have experienced stress fractures indicates that a larger number of athletes at the national qualifying level or lower suffer these injuries than athletes on the national team. This shows that these problems are not just limited to top level athletes ${ }^{2}$ (Figure I-SF-9, 10).

[^2](\%) Figure I-SF-9 - Frequency of Amenorrhea and Stress Fractures (By

(Reference)
Technical ... archery, riffle, etc.
Endurance...long distance in track and field, etc.
Aesthetics...rhythmic gymnastics, gymnastics, figure skating, etc.
Weight, classes...judo, wrestling, etc.
Instantaneous...short dist ance track and field, swimming, etc.
(Note) Prepared based on
Review of menstrual abnormality in athletes and factors contributing to amenorrhea by Yutaka Osuga and Sakaya Nose, Comprehensive practical research on female health: Sports injury analysis and its prevention and treatment
(Representative researcher: Tomoyuki Fujii)(FY 2015 Jap an Agency for Medical Research and Development Project) Analysis of sports injuries in young females (Acta Obstet Gy naecol Jpn. 68(4): Appendix.)
(\%) Figure I-SF-10 - Frequnecy of Amenorrhea and Stress Fractures (By Athlete Level)

(Note) Prepared based on
Review of menstrual abnormality in athletes and factors contributing to amenorrhea by Yutaka Osuga and Sakaya Nose, Comprehensive practical research on female health: Sports injury analysis and its prevention and treatment (Representative researcher: Tomoyuki Fujii) (FY 2015 Japan Agency for Medical Research and Development Project) Analysis of sports injuries in young females (Acta Obstet Gynaecol Jpn. 68(4): Appendix.)

## (Current Situation of Balancing Childbirth/Childrearing and Life as an Athlete)

There are many cases where female athletes retire after pregnancy, but even in Japan, there have been a growing number of female athletes in recent years who would like to continue life as an athlete while raising a child.

The Japan Sport Council (JSC) asked female athletes about the extent of support they can receive in today's environment with regard to balancing childrearing and competition. To the questions of whether there was "Childminding and baby friendly set up at sporting events," and "Guidance on training methods during pregnancy and before and after delivery," respondents answered that they "receive little in the way of support" by close to $80 \%$ and more than $70 \%$, respectively. (Figure I-SF-12).

Figure I-SF-12 - Support for Balancing Childrearing and Competition

(Note) Prepared based on the report of the commissioned project Survey study to support female athletes faced with actual reality by the Japan Sports Agency in FY 2015.

The retirement age of Paralympic athletes is relatively high and the proportion of these athletes who are married or have children is higher than Olympic athletes. Therefore, balancing life as an athlete with family life is believed to be a pressing issue for Paralympic athletes, too.

## (Current Situation of the Ratio of Female Coaches and Initiatives to Increase this Ratio)

The proportion of female coaches on the Japanese national team at the three most recent summer games was around $10 \%$ for the Olympics and around 20\% for the Paralympics. In each case, this proportion was far below the proportion of female athletes on the Japanese national team.

Figure I-SF-16 - Proportion of Female Coaches at the Three Most Recent Summer Olympics / Paralympics

(Notes) 1. Compiled based on information from the Japan Sports Agency.
2. The number of coaches was calculated by the Japan Sports Agency based on information on the Japanese national team for each Summer Olympics (JOC) and Paralympics (JPC) by summing up the team leaders, managers, and coaches.

## (Ratio of Adult Females Participating in Sports)

The ratio of adults participating in sports at least once a week is low among men and women in their 30s and 40s, and when viewed by gender, the ratio of women in their 30s and 40 s is close to 10 percentage points lower than men (Figure I-SF-18).

When asked the reason why the frequency of exercise or participation in sports declined or could not be increased, the proportion of women who answered, "Because it is bothersome," "Because I have to take care of my child," and "Because I dislike exercise and sports" was higher than men.

Figure I-SF-18 - Ratio of Participation in Sports by Age and by Gender (At Least Weekly)

(Note) Prepared based on FY 2017 Public Opinion Survey on Participating in Sports

## (Situation of Student Participation in Sports)

The participation rate in organized sports is $54.9 \%$ among female junior high school students and $27.1 \%$ among female high school students. In either case, the figure is lower than male students (Figure I-SF-20).

Figure I-SF-20 - Participation Rate in Organized Sports by Junior High and High School Students


## (Development of Female Officers of Sports Groups)

The average proportion of female officers at 119 sports groups in Japan is $10.7 \%^{3}$ (as of August 2017). Comparing other developed countries, this proportion is highest in Norway at 37.4\%, followed by the United States, Australia, Canada, and Iceland (Figure I-SF-23).


Looking at the proportion of female officers at groups belonging to the Japan Sport Association (JSPO), Naginata is $90.9 \%$, volleyball is $40.9 \%$, gateball and cheerleading is $33.3 \%$, as the proportion for each is over 30\% (as of August 2017) (Figure I-SF-24). Compared with October 2016, the number of female officers increased at 24 groups, and four of the groups with zero female officers (sumo, skeet shooting, bobsledding/luge/skeleton, dodgeball) appointed a female officer.


[^3]
## Section 2 - Men and Women's Health Support

## (Average Life Expectancy and Healthy Life Expectancy)

Japan's average life expectancy in 2016 was 87.14 years for women and 80.98 years for men, both of which were among the highest in the world. Japan's healthy life expectancy (period lived with no restrictions on everyday living activities) in 2016 was 74.79 years for women and 72.14 years for men. The gap between average life expectancy and healthy life expectancy (the period of unhealthiness with restrictions on everyday living activities) was 12.35 years for women and 8.84 years for men (Figure I-SF-26).

Figure I-SF-26 - Average Life Expectancy and Healthy Life Expectancy

(Note) Figures of average life expectancy are based on the Abridged Life Table (each year) (Complete Life Table used for 2010 only) by the Ministry of Health, Labour, and Welfare. Healthy life expectancy figures are based on Future forecast of healthy life expectancy and research on the cost effectiveness of countermeasures for lifestyle diseases by the science research team of the Ministry of Health, Labours and Welfare (FY2012) for years 2001-2007, and based on the Research on the indexing of healthy life expectancy (FY2015) for years 2010 and 2013, while figures for 2016 are based on the published numbers by the Ministry of Health, Labour and Welfare.

## (Women's Health Support based on Life Stage)

Women face physical and mental changes different from puberty to maturity, menopause, and old age. One cause for such changes is the effects of sexual hormones. Unlike men, women do not secrete hormones at a constant rate, and experience repeated alteration in hormonal secretion generally in monthly cycles, lasting from menstruation to ovulation and then the following month's menstruation. Since women's ovaries have a lifespan, a rapidly decrease or loss of female sexual hormones occur in women's bodies, in contrast with male sexual hormones, which gradually decline as men age. Women experience major effects due to alternation in sexual hormone secretion from their late 40s to their 50s (Figure I-SF-34).

(Note) Prepared by the Gender Equality Bureau based on information provided by Kyoko Tanabe, Gender Equality Meeting
Key Policy Expert Examination Committee Member (Director Toyama of Touseikai Women's Clinic We! Toyama),
"HUMAN+" edited by The Japan Society of Obstetrics and Gynecology.

## (Menstrual Pain, Premenstrual Syndrome [PMS], Irregular Menstruation)

According to research by the Gender Equality Bureau Cabinet Office, symptoms associated with menstruation, such as menstrual pain as well as physical and mental discomfort caused by menstruation, are experienced by a considerable number of women in their 20s and 30s (Figure I-SF-38). In 2008, low dosage oral contraceptive pills were made to be included in National Health Insurance coverage as a treatment for dysmenorrheal, and today, a wide range of treatments are provided by gynecologists for symptoms associated with menstruation.

(Notes) 1. Prepared based on the Gender Equality Bureau Cabinet Office 's Survey on Health Awareness among Men and Women (2018).
2. According to the Obstetrical and Gynecological Clinical Guidelines Outpatient Edition 2017 compiled and edited by the Japan Soc. of Obstetrics and Gynecology/Japan 2. According to the Obstetrical and Gynecological Clinical Guidelines Outpatient Edition 2017 compiled and edited by the Japan Soc. of Obstetrics and Gynecology Japan
Association of Obstetrics and Gynecology, amenorrhea (secondary amenorrhea) is defined as the condition in which a woman has not had a period for 3 months or more, which is apart from physiological amenorrhea due to pregnancy, postpartumor breastfeeding, or menopause.

## (Infertility)

According to a survey ${ }^{4}$ by the National Institute of Population and Social Security Research conducted in 2015, the proportion of couples who had worried about infertility was $35 \%$, while the proportion of couples who had actually received infertility testing or treatment was $18.2 \%$. The total number of cases involving infertility treatment (in vitro fertilization: IVF) exceeded 400,000 cases in 2015, which is triple the figure from 10 years prior (Figure I-SF-39). The success rate (birth rate) is observed to decline as age increases (Figure I-SF-40).

(Notes) 1. Prepared based on ART Databook (2015) by the Japan Soc. of Obstetrics and Gynecology. 2. Numbers of cases reflect the sum of IVG (including GIFT and others), ICSI (including SPLIT), and thawed frozen embryo (egg).

(Note) Prepared based on ART Databook (2015) by the Japan Soc. of Obstetrics and Gynecology.

[^4]
## (Women and Cancer)

The incidence rate of breast cancer (the highest incidence) and uterine cancer (the fifth highest incidence) among women rises from the late 20s and peaks in the late 40s and early 50s. In contrast, the incidence rate of cancer for which men have a high incidence rate such as stomach cancer, colorectal cancer and lung cancer increases with age. Looking at the cancer incidence rate by age group (all types), the rate is largely higher for women than men from their late 20s to early 50s (Figure I-SF-41).

Figure I-SF-41 - Cancer Incidence Rates by Age Group (2013)


## (Menopausal Disorders)

The average age for menopause in Japanese women is 50 years, and the five-year period before and after this age (around 45 to 55 years) is known as menopause. In the case of women, the sharp decrease in the amount of female hormone (estrogen) associated with menopause causes the development of various symptoms, such as symptoms of autonomic nerve disorders including perspiration, chills, sensitivity to cold and heart palpations, along with mental symptoms such as irritability, short temper, and feelings of depression. According to research by the Gender Equality Bureau Cabinet Office, approximately 40\% of women in their 40 s and approximately $50 \%$ of women in their 50 s are self-aware of the symptoms of menopause. Of these, around $10 \%$ responded that they were receiving treatment.

## (Frail ${ }^{5}$ and in Need of Assistance or Long-Term Care)

Research results that categorized seniors age 65 and older into frail or on the verge of frail, from five perspectives such as weight loss, muscle weakness, and fatigue, show that a larger number of women are considered frail or on the verge of frail (Figure I-SF-42).

The number of people age 65 and older certified for long-term care totaled 6.07 million as of the end of fiscal year 2015 ( 4.22 million women and 1.85 million men). When viewed by gender, the proportion of certified people of the population of each age group indicates a rapid increase in the certification rate for both men and women age 80 and older, but the rate of increase in women, in particular, is higher than men (Figure I-SF-43).

Figure I-SF-42 - Portion of Frail and On the Verge of Frail

(Notes) 1. Based on Watching for Frail in Preparation for a Healthy Elderly Life by Kokuritsu Longevity Medical Research Center.
2. One is defined as frail if they meet three or more of the five checklist items (weight loss, muscle weakness, fatigue, reduced walking speed, reduced physical activity), and on the verge of frail if they meet one or two items.

[^5]
(Notes) 1.Based on FY2015 Report on the Status of Insured Long-Term Care Service by the Ministry of Health, Labour and Welfare and 2015 Population Census by the Ministry of Internal Affairs and Communications.
2. Number of certified persons reflects the number of first insured persons deemed as requiring assistance 1-2, and requiring nursing care $1-5$.
3. The proportion in population within each age group (certification rate) is calculated based on the population of Japan.
4. The sum of those certified as requiring long-term care is in bold

## (Women's Regular Health Checkups and Cancer Screening)

The uptake situation of health Checkups (physical examinations, health exams, and thorough medical checkup) by gender and by age shows the uptake rate of men is higher across all ages. Among women, when comparing regular staff, non-regular staff, and homemakers without a job, in the case of regular staff, more than $80 \%$ of women in their 30s receive health checkup, but for homemakers without a job, the uptake rate is around 30\%, which marks a significant gap (Figure I-SF-45). The uptake rate for cervical cancer screenings is low among non-regular staff in their 20s and 30s. As for breast cancer screenings, trend in the uptake rate of women in their 40s and older, which is the recommended age to receive screenings by the Ministry of Health, Labour and Welfare, is observed to be low for non-regular staff and homemakers without a job (Figure I-SF-48).


## (Gender Disparities in Disease)

Looking at the outpatient rate (per 1,000 people), the rate is higher for men for gout and stroke (cerebral hemorrhage, cerebral infarction, etc.), while the rate is higher for women for osteoporosis, thyroid disease, and rheumatoid arthritis. As for osteoporosis, for which the outpatient rate of women is high, the outpatient rate of women largely increases from around their 50s in the pre- and post-menopause period. Dyslipidemia is also a disease with a high female outpatient rate, but the outpatient rate among men is higher than women up to their early 50s (Figure I-SF-54).


## (Women's Participation in Healthcare)

Looking at the participation of women in healthcare, the proportion of women physicians and dentists is rising, and in 2016 it was $21.1 \%$ for physicians and $23.3 \%$ for dentists (Figure I-SF-56). In the majority of OECD countries, the proportion of women physicians is around 40 to 50\% (Figure I-SF-58).

Figure I-SF-56 - Portion of Women in Healthcare Jobs and Students

(Notes) 1. Data for healthcare workers is based on Survey of Physicians, Dentists, and Pharmacists 2016 and Report on Public Health Administration and Services
(Practicing health prefeessionals)2016 by the M inistry of Health, Labour and Welfare . Data for health sciences students is based on the FY 2017 School Basic
( $)$
(Practicing healin prefessionuls)2or of the M inistry of Education, Culture, Sports, Science and Technology.
2. Data for physicians, dentists and pharmacists as of December 31, 2016. Data for nurses as of December 31, 2016. Data for health sciences students as of May 1,2017 .
3. Physicians and dentists are workers at medical institutions. Pharmacists are workers at pharmacies or medical insttutions.

Figure I-SF-58 - Portion of Women Physicians (International Comparison)
(\%)

(Notes) 1. Data for Japan is based on Survey of Physicians, Dentists, and Pharmacists 2016 by the Ministry of Health, Labour and Welfare, and data for other countries are based on OECD Health Statistics 2017 by OECD.
2. Numbers for Sweden and the United States are from 2014, number for Japan is from 2016, and all others are from 2015


[^0]:    (Notes) 1. Prepared based on the IOC website, JOC website, and data from JSC.
    2. Mixed gender competitions are excluded.
    3. Percentage of medals won is calculated by dividing the number of medals won by Japanese athletes of each gender by the total number of medals won by gender.

[^1]:    ${ }^{1}$ Team Japan won a record high 13 medals, when counting both male and female athletes.

[^2]:    ${ }^{2}$ According to research by The Japan Society of Obstetrics and Gynecology, the most susceptible age to stress fractures is 16 to 17 years old, regardless of the athlete's level.

[^3]:    ${ }^{3}$ The number including the JSPO and JOC. The figure only for member groups of the JSPO is $10.6 \%$ (as of August 2017).

[^4]:    4 "The Fifteenth Japanese National Fertility Survey in 2015" (National Institute of Population and Social Security Research, March 31, 2017)

[^5]:    ${ }^{5}$ Frail is a condition in which mental/physical vitality, such as muscle and cognitive functions, etc., decline with age resulting in a higher risk of livelihood impairment, requiring nursing care, or death. Appropriate intervention and assistance can maintain or improve living functions.

