

The Criteria for the Notification, etc. on Contraindications and Cautions for Bathing and Drinking as specified in Article 18, Paragraph 1 of the Hot Springs Act

The Criteria for the Notification, etc. on Contraindications as well as Cautions for Bathing and Drinking as specified in Article 18, Paragraph 1 of the Hot Springs Act shall be as prescribed in the following. The prefecture, etc. and the party that serve hot springs for public bathing and drinking shall review, in light of this notice, the current listings in the notification and endeavor to take necessary measures immediately with regard to listings to be corrected.

1. Contraindications

Contraindications are diseases and state of illness with a risk of adverse events by even one occasion of bathing in or drinking of hot springs. However, it does not preclude, even with contraindications, hot spring cures under the guidance of a doctor with expertise.

Plain terms have been adopted as much as possible for the names of diseases, etc. in contraindications.

2. Criteria for the Notification on Contraindications of Hot Springs as well as Cautions for Bathing and Drinking

(1) Criteria for the notification of contraindications of hot springs

Contraindications of hot springs shall be based, in general, on the following

(i) General contraindications of hot springs, (ii) Contraindications by spring quality, and (iii) Contraindications by constituents of hot springs.

(i) General contraindications of hot springs (for Bathing)

Active stage of diseases (especially when fever is accompanied);
Active tuberculosis, advanced malignant tumor or the case of significant debility involving severe anemia, etc. ;
Severe cardiac or lung diseases involving suffocation feelings with a little movement and severe kidney diseases involving edema;
Gastrointestinal bleeding and when bleeding is visible; and
Acute exacerbation stage of chronic diseases

(ii) Contraindications by spring quality

Spring Quality for Notification	for Bathing	for Drinking
Acidic springs	Persons with hypersensitive skin or mucous membrane; and the elderly with dry skin	—
Sulphur springs	Same with acidic springs	—

(iii) Contraindications by constituents of hot springs

Constituents	for Bathing	for Drinking
In the case where the daily amount of drinking sodium ion containing hot spring is over $(1,200/A) \times 1,000$ mL	—	State of illness required of salt restriction (renal failure, cardiac failure, hepatic cirrhosis, ischemic cardiac disease, hypertension, etc.)
In the case where the daily amount of drinking potassium ion containing hot spring is over $(900/A) \times 1,000$ mL	—	State of illness required of potassium limitation (renal failure and adrenocortical hypofunction)
In the case where the daily amount of drinking magnesium ion containing hot spring is over $(300/A) \times 1,000$ mL	—	Diarrhea and renal failure
In the case where the daily amount of drinking iodide ion containing hot	—	Hyperthyroidism

spring is over (0.1/A) x 1,000 mL		
In the case of correspondence to two or more of the above	—	All corresponding contra-indications

Note: A refers to weight (mg) of each contingent contained in a kilogram of hot springs. With regard to hot springs for drinking, the specific amount of drinking shall be calculated and listed for each contingent contained, based upon its respective weight. However, in (2) Criteria for the notification on cautions for bathing and drinking, (ii) How to drink and cautions, C., it is stipulated that “The daily amount shall be about 200 mL to 500 mL in total.” In the case where the specific threshold is 500 mL or more, surpassing the stipulated daily amount of drinking, it shall not be required to list contraindications in the notification.

Example: In the case of drinking hot spring, containing 3,000 mg/kg of sodium ion, 200 mg/kg of potassium ion, 60 mg/kg of magnesium ion and 1 mg/kg of iodide ion, it shall be listed, as follows, in the notification as contraindications by constituents of hot springs:

- In the case where the daily amount of drinking surpasses 100 mL (the threshold calculated from the contained amount of iodide ion):
Hyperthyroidism
- In the case where the daily amount of drinking surpasses 400 mL (the threshold calculated from the contained amount of sodium ion):
State of illness required of salt restriction (renal failure, cardiac failure, hepatic cirrhosis, ischemic cardiac disease, high blood pressure, etc.)

Reference: In this case, with regard to sodium ion and magnesium ion, the specific threshold calculated reaches 500 mL or more due to the above reason, it shall not be required to list as contraindications in the notification.

(2) Criteria for the notification on cautions for bathing and drinking

(i) How to bathe and cautions

For bathing in hot springs, the following items shall be observed.

A. Cautions before bathing

- (a) Bathing, immediately before or after a meal as well as after drinking alcoholic beverages, shall be avoided. It is especially so when in inebriation,
- (b) Body shall be rested at the time of over fatigue.
- (c) Body shall be rested for about half an hour after exercise
- (d) With regard to the elderly, children and physically challenged persons, it is preferable to avoid bathing alone.
- (e) Before soaking in hot water, it is preferable to pour water on the body from extremities in order to acclimate it to high temperature and rinse off dirt, etc.
- (f) A cup or so of water or fluid shall be taken before bathing in order to stay hydrated. It is especially so for bathing just after awakening and getting out of bed.

B. How to bathe

(a) Temperature

High temperatures of 42 degrees C or more shall be avoided by the elderly, persons with high blood pressure or with cardiac diseases and persons who have experienced cerebral hemorrhage.

(b) Ways of bathing

It is more preferable to submerge the body halfway or partially than soak the entire body for persons with cardiopulmonary insufficiency.

(c) Frequency of bathing

For the first few days, bathing shall be once or twice a day. When accustomed more, bathing of two to three times a day is permissible.

(d) Duration time of bathing

Although depending upon temperatures of hot springs, bathing shall be for 3 to 10 minutes or so in one occasion at the start. When accustomed, the time extension to 15 to 20 minutes or so is permissible.

C. Cautions during bathing

- (a) Except exercise bathing, it is preferable to soak the body slowly as a rule, moving extremities lightly.
- (b) It is preferable to get out of the bath slowly not to cause lightheadedness on standing.
- (c) When getting dizzy or feeling sick, it is preferable to ask for help from persons nearby, get out of the bath slowly, keep your head at a lower

position, and then wait for the recovery, lying down on the floor.

D. Cautions after bathing

(a) It is preferable not to rinse off hot spring contingents attached on the body, using warm water, but just wipe off moisture with a towel. Try to keep warm after wearing clothes and keep rested for about half an hour. (However, it is preferable for persons with sensitive skin to rinse off, using warm water, hot spring contingents from acidic springs, sulphur springs or other stimulant springs. It is also preferable for them to rinse off the body when sterilization by chlorine, etc. has been processed as needed.)

(b) A cup or so of water or fluid shall be taken in order to stay hydrated.

E. Overheating of the body

Around 3 to 7 days or so after starting hot spring cures, some persons may suffer from overheating of the body such as a sense of feeling bad, insomnia and digestive symptoms or from dermatitis. While these symptoms stay, bathing shall be stopped or its frequency decreased, and the recovery from these symptoms shall be awaited.

F. Others

Towels shall be left out of the bathtub in order to keep water clean.

(ii) How to drink and cautions

Hot spring constituents are identified to go through changes with time passing after springs gush forth from the source. Springs fresh just out of the source are said to be of the best efficacy. However, unless they are used in accordance with the characteristics of respective quality, they may adversely affect human health. For hot spring drinking, the following items shall be observed.

In the case where hot springs are served for drinking, the facilities provider, etc. shall be required to use fresh water and pay adequate public health attention with regard to the source of hot springs as well as facilities serving hot springs for drinking.

- A. For drinking of hot springs in medical treatment, guidance shall be drawn from a doctor with expertise. Persons under the drug administration guidance shall ask for their doctors' advice.
- B. Persons aged 15 or under shall avoid drinking hot springs in principle. However, under the guidance of a doctor with expertise, it shall be an exemption.

- C. The place where drinking of hot springs is permitted shall be designated and fresh hot springs drawn directly from the source shall be used.
- D. The amount of hot spring for drinking shall be, in general, about 100 to 150 mL for one time. The daily amount shall be about 200 to 500 mL in total.
- Note 1: In the case where hot springs contain arsenic, copper, fluorine, lead and mercury as well as free carbon dioxide, the amount of drinking shall be listed by a separately stipulated method, in addition to the figures listed herein.
- Note 2: In the case where the pH of hot springs is under 3 (except for the case where dilution has been conducted and hot springs for drinking record pH 3 or more.), the description, in place of the one herein, shall be, for example, "This spring is acidic and about A-fold diluted with pure water to achieve the pH of 3 or more. The amount of drinking shall be 100 mL at one time and the daily amount shall be 200 to 500 mL in total." The figure for A, varying according to the pH, shall be listed by calculating the specific dilution factor so that acidic springs will reach pH 3 or more.
- E. For drinking, a sanitary cup, special to the user or disposal, shall be used.
- F. It is generally preferable to drink hot springs about half an hour before taking a meal.
- G. The hot spring water shall not be, for the purpose of drinking, brought out of the place where drinking is permitted.
- H. Attention shall be paid to avoid aspiration at the time of drinking.
- Note: Aspiration refers to the inhaling of water into the lung or trachea by gargling or hasty drinking. Persons with dysphagia shall not drink hot spring water.

(3) Scope of the criteria application

The criteria listed in the above 2. Criteria for the Notification of Contraindications of Hot Springs as well as Cautions for Bathing and Drinking, (1) Criteria for the notification of contraindications of hot springs and (2) Criteria for the notification on cautions for bathing and drinking shall apply to the use of hot springs at accommodations and public bath houses, etc., serving hot springs for public bathing and drinking. In the case where medical institutions use hot springs as part of healthcare intervention, all criteria shall not apply.

(4) Procedures for the notification

The party that serves hot springs for public bathing and drinking shall report, in the case where it intends to list or change hot spring contingents, contraindications and cautions for bathing and drinking in the notification, the content to the prefectural governor in advance based upon Article 18, Paragraph 4 of the Hot Springs Act, The prefectural governor, etc. shall make it a principle to listen to the opinions of a doctor with expertise on accepting the report. The prefectural governor, etc. may give direction to change the content of the report, when necessary to protect health.

3. Indications of Medicinal Springs

In conducting hot spring cures, the following points should be understood:

- (i) Efficacy of hot spring cures shall be biological reactions including psychological reactions as a result of combined actions caused by chemical factors including hot spring constituents, etc., physical factors including heat and others, topographic features and the climate of hot spring sites as well as changes of users' life rhythm and others.
- (ii) The purpose of hot spring cures shall be, rather than curing specific diseases, obtaining comprehensive improvement effects of those to be cured by alleviating symptoms and pains, restoring and promoting health.
- (iii) The period of hot spring cures shall be appropriate for two to three weeks in general to obtain adequate effects, although cures of even a short period bring about reasonable effects including mental refreshment, etc.
- (iv) Even indications may deteriorate depending upon the stage of diseases or conditions of those to be cured. Accordingly, hot spring cures shall be conducted under the direction and guidance from a doctor with expertise on medicines, exercise and rest, sleep, meals, etc.
- (v) With regard to indications, the efficacy depends upon biological reactions as a result of combined actions and it has been difficult to determine the efficacy of respective hot springs by their contingents alone. Under these and other circumstances, the content of the notification shall continue to be entrusted with the judgment of the prefectural governor.

(1) Criteria for the notification on indications of medicinal springs

- (i) General indications of medicinal springs (for bathing)

Chronic pains or stiffness of muscle or joints (the chronic phase of rheumatoid arthritis, osteoarthritis, lower back pains, nerve pains, frozen shoulder, bruises, etc.);
 Muscle stiffness in motor paralysis;
 Excessive sensitivity to cold and peripheral circulatory failure;
 Gastrointestinal hypofunction (slow digestion, intestinal gas formation, etc.);
 Mild hypertension;
 Impaired glucose tolerance (diabetes)
 Mild dyslipidemia;
 Mild asthma or emphysema;
 Pains of hemorrhoids;
 Autonomic instability and various symptoms from stress (Sleep disorder, depression, etc.);
 Restorative phase from illness; and
 Recovery from fatigue and health promotion

(ii) Indications by spring quality

Spring Quality for Notification	for Bathing	for Drinking
Simple springs	Autonomic instability, insomnia and depression	—
Chloride springs	Cuts, peripheral circulatory failure, excessive sensitivity to cold, depression and xeroderma	Atrophic gastritis and constipation
Carbonated springs	Cuts, peripheral circulatory failure, excessive sensitivity to cold and xeroderma	Gastroduodenal ulcerations, reflux esophagitis, impaired glucose tolerance (diabetes) and hyperuricemia (gout)
Sulphate springs	Same with chloride springs	Biliary dysfunction, dyslipidemia and constipation

Carbon dioxide springs	Cuts, peripheral circulatory failure, excessive sensitivity to cold and autonomic instability	Gastrointestinal hypofunction
Ferruginous springs	—	Iron-deficiency anemia
Acidic springs	Atopic dermatitis, plaque psoriasis, impaired glucose tolerance (diabetes) and epidermoid suppuration	—
Iodine containing springs	—	Dyslipidemia
Sulphur springs	Atopic dermatitis, plaque psoriasis, chronic eczema and epidermoid suppuration (peripheral circulatory failure is added with regard to the hydrogen sulphide type)	Impaired glucose tolerance (diabetes) and dyslipidemia
Radioactive springs	Hyperuricemia (gout), rheumatoid arthritis, ankylosing spondylitis, etc.	—
In the case of correspondence to two or more of the above	All corresponding indications	All corresponding indications

Note 1: In the case where overlaps are witnessed with regard to general indications and indications by spring quality of medicinal springs, it shall give preference to the notification of indications by spring quality and it shall not prevent the exclusion of overlapping items from general indications.

Note 2: Indications are listed as “All corresponding indications” in the case of the categorization of spring quality of medicinal springs, listed in the Guideline to the Mineral Spring Analysis Methods (2014 Revision)*, corresponds to two or more. However, it shall not be overlapped and listed in the notification.

Example: Carbon dioxide-sodium-chloride springs correspond to “chloride springs” and “carbon dioxide containing medicinal springs.” Accordingly, cuts,

peripheral circulatory failure and excessive sensitivity to cold shall not be overlapped and listed as indications for bathing.

*The categorization of spring quality of medicinal springs stipulated in the Guideline to the Mineral Spring Analysis Methods (2014 Revision) shall be referred to.

(2) Scope of the criteria application

The criteria listed in the above 3. Indications of Medicinal Springs, (1) Criteria for the notification on indications of medicinal springs shall apply to the use of hot springs at accommodations and public baths, etc. that serve hot springs for public bathing and drinking. In the case where medical institutions use hot springs as part of healthcare intervention, all criteria shall not apply. In the case where traditional indications are decided to be listed, in addition to general indications and indications by spring quality of medicinal springs, it is preferable to refer to the opinions of a doctor with expertise.

(3) Procedures of notification

In the case where there is an intention to post the notification in accordance with the criteria listed in 3. Indications of Medicinal Springs, (1) Criteria for the notification on indications of medicinal springs, the party serving hot springs for public bathing and drinking shall follow the procedures that the prefecture as well as the city or special ward establishing a health center stipulate as needed. With regard to deciding the content of the notification, it is preferable for the prefecture, etc. to make it a principle to listen to the opinions of a doctor with expertise

4. Matters to be considered

Hot springs are blessings from nature. After springs are discharged and exposed to air, changes may occur to their components through oxidization or volatilization. Therefore, in serving hot springs for actual bathing, it is difficult to list the permanent results of their componential analyses due to changes of temperatures and the degree of changes depending upon the number of users.

With regard to the notification, it shall be the principle to provide the content based upon the analysis of contingents at the facilities serving hot springs. However, in the case where contingents are identified to be unchanged at the

spring source and facilities, it shall not prevent the posting of the notification based upon the analysis at the source. Accordingly, in the case where indications are judged based upon the analysis at the source, the effect shall be made available to users of hot springs. In the case where indications have been judged based upon the analysis of contingents at the facilities, it shall not prevent the listing of the effect in the notification.

With regard to adding, heating, circulating (filtering) and sterilizing water as well as adding bath agents, in the case where hot springs are served for public bathing, the effect as well as its grounds are required to be listed in the notification based upon Article 10 of the Enforcement Regulation of the Hot Spring Act.