

		<p>questionnaire. If their total score ranges from 8 to 14 points, the subject is advised to receive support for reducing alcohol consumption (brief intervention).</p> <p>++ Support for reducing alcohol consumption (brief intervention): In the initial interview, the person in charge of the health guidance and the concerned subject check his/her current alcohol consumption. He/she is advised to gather more knowledge about the health problems resulting from drinking. Then, a concrete goal for the control of alcohol consumption, and the method for controlling the same, is examined. The concerned subject is advised to maintain a “diary” to control his/her drinking, and bring it when he/she comes to the health guidance, generally scheduled about 2–4 weeks later (there is no specified or recommended duration for the interval between two health guidance programs). In this manner, the person in charge of the health guidance and the concerned subject can reflect on his/her recent drinking behavior.</p> <ul style="list-style-type: none"> ● People who select “Rarely (I do not drink)” may include those who have stopped consuming alcohol. Generally, they refrain from consuming alcohol because of their health problems (certain diseases). According to a cohort study, the risk of mortality is extremely high in the people who stopped drinking^{*15}. Therefore, it should be checked if those who picked this response include those who stopped drinking. The reasons for discontinuation of alcohol consumption should be explored and appropriate health consultation programs should be provided for them.
20	Do you sleep well and get a sufficient amount of rest?	<ul style="list-style-type: none"> ● A subject who selects “No” is likely to have a problem with either their “quantity” or “quality” of sleep. ● If a subject does not have sufficient quantity or length of sleep, it should be confirmed if this is due to their unavoidable working or living conditions and. Then, appropriate support should be provided so that sufficient length of sleep can be assured. ● If a subject has any problem with quality of sleep, you might refer to the Sleep Guideline for Health Promotion, “Seven Rules for Comfortable Sleep,” and appropriate support should be provided. ● An obese subject may suffer from sleep apnea syndrome (SAS), a common complication of obesity. He/she should be checked for daytime sleepiness,

		<p>snoring, and excessive consumption of coffee. Weight control is effective in treating SAS. Therefore, they should be encouraged to reduce their weight. Information regarding improvement of sleep, such as weight control, use of a mouthpiece, or treatment using continuous positive airway pressure (CPAP), and seeking medical attention should be provided as needed.</p> <ul style="list-style-type: none"> ● A subject who selects “No” is likely to unwilling to improve their dietary habits/lack of exercise. They should not be urged to determine their target body weight, but should be informed of the close relationship between lack of sleep or insomnia and depression or lifestyle-related diseases. In this manner, support for ensuring sufficient quality and quantity of sleep should be provided.
21	Do you intend to improve your lifestyle, including fitness and dietary habits?	<ul style="list-style-type: none"> ● This item is intended to assess the stage of behavior change (preparation stage) at the time of health guidance. People’s response to this item can be utilized to provide the support appropriate for their preparation stage, based on Prochaska’s theoretical model of behavior change. ● Some people may change their attitudes after the interview. Therefore, the stage of people who understood the medical checkup results should be reexamined in a later interview. ● Even if a subject selects “I do not intend to improve my lifestyle,” they may change their attitude after the health guidance and their willingness to improve habits may increase. Therefore, it is important to carefully examine people’s attitudes before excluding them from requiring health guidance. ● If people report that they have started improving their lifestyle [i.e., are in (4) action stage or (5) maintenance stage], how they try to improve, how long this improvement lasts, and how they recognize the effect of improvement should be examined and appreciated. Then, they should be informed of the importance of continuous effort. They may take an excessively difficult approach or may find it difficult to maintain these lifestyle changes. In this case, appropriate action, including reconsidering their goal, should be taken. ● If people are in the preparation stage (i.e., stage 3), they should be set objectives that can be achieved easily and encouraged by providing some tools at the right time so that they can improve their lifestyle.

		<ul style="list-style-type: none"> ● If the subject concerned is in the contemplation stage (getting ready; i.e., stage 2), they should be informed of the benefits of improving one’s lifestyle and of the efficacy of reasonable methods. For example, a mild decrease (3–4%) in body weight results in an improvement in laboratory results^{*16}. ● If the subject concerned is in the precontemplation stage (not ready; i.e., stage 1), they should be informed of the fact that their present lifestyle may result in the development of lifestyle-related diseases. Further, be aware that, among people who selected “I do not intend to improve my lifestyle,” there will be a variety of reasons for this selection, including the notion that further improvement is impossible because a good lifestyle has already been achieved. Therefore, the subject’s attitude towards lifestyle improvement should be examined. For instance, the concerned subject could be asked about their current efforts to promote health. The physician in charge of health guidance should sympathize with subjects who finds it difficult to change their behavior, and help them identify the factors that are preventing behavior change. That is, the concerned subjects should be encouraged to understand their present condition
22	Do you utilize health guidance services to improve your lifestyle, if available?	<ul style="list-style-type: none"> ● Persons who respond with “No” may do so because of the following reasons: they do not like to receive instructions; they prefer their own way of addressing the situation; they have already received instructions; or they do not have the time to avail themselves of the health guidance services. ● Even if people who respond with “No” and are reluctant to receive health guidance, they may change their attitudes after knowing their medical checkup results. Therefore, sufficient consideration should be given to their medical checkup results and their readiness levels, and appropriate support should be provided. ● A study results revealed that the benefit of intensive support was different between people who intend to seek such support and those who do not^{*17}. Therefore, the fact that a collaborative attempt at intensive support differs from conventional “instruction” should be made clear to people who require health guidance.

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Methods and considerations for medical checkups and laboratory tests

Medical checkups and laboratory tests should be conducted according to the following instructions:

(1) Consumption of food or liquid and physical exercise before medical checkup

- a. Alcohol consumption and heavy physical exercise should be avoided the day before and of the medical checkup.
- b. When the medical checkup is scheduled in the morning, the consumption of any food or liquid, except for water, is not permitted for 10 hours before the medical checkup. This is because the consumption of food or liquid at less than 10 hours before laboratory tests may affect the blood glucose and serum triglyceride levels.
- c. When the medical checkup is scheduled in the afternoon, the subject undergoing the examination is allowed to eat a light breakfast, even if HbA1c is to be tested. However, they are advised not to consume any food or liquid, except for water, after breakfast, until after the medical checkup.

(2) Measurement of abdominal circumference

- a. Abdominal circumference is measured at the navel, in the upright position, during mild expiration.
- b. In case of a downward dislocation of the navel resulting from marked accumulation of fat, the abdominal circumference is measured at the midpoint between the lower margin of the rib and the superior anterior iliac spine.
- c. For more details, refer to the website of the National Institute of Health and Nutrition (<http://www0.nih.go.jp/eiken/info/kokucho.html>).

(3) Measurement of blood pressure

- a. In principle, blood pressure is measured twice and the mean is used as the final measurement. However, depending on the measurement conditions, the result of one measurement is acceptable.
- b. The Japanese Association for Cerebro-cardiovascular Disease Control published a handbook detailing this measurement method ('Handbook for Preventing Cerebro-cardiovascular Diseases'). For a brief overview, refer to the website of the association (<http://www.jacd.info/method/index.html>).

(4) Blood lipid examination and liver function test

- a. In general, a blood collection tube with a separating agent is used.
- b. The collected blood sample should be centrifuged immediately. Ideally, measurement should be conducted within 24 hours from the time of collection of the sample.

If the blood sample cannot be handled in this manner, the blood collection tube should be stored in the refrigerator or at room temperature. The blood sample should be centrifuged within 12 hours.

- c. The serum should be refrigerated until measurement. It should be analyzed within 72 hours after collection.
- d. The visible absorption spectrophotometry or ultraviolet absorption spectrophotometry should be used for blood lipid examination. Only if the blood sample is collected in the fasting state, total cholesterol is measured, and the level of triglycerides is below 400 mg/dL, LDL cholesterol level can be estimated with the Friedwald equation.
- e. In the liver function test, AST (GOT) and ALT (GPT) are measured by using ultraviolet absorption spectrophotometry, while the γ -GT (γ -GTP) is measured by using visible absorption spectrophotometry.

(5) Blood glucose test

Blood glucose level is measured by using one of the following methods. If a blood sample cannot be collected in the fasting state, the HbA1c measure is used.

a. Fasting blood glucose test

1. It should be confirmed that the blood was collected in fasting status. The fasting blood glucose level is defined as measured glucose level from a blood sample taken after a fast of more than 10 hours.
2. Blood collection tubes containing sodium fluoride (sample tubes for blood glucose test) should be used.
3. The tube containing the blood sample is gently inverted 5–6 times for mixing.
4. The mixed blood sample is stored in the refrigerator. Ideally, the blood sample should be centrifuged for measurement within 6 hours after collection. If this is not possible, it should be centrifuged within a maximum of 12 hours after collection.
5. The plasma collected by centrifugation is stored in the refrigerator until measurement. It should be analyzed within 72 hours after collection.
6. Potentiometry, visible absorption spectrophotometry, or an ultraviolet absorption spectrophotometry is used for measurement.

b. HbA1c test

1. Blood collection tubes containing sodium fluoride (sample tubes for blood glucose test) or ethylenediaminetetraacetic acid (EDTA) should be used.
2. The tube containing the blood sample is gently inverted 5–6 times for mixing.
3. The mixed blood sample is stored in the refrigerator.
4. The collected blood sample should be analyzed within 48 hours.
5. The immunological method, high-speed liquid chromatography (HPLC), or the enzyme method is used for measurement.

(6) Test for sugar and protein in the urine

- a. A midstream urine sample is collected.
- b. Ideally, the urine sample should be tested with the strips within 4 hours after collection. However, if this is not possible, the urine is transferred to a special, sealed container that can be stored until testing. If stored at room temperature, it should be tested within 24 hours from collection. If stored in the refrigerator, it should be tested within 48 hours from collection.
- c. The Japanese Association for Cerebro-cardiovascular Disease Control published a handbook detailing these measurements and their standards for judgment ('Handbook for Preventing Cerebro-cardiovascular Diseases'). For a brief overview, refer to the website of the association (<http://www.jacd.info/method/index.html>).

(7) Detailed laboratory tests

1. Anemia test

- a. Blood collection tubes containing ethylenediaminetetraacetic acid (EDTA) should be used.
- b. After blood collection, the EDTA should be dissolved in the blood collection tube.
- c. The blood sample should be mixed and stored at room temperature. It should be tested within 12 hours of collection.

2. ECG

- a. A standard resting 12-lead ECG should be traced.
- b. The Japanese Association for Cerebro-cardiovascular Disease Control published a handbook detailing this examination method and its standards for judgment ("Handbook for Preventing Cerebro-cardiovascular Diseases"). For a brief overview, refer to the website of the association (<http://www.jacd.info/method/index.html>).

3. Funduscopy

- a. A handheld, head-mounted, or fixed electronic ophthalmoscope or fundus camera is used to

conduct a funduscopy.

- b. The Japanese Association for Cerebro-cardiovascular Disease Control (<http://www.jacd.info/method/index.html>) published a handbook detailing this examination method and its standards for judgment (“Handbook for Preventing Cerebro-cardiovascular Diseases”). The Osaka Center for Cancer and Cardiovascular Diseases Prevention (formerly the Osaka Medical Center for Health Science and Promotion) (<http://www.osaka-ganjun.jp/effort/cvd/gantei/>) also published the “Comprehensive Funduscopy for Medical Checkup.” For a brief overview, refer to their websites.

Levels of health guidance and medical treatment recommendations for medical checkup results

No	Test code (JLAC 10)	Laboratory test	Level of health guidance	Level of medical treatment recommendation	Data type	Unit	Examination method	Remarks
1	9A75500000000001 9A75200000000001 9A75100000000001	Systolic BP	130	140	Numerical value	Mm Hg	3: Others 2: 2nd measurement 1: 1st measurement	A mean or the most reliable value other than the "1st" and "2nd" measurements should be recorded.
2	9A76500000000001 9A76200000000001 9A76100000000001	Diastolic BP	85	90	Numerical value	Mm Hg	3: Others 2: 2nd measurement 1: 1st measurement	A mean or the most reliable value other than the "1st" and "2nd" measurements should be recorded.
3	3F015000002327101 3F015000002327201 3F015000002399901	Triglycerides	150	300	Numerical value	mg/dL	1: Visible absorption spectrophotometry (enzyme colorimetric assay/glycerol elimination) 2: Ultraviolet absorption spectrophotometry (enzyme colorimetric assay/glycerol elimination) 3: Others	Judgment is based on measurement in the fasting state. Judgment is based on measurement in the fasting state.
4	3F070000002327101 3F070000002327201 3F070000002399901	HDL cholesterol	39	34	Numerical value	mg/dL	1: Visible absorption spectrophotometry (direct method (non-precipitation method) 2: Ultraviolet absorption spectrophotometry (direct method (non-precipitation method) 3: Others	
5	3F077000002327101 3F077000002327201 3F077000002399901	LDL cholesterol	120	140	Numerical value	mg/dL	1: Visible absorption spectrophotometry (direct method (non-precipitation method) 2: Ultraviolet absorption spectrophotometry (direct method (non-precipitation method) 3: Others	Total cholesterol level is measured using the fasting blood sample, and LDL cholesterol is estimated with the Friedwald equation.
6	3D010000001926101 3D010000002227101 3D010000001927201 3D010000001999901	Fasting blood glucose	100	126	Numerical value	mg/dL	1: Potentiometry (glucose oxidase electrode method) 2: Visible absorption spectrophotometry (glucose oxidase method) 3: Ultraviolet absorption spectrophotometry (hexokinase method, glucokinase method, glucose dehydrogenase method) 4: Others	
7	3D046000001906202 3D046000001920402 3D046000001927102	HbA1c (NGSP)	5.6	6.5	Numerical value	%	1: Latex agglutination turbidimetry (immunological method)	Number to one decimal place Number to one decimal

	3D046000001999902						2: HPLC (instable fraction elimination HPLC method) 3: Enzyme method 4: Others	place Number to one decimal place Number to one decimal place
8	3B035000002327201 3B035000002399901	AST (GOT)	31	51	Numerical value	U/L	Ultraviolet absorption spectrophotometry (JSCC standardization compatible method) 2: Others	
9	3B045000002327201 3B045000002399901	ALT (GPT)	31	51	Numerical value	U/L	Ultraviolet absorption spectrophotometry (JSCC standardization compatible method) 2: Others	
10	3B090000002327101 3B090000002399901	γ -GT (γ -GTP)	51	101	Numerical value	U/L	Ultraviolet absorption spectrophotometry (IFCC (JSCC) standardization compatible method) 2: Others	
11	2A030000001930101	Hemoglobin	13.0 (males) 12.0 (females)	12.0 (males) 11.0 (females)	Numerical value	g/dL	Automated hemocytometer	

*1 and 2: Data are based on the standards specified in “Guidelines for the Management of Hypertension,” created by the Japanese Society of Hypertension.

*3–5: Data are based on the standards specified in “Guidelines for Prevention of Atherosclerotic Cardiovascular Diseases,” created by the Japan Atherosclerosis Society, and “Manual for Medical Checkups Specified by the Health and Medical Service Act for the Aged” (*related to the former “Medical Service Act for the Aged”).

*6 and 7: Data are based on the judgment standards specified in “Treatment Guide for Diabetes,” edited by the Japan Diabetes Society.

*8–10: Data are based on the position document of the liver function research team of the Japanese Society of Gastroenterology.

*11: Data are based on the standards specified in WHO criteria for anemia and the “Guidelines for Judgment of Complete Medical Checkup Results and Follow-up Guidance,” created by the Japan Society of Ningen Dock.

* The routine examination methods that assure traceability covering more than 90% of each laboratory test are listed.

* The above laboratory tests and those not included in the above table are coded with JLAC-10 codes.

* Since 2013, NGSP level has been used to express HbA1c in place of conventional the JDS levels. The following formulas can be used for conversion from NGSP level to JDS level, and from JDS level to NGSP level.

$$\text{JDS level (\%)} = 0.980 \times \text{NGSP level (\%)} - 0.245\%$$

$$\text{NGSP level (\%)} = 1.02 \times \text{JDS level (\%)} + 0.25\%$$

Example expressions to notify increased blood pressure

[Classification of medical checkup results and advice]

Medical checkup results			Advice	
			Obese persons	Non-obese persons
Abnormal ↑	Higher than the level of medical treatment recommendation	Systolic BP \geq 160 mm Hg or Diastolic BP \geq 100 mm Hg	1) Seek prompt medical attention.	
		Systolic BP 140–159 mm Hg or Diastolic BP 90–99 mm Hg	2) Try to improve your lifestyle. If the high BP persists, seek medical attention.	
↓ Normal	Higher than the level of health guidance	Systolic BP 130–139 mm Hg or Diastolic BP 85–89 mm Hg	3) Use specific health guidance services regularly and try to improve your lifestyle.	4) Try to improve your lifestyle.
	Within normal range	Systolic BP $<$ 130 mm Hg and Diastolic BP $<$ 85 mm Hg	5) Continue to get regular medical checkups.	

[Example expressions to explain the results to the concerned persons]

Case 1 (Obese persons/non-obese persons)

Systolic BP \geq 160 mm Hg or diastolic BP \geq 100 mm Hg

This time, your blood pressure (BP) has increased to a very high level. Your risk of suffering from a stroke or heart disease is five times higher than that of persons with a desirable BP (systolic BP $<$ 120 mm Hg and diastolic BP $<$ 80 mm Hg).

You should visit your primary care doctor immediately and show him/her the result of this medical checkup.

Case 2 (Obese persons/non-obese persons)

Systolic BP 140–159 mm Hg or Diastolic BP 90–99 mm Hg

According to this blood pressure (BP) measurement, you are suspected of having hypertension. If your BP continues to remain high, your risk of suffering from a stroke or heart disease will be three times higher than that of persons with a desirable BP (systolic BP $<$ 120 mm Hg and diastolic BP $<$ 80 mm Hg).

To decrease your BP, you need to improve your lifestyle by making the following changes: losing weight (for obese persons or for persons who have gained weight recently), appropriate exercise, quitting smoking, limiting the consumption of alcoholic beverages, limiting salt intake, increasing the consumption of vegetables, and ensuring the consumption of appropriate amounts of fruit. You can improve your lifestyle in two ways: through self-improvement, where you try to improve your lifestyle by yourself, or by using a specific health guidance service. Practice one of them for one to three months, and then visit your primary care doctor for reexamination.

Please note that if you have diabetes, chronic kidney disease, or cardiovascular diseases (diseases of the heart or blood vessels), or have more than three other risk factors* along with high BP, these disease and factors put you at a higher risk of stroke or myocardial infarction when your BP remains high. Therefore, you should seek the advice of your primary care doctor immediately.

* “Other risk factors” include:

- ✓ Old age (≥ 65 years).
- ✓ Smoking.
- ✓ Hyperlipidemia (HDL < 40 mg/dL; LDL ≥ 140 mg/dL; TG ≥ 150 mg/dL).
- ✓ Obesity (BMI ≥ 25) (particularly abdominal obesity).
- ✓ Metabolic syndrome.
- ✓ Family history of early onset cardiovascular disease (< 50 years).

Case 3 (Obese persons)

Systolic BP 130–139 mm Hg or Diastolic BP 85–89 mm Hg

This blood pressure (BP) measurement is within normal limits, but is closer to the upper limit of normal. If your BP continues to remain slightly high, your risk of suffering from a stroke or heart disease will be 1.5–2 times higher than that of persons with a desirable BP (systolic BP < 120 mm Hg and diastolic BP < 80 mm Hg).

To decrease your BP, you need to improve your lifestyle by making the following changes: losing weight, quitting smoking, limiting the consumption of alcoholic beverages, limiting salt intake, increasing the consumption of vegetables, and ensuring the consumption of appropriate amounts of fruit.

If you find an explanatory leaflet enclosed with the medical checkup results, you are a subject to be advised by the specific health guidance service. It is strongly recommend that you use this service to improve your lifestyle.

You should continue to undergo regular medical checkups to monitor your health condition.

Case 4 (Non-obese persons)

Systolic BP 130–139 mm Hg or Diastolic BP 85–89 mm Hg

This blood pressure (BP) measurement is within normal limits, but is closer to the upper limit of normal. If your BP continues to remain slightly high, your risk of suffering from a stroke or heart disease will be 1.5–2 times higher than that of persons with a desirable BP (systolic BP < 120 mm Hg and diastolic BP < 80 mm Hg).

To decrease your BP, you need to improve your lifestyle by making the following changes: losing weight (for persons who may have gained weight recently), quitting smoking, limiting the consumption of alcoholic beverages, limiting salt intake, increasing the consumption of vegetables, and ensuring the consumption of

appropriate amounts of fruit.

You should continue to undergo regular medical checkups to monitor your health condition.

Case 5 (Obese persons/non-obese persons)

Systolic BP < 130 mm Hg and diastolic BP < 85 mm Hg

This blood pressure (BP) measurement is within the normal limits.

You should continue to undergo regular medical checkups to monitor your health condition.

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Example expressions to notify lipid abnormality

[Classification of medical checkup results and advice]

Medical checkup results			Advice	
			Obese persons	Non-obese persons
Abnormal ↑	Higher than the level of medical treatment recommendation	LDL \geq 180 mg/dL or TG \geq 1,000 mg/dL	1) Seek prompt medical attention.	
		LDL 140–179 mg/dL or TG 300–999 mg/dL	2) Try to improve your lifestyle. If your measurements do not improve, seek medical attention.	
	Higher than the level of health guidance	LDL 120–139 mg/dL or TG 150–299 mg/dL or HDL $<$ 40 mg/dL	3) Use the specific health guidance service regularly and try to improve your lifestyle.	4) Try to improve your lifestyle.
↓ Normal	Within normal range	LDL $<$ 120 mg/dL and TG $<$ 150 mg/dL and HDL \geq 40 mg/dL	5) Continue to get regular medical checkups.	

[Example expressions to explain the results to the concerned persons]

Case 1 (Obese persons/non-obese persons)

LDL \geq 180 mg/dL

The lipid assessment showed a very high level of bad cholesterol, or Low Density Lipoprotein (LDL). As compared to persons with LDL levels below 100 mg/dL, you have about 3–4 times the risk of suffering from a myocardial infarction.

You should visit your primary care doctor immediately and show him/her the results of this medical checkup.

TG \geq 1,000 mg/dL

Your blood fat level is very high. If this persists, acute pancreatitis could occur.

You should contact with your primary care doctor and ask him/her to refer to a specialist immediately.

Case 2 (Obese persons/non-obese persons)

LDL 140–179 mg/dL

Lipid assessment showed a very high level of bad cholesterol, or Low Density Lipoprotein (LDL). As compared to persons with LDL levels below 100 mg/dL, you have about 1.5–2 times the risk of suffering from a myocardial infarction.

You should reduce your consumption of animal fats abundant in saturated fatty acids. In addition, consuming more vegetable oil and fish abundant in polyunsaturated fatty acids is recommended. The consumption of

foods rich in cholesterol, such as eggs, should also be reduced, and if you smoke, that should be stopped. You should visit your primary care doctor for reexamination in 3–6 months.

Please note that if you have diabetes, chronic kidney disease, or cardiovascular diseases (diseases of the heart or blood vessels) in addition to abnormal levels of cholesterol, these comorbidities may aggravate arteriosclerosis and accelerate the development of myocardial infarction. Therefore, you should visit a hospital for reexamination.

You should continue to undergo regular medical checkups to monitor your health condition.

TG 300–999 mg/dL

The lipid assessment showed a high level of the neutral fat (triglycerides: TG). As compared with persons with TG levels below 150 mg/dL, you have twice the risk of developing heart disease.

You need to reduce the consumption of high-sugar foods and alcoholic beverages. You also need to lose weight if you are obese. It is recommended that you undergo a complete checkup urgently. You should visit your primary care doctor for reexamination within at least 3–6 months.

You should continue to undergo regular medical checkups to confirm your health conditions.

Case 3

LDL 120–139 mg/dL

The lipid assessment showed the presence of a borderline level of bad cholesterol (i.e. your cholesterol level is between high and normal levels).

You need to curb any further increase in LDL by reducing the consumption of animal fats abundant in saturated fatty acids, and by increasing your intake of vegetable oil and fish abundant in polyunsaturated fatty acids. The consumption of foods rich in cholesterol, such as eggs, should also be controlled. Smoking should be stopped and body weight should be lost appropriately.

If you find an explanatory leaflet enclosed with the medical checkup results, you are the subjects to be advised by specific health guidance service. It is strongly recommend that you use this service to improve your lifestyle.

Please note that if you have diabetes or kidney disease in addition to the borderline level of bad cholesterol, these comorbidities may aggravate arteriosclerosis and increase the possibility of suffering from a myocardial infarction. Therefore, you should visit a hospital for reexamination.

You should continue to undergo regular medical checkups to monitor your health condition.

TG 150–299 mg/dL

The lipid assessment showed the presence of a high level of the neutral fat (triglycerides: TG).

First, you need to lose weight. You also need to reduce your consumption of high-sugar foods and alcoholic beverages.

If you find an explanatory leaflet enclosed with the medical checkup results, you are a subject to be advised

by a specific health guidance service. It is strongly recommend that you use this service to improve your lifestyle.

You should continue to undergo regular medical checkups to monitor your health condition.

HDL < 40 mg/dL

The lipid assessment showed a low level of good cholesterol.

First, you need to control your weight, and if you smoke, you should stop. In addition, you should exercise regularly to increase your activity level.

If you find an explanatory leaflet enclosed with the medical checkup results, you are the subjects to be advised by a specific health guidance service. It is strongly recommend that you use this service to improve your lifestyle.

You should continue to undergo regular medical checkups to monitor your health condition.

Case 4 (Non-obese persons)

LDL 120–139 mg/dL

The lipid assessment showed a borderline level of bad cholesterol (i.e. your cholesterol level is between the high and normal levels).

You should curb any further increase in LDL by reducing your consumption of animal fats abundant in saturated fatty acids, and by increasing your intake of vegetable oil and fish abundant in polyunsaturated fatty acids. The consumption of foods rich in cholesterol, such as eggs, should also be controlled. Smoking should be stopped.

Please note that if you have diabetes, chronic kidney disease, or cardiovascular diseases (diseases of the heart or blood vessels) in addition to having borderline cholesterol, these comorbidities may aggravate arteriosclerosis and increase the possibility of your suffering a myocardial infarction. Therefore, you should visit a hospital to undergo examinations to rule out the possible presence of these diseases.

You should continue to undergo regular medical checkups to monitor your health conditions.

TG 150–299 mg/dL

The lipid assessment showed a high level of the neutral fat (triglycerides: TG).

You should reduce the consumption of high-sugar foods and alcoholic beverages. You should also lose weight if you have recently gained some.

You should continue to undergo regular medical checkups to monitor your health condition.

HDL < 40 mg/dL

The lipid assessment showed a low level of good cholesterol.

You should stop smoking. In addition, you should exercise regularly to increase your activity level.

You should continue to undergo regular medical checkups to monitor your health condition.

Case 5 (Obese persons/non-obese persons)

The lipid test results were normal.

You should continue to undergo regular medical checkups to monitor your health condition.

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Example expressions to notify increased blood glucose

[Classification of medical checkup results and advice]

Medical checkup results				Advice			
		Fasting blood glucose (mg/dL)	HbA1c (NGSP) (%)	Obese persons		Non-obese persons	
				Diabetes treatment (+)	Diabetes treatment (-)	Diabetes treatment (+)	Diabetes treatment (-)
Abnormal ↑	Higher than the level of medical treatment recommendation	~126 or over	~6.5 or over	1) Control obesity and blood glucose. Monitor blood glucose regularly.	2) Seek prompt medical attention.	3) Monitor and control blood glucose.	2) Seek prompt medical attention.
	Higher than the level of health guidance	110–125	6.0–6.4	4) Control of blood glucose is satisfactory, but obesity needs to be controlled.	5) Regularly use the specific health guidance service and try to improve your lifestyle.	6) Control of blood glucose is satisfactory, and the same should be maintained.	7) Try to exercise regularly and improve dietary habits. A complete medical checkup is strongly recommended.
		100–109	5.6–5.9				8) Try to improve your lifestyle. Visit a hospital for a complete medical checkup if you have other risk factors.
↓ Normal	Within normal range	~99 or less	~5.5 or less		9) Try to control obesity and visit a hospital for regular medical checkups.		10) Visit a hospital for regular medical checkups.

[Example expressions to explain the results to the concerned persons]

Case 1 (Obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL and HbA1c was () %. To prevent complications related to diabetes, you should continue to optimize the control of your blood glucose level. Therefore, you should continue to receive treatment for diabetes.

If your HbA1c exceeds 7.0%, your blood glucose control is considered unsatisfactory. If this occurs, you should consult your primary care doctor or visit a hospital specializing in diabetes treatment. In this manner, you should continue to receive specialized treatment for diabetes.

Losing weight, even if it is just a little, is important for your condition.

Case 2 (Obese persons/non-obese persons)

*HbA1c (not measured); fasting blood glucose ≥ 126 mg/dL

In this medical checkup, your fasting blood glucose was () mg/dL. You are suspected of having diabetes. Visit your primary care doctor or a hospital specializing in diabetes treatment immediately.

*Fasting blood glucose (not measured); HbA1c $\geq 6.5\%$

In this medical checkup, your HbA1c was () %. You are suspected of having diabetes. Visit your doctor or a hospital specializing in diabetes treatment immediately.

*Fasting blood glucose ≥ 126 mg/dL and HbA1c $\geq 6.5\%$

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was () %. These measurements indicate that you have diabetes. Visit your primary care doctor or a hospital specializing in diabetes treatment immediately to receive treatment for diabetes as soon as possible.

Case 3 (Non-obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was () %. To prevent the complications of diabetes, you should continue to optimize the control of your blood glucose level. Therefore, you should continue to receive treatment for diabetes.

Please note if your HbA1c exceeds 7.0%, it indicates that your blood glucose control is unsatisfactory. In such a situation, you must consult your primary care doctor or visit a hospital specializing in diabetes treatment. It is important that you continue to receive treatment for diabetes.

Case 4 (Obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was () %. These measurements indicate that your blood glucose control is satisfactory. You should still visit your primary care doctor and receive continuous treatment. To ensure that this satisfactory blood glucose control is maintained,

you should lose weight.

Case 5 (Obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was () %. The possibility that you have diabetes cannot be ruled out. A 75-mg oral glucose tolerance test is a detailed examination used for screening for diabetes. You are advised to undergo this test. Losing weight is important to prevent diabetes. A leaflet explaining the specific health guidance service has been enclosed with your medical checkup results. This service provides you with an opportunity to learn how to prevent diabetes by practicing appropriate dietary/exercise therapy. The use of this service is strongly recommended.

Case 6 (Non-obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was () %. These measurements indicate that your blood glucose control is satisfactory. You should still visit your primary care doctor to receive continuous treatment. You should also continue to maintain a healthy lifestyle by improving your dietary habits and by exercising regularly.

Case 7 (Obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was ()%. The possibility that you have diabetes cannot be ruled out. It is recommended that you begin dietary/exercise therapy to prevent diabetes. If you have any questions about dietary/exercise therapy, please contact the health center for advice. A 75-mg oral glucose tolerance test is a detailed examination that will aid in creating your future treatment plan. You are advised to undergo this test.

Case 8 (Non-obese persons)

In this medical checkup, your fasting blood glucose was () mg/dL, and your HbA1c was () %. The possibility that you have diabetes cannot be ruled out. It is recommended that you begin dietary/exercise therapy to prevent diabetes. If you have any questions about dietary and exercise therapy, please contact the health center for advice. If you have other risks such as hypertension or hyperlipidemia, or if your relatives have diabetes, you are advised to undergo a 75-mg oral glucose tolerance test. This detailed examination will aid in creating your future treatment plan. In the regular medical checkup scheduled for the next year, your progress should be examined carefully.

Case 9 (Obese persons)

In this medical examination, your test results for indicators of diabetes were normal. However, if obesity is left uncontrolled, you may be at a higher risk of developing diabetes. Therefore, you should lose weight, even if it is only by a little.

You should continue to undergo regular medical checkups to monitor your health condition.