

## ClinFIT COVID-19 rating manual (rating option with specifications)

### *Basic structure of the rating manual*

This rating manual has been developed for practical use of the ClinFIT for COVID-19. This set of items is based on the ICF and consists of the categories from three components of the ICF: the body function, the activity and participation, and the body structure categories. The rating manual for those three components is designed for the common rating scale of 0 to 4, but each has a different structure.

### *How to rate body function categories*

The body function categories in ClinFIT for COVID-19 are as follows:

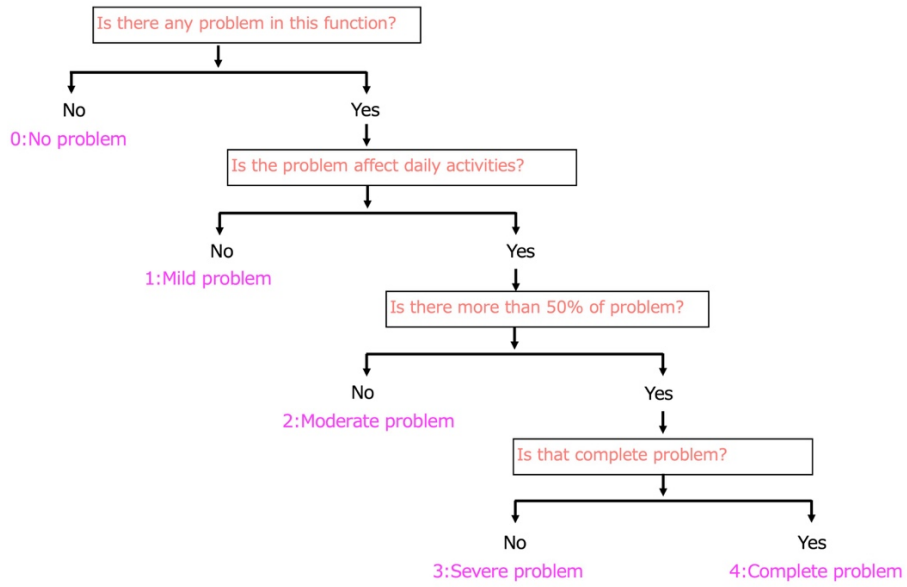
- b130 Energy and drive functions (G)
- b134 Sleep functions
- b140 Attention functions
- b152 Emotional functions (G)
- b280 Sensation of pain (G)
- b440 Respiratory functions
- b445 Respiratory muscle functions
- b455 Exercise tolerance functions
- b710 Mobility of joint functions
- b730 Muscle power functions

Body function categories include ICF categories related to physical and mental functions. In principle, the body function categories could be rated with a five-point scale as follows:

- 0: No problem
- 1: Mild problem: May include a problem that does not affect the patient's daily activities
- 2: Moderate problem: May include a problem that exceeds 1 but remains a relatively minor problem (<50%)
- 3: Severe problem: May include a major problem ( $\geq 50\%$ )
- 4: Complete problem: May include a complete problem such as...(defined for each category)

A “minor” problem is defined as less than 50% of the problem, whereas a “major” problem is defined as more than 50% of the problem. The manual for the body function categories also includes two additional pieces of information: 1) what aspect must be considered in the rating of each category and 2) what does “a complete problem” mean in each category.

## b categories



The rating reference guide for body function categories

Category	Aspect to be scored	Description of each response option * The percentage describes the severity of the problem, if 100% means it is a complete problem. **The rating should reflect the body's function without the help of devices.	Typical examples
b130	Energy and drive functions	Extent and frequency of the problem, such as loss of motivation or appetite	0 No motivation problems 1 Slight lack of energy that does not interfere with daily activities 2 Loss of motivation to perform daily activities, such as lack of motivation to go outside for daily activities or lack of appetite resulting in inadequate food consumption 3 Severe loss of motivation to carry out daily activities, such as a frequent lack of motivation to carry out minimal activities of daily life and consumption of small amounts of food 4 No evidence of volition / under deep sedation
b134	Sleep functions	Extent and frequency of the problem, such as shortage of sleep or irregular sleep schedules	0 No sleep function problem 1 Mild insomnia/hypersomnia that does not affect daytime activities 2 Occasional insomnia/hypersomnia that affects daytime activities 3 Frequent insomnia/hypersomnia that affects daytime activities 4 Cannot sleep at all; complete day-night reversal; under deep sedation
b140	Attention functions	Extent and frequency of the problem in attention functions, such as impairment in focusing on a single task or distributing	0 No attention function problem 1 Mild impairment of attention function (on cognitive testing) that does not affect daily activities 2 Moderate impairment of attention function that affects

		attention to multiple tasks	exceeds 1 but remains relatively minor (<50%)		daily life, such as being easily distracted in a conversation and/or reduced speed in performing cognitive tasks
			3: Severe problem: May include a major problem ( $\geq 50\%$ ) with attention functions		3 Severe impairment of attention function, such as an inability to concentrate in completing basic daily tasks (i.e. eating)
			4: Complete problem: May include a complete problem with attention functions, such as inability to concentrate on one task at all or to pay attention to another object at all		4 Cannot concentrate on any task at all/under deep sedation
b152	Emotional functions	Extent and frequency of the problem, such as loss of emotional control or lack of emotional expression	0: No problem		0 Mentally stable; no emotional problems
			1: Mild problem: May include a problem with emotions that do not affect the patient's daily activities		1 Some emotional instability that does not affect daily activities
			2: Moderate problem: May include a problem with emotions that exceed 1, but remains relatively minor (<50%)		2 Minor emotional problems that affect daily activities, such as depression or irritability
			3: Severe problem: May include a major problem ( $\geq 50\%$ ) with emotions		3 Severe emotional control problems, such as great difficulty in communicating due to depression or frequent problems due to irritability
			4: Complete problem: May include a complete problem with emotions, such as complete loss of control of emotions, or being incapable of expressing emotions at any time		4 No emotional expression at all
b280	Sensation of pain	Extent, frequency, and number of sites with pain	0: No problem		0 No pain problem
			1: Mild problem: May include a problem with sensations of pain, but does not affect the patient's daily activities		1 Occasional mild pain that does not affect daily activities
			2: Moderate problem: May include a problem with sensations of pain that exceeds 1, but remains a relatively minor problem (<50%)		2 Frequent mild pain or occasional severe pain that affects daily activities
			3: Severe problem: May include a major problem ( $\geq 50\%$ ) with sensations of pain		3 Frequent severe pain affecting daily activities
			4: Complete problem: May include a complete problem with sensations of pain, such as continuous, intolerable pain		4 Continuous, intolerable pain
b440	Respiratory	Extent and frequency	0: No problem		0 No respiratory function problem

	functions	of the problem, such as gas exchange in the lungs and respiratory muscle dysfunction	<p>1: Mild problem: May include a problem with respiratory functions that does not affect the patient's daily activities</p> <p>2: Moderate problem: May include a problem with respiratory functions that exceeds 1 but remains relatively minor (&lt;50%)</p> <p>3: Severe problem: May include a major problem (<math>\geq 50\%</math>) with respiratory functions</p> <p>4: Complete problem: May include a complete problem with respiratory functions, such as complete loss of breathing functions</p>	<p>1 Mild respiratory distress during exercise with no need of oxygenation</p> <p>2 Respiratory dysfunction requiring oxygenation</p> <p>3 Severe respiratory dysfunction requiring positive pressure ventilation with a ventilator</p> <p>4 Very severe respiratory dysfunction requiring extracorporeal membrane oxygenation</p>
b445	Respiratory muscle functions	Extent and frequency of the problem, such as respiratory muscle dysfunction/fatigue	<p>0: No problem</p> <p>1: Mild problem: May include a problem with respiratory muscle functions that does not affect the patient's daily activities</p> <p>2: Moderate problem: May include a problem with respiratory muscle functions that exceeds 1 but remains relatively minor (&lt;50%)</p> <p>3: Severe problem: May include a major problem (<math>\geq 50\%</math>) with respiratory muscle functions</p> <p>4: Complete problem: May include a complete problem with respiratory muscle functions, such as complete loss of respiratory muscle movement</p>	<p><i>Note that this category cannot be rated if the patient rely on mechanical ventilation for reasons other than respiratory muscle dysfunction</i></p> <p>0 No respiratory muscle function problem</p> <p>1 Presence of clinical signs of mild respiratory muscle fatigue, such as increase in respiratory rate without respiratory distress</p> <p>2 Presence of clinical signs of respiratory muscle fatigue/dysfunction, such as paradoxical abdominal wall movements and/or respiratory alternants, with respiratory distress</p> <p>3 Respiratory muscle dysfunction that requires mechanical ventilation</p> <p>4 Respiratory muscle dysfunction that requires full mechanical ventilation</p>
b455	Exercise tolerance functions	Extent and frequency of the problem, such as decline in respiratory and cardiovascular capacity that is required to perform daily activities	<p>0: No problem</p> <p>1: Mild problem: May include a problem with exercise tolerance that do not affect the patient's daily activities</p> <p>2: Moderate problem: May include a problem with exercise tolerance that exceeds Level 1, but remains a relatively minor problem (&lt;50%)</p>	<p><i>Note that this category should be scored by considering exercise tolerance functions without oxygen</i></p> <p>0 No problem in exercise tolerance in carrying out daily activities</p> <p>1 Easily fatigued in daily life but daily activities remain unaffected</p> <p>2 Takes short breaks due to fatigue in daily activities</p>

			3: Severe problem: May include a major problem ( $\geq 50\%$ ) with exercise tolerance	3 Takes long breaks (e.g. longer than the duration of the activity itself) due to fatigue in indoor daily activities, such using the toilet
			4: Complete problem: May include a complete problem with exercise tolerance, such as being incapable of bearing any activity of daily living at any time due to cardiorespiratory problems	4 Incapable of undertaking any daily activity at any time
b710	Mobility of joint functions	Extent of the problem, such as joint contracture, or limitations in range of motion and percentage of joints with mobility problems	0: No problem	0 No joint movement problem
			1: Mild problem: May include a problem with joint mobility functions that do not affect the patient's daily activities	1 Mild problems in range of motion, for example, a slight limitation in shoulder flexion that does not affect most daily activities
			2: Moderate problem: May include a problem with joint mobility that exceed 1, but remains a relatively minor problem (<50%)	2 Minor limitation in the range of motion of a few joints that affects daily activities, for example, minor contractures in the knee or ankle joint that affect gait patterns
			3: Severe problem: May include a major problem ( $\geq 50\%$ ) with joint mobility	3 Major limitation in the range of motion of multiple joints of the upper and lower limbs that affects daily activities, for example, severe shoulder, hip, knee and ankle contractures of the limbs of both sides
			4: Complete problem: May include a complete problem with joint mobility, such as complete joint contracture in all of the major joints	4 Complete joint contracture in all the major joints
b730	Muscle power of functions	Extent of the problem, and percentage of joints with muscle power problems	0: No problem	0 No muscle strength problem
			1: Mild problem: May include a problem with muscle power that do not affect the patient's daily activities	1 Slight muscle weakness that does not interfere with daily activities
			2: Moderate problem: May include a problem with muscle power functions that exceeds 1, but remains a relatively minor problem (<50%)	2 Minor muscle weakness that affects daily activities, such as mild foot drop or poor grip strength
			3: Severe problem: May include a major problem ( $\geq 50\%$ ) with muscle power	3 Major muscle weakness that affects daily activities, such as severe quadriplegia
			4: Complete problem: May include a complete problem with muscle power, such as a complete loss of muscle power in all of the major muscles	4 Loss of muscle power in all major muscles, such as locked-in syndrome

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### How to rate the activity and participation categories

The activity and participation categories in ClinFIT for COVID-19 are as follows:

- d230 Carrying out daily routine (G)
- d240 Handling stress and other psychological demands
- d450 Walking (G)
- d455 Moving around (G)
- d850 Remunerative employment (G)
- d920 Recreation and leisure

In principle, the activities and participation categories could be rated with a five-point scale as follows:

0: No problem

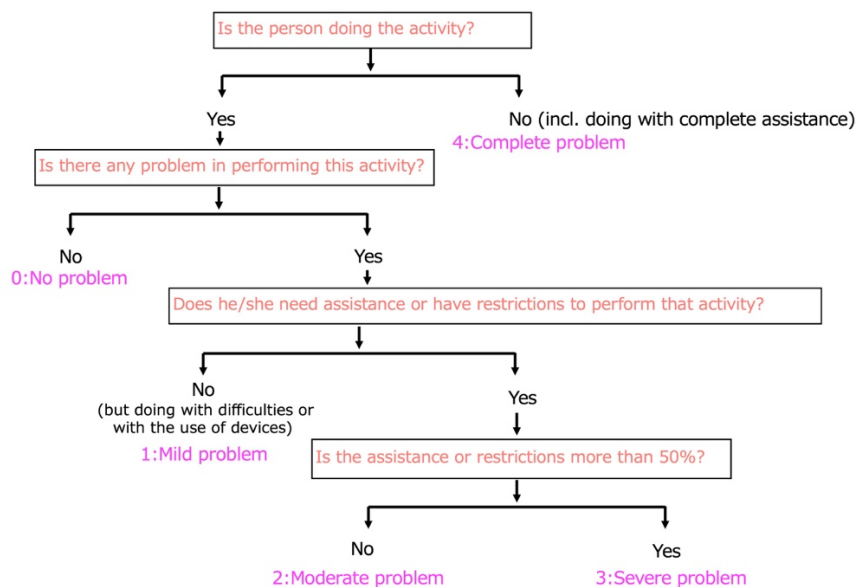
1: Mild problem: May include doing an activity independently with some difficulty or with the use of assistive devices

2: Moderate problem: May include doing an activity partially (less than 50%) with support or doing the activity with partial (less than 50%) restrictions

3: Severe problem: May include doing an activity largely (50% or more) with support or doing the activity with large (50% or more) restrictions

4: Complete problem: May include doing an activity with complete assistance or unable to do the activity at all

## d categories



Category	Description of each response option	Typical examples
d230	Carrying out daily routine	0 Plans and completes the daily routine without problems
	0: No problem May include: - Carrying out daily routine by him/herself without any problems	
	1: Mild problem: May include: - Carrying out daily routine by him/herself, but poor in planning activities - Carrying out daily routine by him/herself, but not active in planning activities	1 Plans and completes the daily routine with minor problems, for example, irregular waking time or sometimes cancelling appointments depending on mood
	2: Moderate problem: May include: - Carrying out daily routine partly (<50%) with support for planning and doing daily activities	2 Less than half of daily routines (such as waking up, going to bed, dressing, eating, shopping, going to the toilet and going to the doctor) are managed and supported by others, such as family members
	3: Severe problem: May include: - Carrying out daily routine largely ( $\geq 50\%$ ) with support for planning and doing daily activities	3 More than half of daily routines (such as waking up, going to bed, dressing, eating, shopping, going to the toilet and going to the doctor) are managed and supported by others, such as family members
	4: Complete problem: May include: - Carrying out daily routine completely with support - Being impossible to carry out daily routine	4 Cannot carry out any daily routines unaided
d240	Handling stress and other psychological demands	0 No problem in handling stress, crisis or responsibilities
	0: No problem May include: - Handling stress and other psychological demands by him/herself without any problems	
	1: Mild problem: May include: - Handling stress and other psychological demands by him/herself but have some difficulties, for example requiring advice or encouragement from others to complete tasks	1 Handles stress, crisis or responsibilities with encouragement from others, for example, family members
	2: Moderate problem: May include: - Handling stress and other psychological demands partly (<50%) with	2 Handles stress, crisis or responsibilities but has minor problems in doing so, for example, blames others when stress increases, which requires consideration and/or care by others



support and/or instruction from others

3: Severe problem:

May include

- Handling stress and other psychological demands largely ( $\geq 50\%$ ) with support and/or instruction from others

4: Complete problem:

May include

- Handling stress and other psychological demands completely with support  
- Being impossible to handle stress and other psychological demands

3 Shows clearly irrational reaction in handling stress, crisis or responsibilities, for example, refusing treatment due to psychological stress, which requires active persuasion from others

4 Not able to handle stress, crisis or responsibilities at all, for example, completely disconnecting from surroundings

d450 Walking

\* Mainly evaluate indoor walking

0: No problem

May include:

- Walking by him/herself without any problems

1: Mild problem:

May include:

- Walking by him/herself with the use of orthosis, canes and/or handrail

- Walking by him/herself with a feeling of difficulty

2: Moderate problem:

May include:

- Walking partly ( $< 50\%$ ) with support

3: Severe problem:

May include:

- Walking largely ( $\geq 50\%$ ) with support

4: Complete problem:

May include

- Walking completely with support

- Being impossible to walk

0 Walks without difficulty

1 Walks with orthotics and/or a cane

2 Walks with minimal assistance, for example, supervision or light touch

3 Walks with maximal assistance, for example, supporting trunk movement

4 Walks with complete assistance and no cooperative voluntary movements at all

d455 Moving around

\* Mainly evaluate stair climbing and running

0: No problem

May include:

- Moving around by him/herself without problems, in the ways except for walking on level ground; for example, going up and down stairs and running

1: Mild problem:

May include:

- Moving around by him/herself with the use of orthosis, canes and/or

0 Climbs stairs and runs without difficulty

1 Climbs stairs with the aid of a handrail; runs with the use of orthosis or prosthesis

handrail

- Moving around by him/herself with the supervision of others.

- Moving around by him/herself with a feeling of difficulty

2: Moderate problem:

May include:

- Moving around partly (<50%) with support

3: Severe problem:

May include:

- Moving around largely ( $\geq$ 50%) with support

4: Complete problem:

May include

- Moving around completely with support

- Being impossible to move around

2 Climbs stairs with minor assistance (e.g. light touch)

3 Climbs stairs with major assistance (e.g. supporting trunk movement)

4 Unable to climb stairs

d850 Remunerative  
employment

0: No problem

May include:

- Working without support or restrictions in terms of content, work time, and/or work intensity

1: Mild problem:

May include:

- Working without support or restrictions in content but with consideration in work time and/or work intensity.

- Working without support or restrictions in content but with the use of assistive devices and/or in an assistive environment

2: Moderate problem:

May include:

- Working partly (<50%) with restrictions to work content

- Working partly (<50%) under support by others

3: Severe problem:

May include:

- Working largely ( $\geq$ 50%) with restrictions to work content

- Working largely ( $\geq$ 50%) under support by others

4: Complete problem:

May include:

- Being impossible to work

0 Works without problems

1 Works without support or restrictions but with consideration, for example, works shorter hours than usual workers or only in locations with wheelchair access

2 Works with some restrictions, for example, work duty is restricted to office work or needs some support, such as needing a colleague to double check the completed work

3 Works with significant restrictions, such as being limited to simple work in a community workshop for people with disabilities or needs significant support, such as most of the work being done by a supervisor

4 Unable to work because of health problems

d920	Recreation and leisure	<p>0: No problem May include: -Doing leisure activities without restrictions or difficulties</p> <p>1: Mild problem: May include: - Doing leisure activities without restrictions, but with some difficulties</p> <p>2: Moderate problem: May include: - Doing leisure activities partly (&lt;50%) with restrictions to the content</p> <p>3: Severe problem: May include: - Doing leisure activities largely (<math>\geq 50\%</math>) under restriction to the content</p> <p>4: Complete problem: May include - Being impossible to do leisure activities</p>	<p>0 Does leisure activities without any problems</p> <p>1 Does leisure activities with some problems, for example, reads books but takes a long time or exercises but easily gets tired</p> <p>2 Does restricted leisure activities, for example, would prefer to play football but enjoys jogging or listening to music instead</p> <p>3 Leisure activities are largely restricted but can still pursue some recreation, such as watching TV</p> <p>4 Unable to do any leisure activities</p>
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### How to rate the body structure categories

The activity and participation categories in ClinFIT for COVID-19 are as follows:

s430 Structure of the respiratory system

In principle, the activity and participation categories could be rated with a five-point scale as follows:

0 No problem: No abnormality in structure

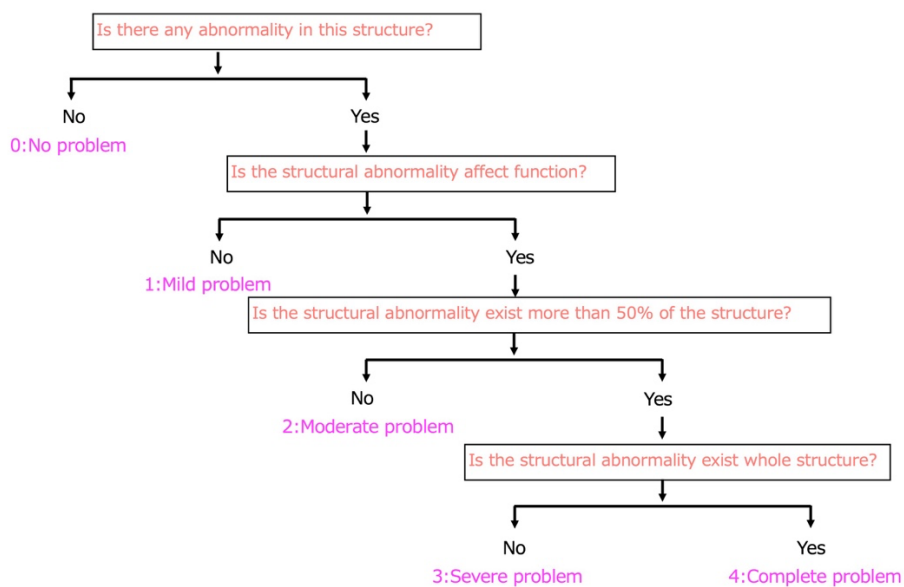
1 Mild problem: Some abnormality in structure without apparent functional limitation

2 Moderate problem: Abnormality in structure that affects function but less than 50% in extent

3 Severe problem: Abnormality in structure that affects function but 50% or more in extent

4 Complete problem: Abnormality in the whole structure

## s categories



Category	Description of each response option	Typical examples
Structure of the respiratory system	0 No problem: No abnormality in the trachea, lungs, thorax or respiratory muscles	0 No abnormality of the trachea, lungs, thorax or respiratory muscles
	1 Mild problem: Some abnormality in the trachea, lungs, thorax or respiratory muscles without apparent functional limitation	1 Slight structural abnormality, such as some lung bras or obsolete inflammatory changes, but does not affect respiratory function
	2 Moderate problem: Abnormality in the trachea, lungs, thorax or respiratory muscles that affects function but less than 50% in extent	2 Partial structural abnormality, such as lung fibrosis or tracheal dilatation, that affects respiratory function
	3 Severe problem: Abnormality in the trachea, lungs, thorax or respiratory muscles that affects function but 50% or more in extent	3 Severe structural abnormality affecting respiratory function, such as severe lung fibrosis or marked atrophy of respiratory muscles
	4 Complete problem: Abnormality in the whole structure of the trachea, lungs, thorax or respiratory muscles	4 Structural abnormalities affecting respiratory function in the whole structure of the respiratory system, for example, end stage pulmonary fibrosis