

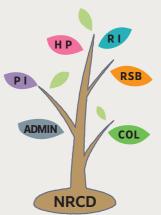
For independent life and social participation

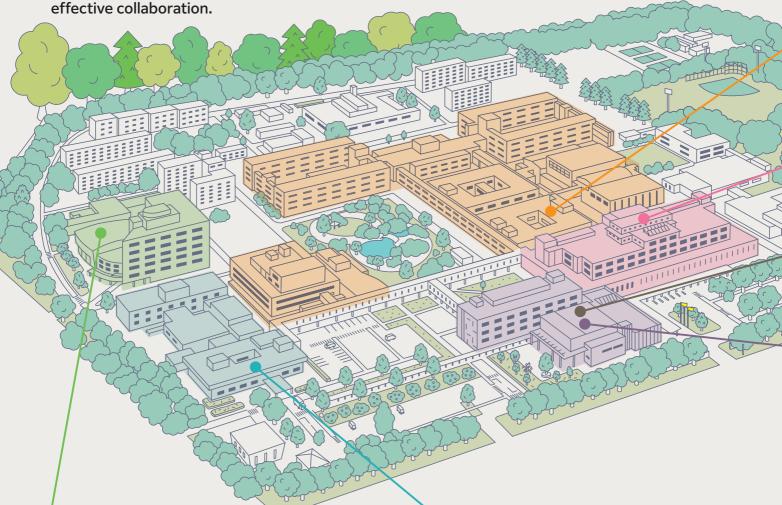


Rehabilitation Center for Persons with Disabilities

Organization / Area Map

National Rehabilitation Center for Persons with Disabilities (NRCD) is a unique institution that includes hospital, welfare facility, research institute, educational institution, and facility for information dissemination. Our center coordinates with various professionals involved in rehabilitation: doctors, therapists, nurses, pharmacists, laboratory technicians, clinical radiologists, dietitians, engineers, social workers, researchers, and administrative staff. They are grouped into six departments that render rehabilitation services through functional and





College

: Workforce Development

Therapists Doctors, etc.



COL

Research Institute : Research

Doctors Therapists Engineers, etc.



Rehabilitation Services Bureau : Welfare

Social workers **Therapists** Doctors, Nurses, etc.



RSB

Hospital : Medicine

Doctors Therapists Nurses, etc.



HP

Department of Administration : Management

Administrative staff, etc.

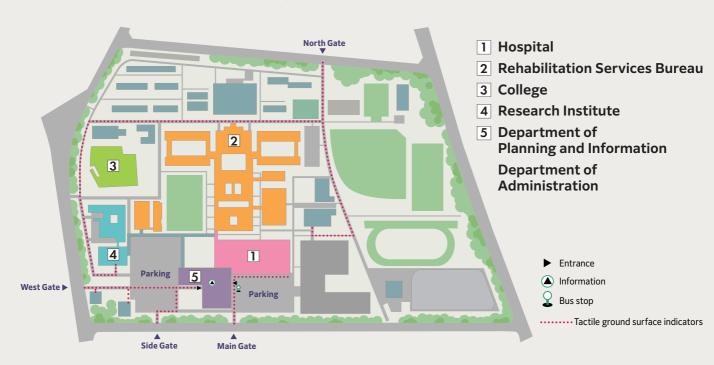


Department of Planning and Information Information

Administrative staff, etc.







Greetings from the President



President **HAGA** Nobuhiko

Since its establishment, National Rehabilitation Center for Persons with Disabilities (NRCD) has played a leading role in the field of disability rehabilitation in Japan. It is also the only WHO Collaborating Centre for Disability Prevention and Rehabilitation in Japan designated by WHO, and is actively involved in international cooperation, such as supporting rehabilitation techniques in the Western Pacific region. NRCD treats a wide range of disabilities, including spinal cord injuries, limb amputations, congenital upper limb deficiencies, visual impairments, hearing impairments, stuttering, higher brain dysfunctions, and developmental disorders. NRCD will continue to contribute to the realization of autonomy, independence, and social participation of people with disabilities. We ask for the cooperation of all involved.

History

1979

National Rehabilitation Center for the Physically **Disabled was** established.

2008

Changed its name to National Rehabilitation Center for Persons with Disabilities Information and Support Center for Persons with **Developmental Disorders transferred from the** Ministry of Health, Labour and Welfare

2011

Information and **Support Center for Persons with Higher Brain Dysfunctions** was established.

1995 • • • • • 2008 • • • • • 2010 • • • • • 2011 • • • •

Designated as WHO Collaborating Centre (WHO CC)

2010

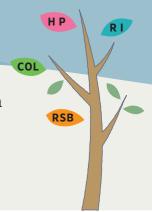
Center of Sports Science and Health Promotion was established.

Role

NRCD is an organization under the Ministry of Health, Labour and Welfare of Japan. As the only national rehabilitation center in Japan, we are taking a leading role in rehabilitation of persons with disabilities in Japan.

Persons with Cervical Spinal Cord Injuries

We provide comprehensive and seamless services for people with cervical spinal cord injuries, ranging from medical care during the recovery period to reintegration into society. They include support for community living, workplace re-entry, and seeking for new employment opportunities.



Cervical spinal cord injuries arising from an accident or illness can significantly hinder activities of daily living, largely due to tetraplegia and associated bladder and rectal dysfunctions. Upon discharge from the acute hospital, patients often lack arrangements for transportation, such as wheelchairs or cars, or the necessary adjustments to their living conditions. Therefore, because of the significant support needed, people with cervical spinal cord injuries who require wheelchairs are unable to immediately return to community living. Consequently, these hindrances severely impact work and leisure activities, creating difficulty in finding and returning to employment.

Our team of doctors, nurses, care workers, physical therapists, occupational therapists, exercise therapists, social workers, and other healthcare professionals work together to provide a variety of support to enable people with cervical spinal cord injuries to live in the community again. In addition to medical services at the Hospital, we continue to provide welfare services at the Rehabilitation Services Bureau. Through this process, we collaborate in supporting people with cervical spinal cord injuries to regain their independence in performing daily activities, maintain suitable living arrangements in a community setting, participate in lifelong sports activities, and drive a car. We also offer employment support to facilitate their return to work, including remote work.

In terms of logistical support, we aim to provide maximum support to people with spinal cord injuries by collaborating with the Research Institute to develop regenerative medicine, as well as assistive technologies and self-help devices. The College hosts annual specialized training sessions to disseminate our knowledge and experience in rehabilitation of spinal cord injury across the country.



Medical support such as functional recovery training, and prevention and treatment of secondary disorders



~~ Logistics support

Research on regenerative medicine, as well as assistive technologies and self-help devices



RSB

Implementation of ADL training, support for arranging living conditions and employment, and coordination of services for community life.



RI

Implementation of specialized training sessions

Persons with Limb Amputations

Our services encompass a comprehensive range of integrated prosthetics care, including assessments, manufacturing, fitting, and training. We also offer trial evaluations of myoelectric prosthses and investigate difficult conditions, such as multiple limb amputations.

The majority of patients visiting the brace clinic at the Hospital have rare conditions, including multiple limb amputations and disabilities that are difficult to manage in private healthcare settings. Notably, the number of patients with multiple limb amputations (including quadruple amputations) is increasing, currently accounting for 15% of all patients with limb amputations.

To ensure the provision of appropriate prosthetic limbs and rehabilitation for patients with severe amputations including multiple limb loss and combined disabilities the Hospital adopts a multidisciplinary healthcare approach. This approach integrates the specialized expertise and extensive experience of our healthcare professionals.

The roles of each healthcare professional are as follows:

1)	\cap	ct	<u> </u>	rs	

Primarily responsible for whole health management and medical care of complications and amputation stump.

Nurses

Provides support in healthcare and stump management through daily living assistance.

Prosthetists and Orthotists

Design, fabricate, and fit prostheses in collaboration with doctors.

Occupational Therapists Physical Therapists

Enhance physical function and provide training in both basic and advanced activities and mobility while using prosthetic devices.

Exercise Therapists

Promote physical fitness and overall health through sports-based rehabilitation programs.

Medical Social Workers

Offer guidance and assistance regarding welfare systems, prosthetic-related administrative procedures, and workplace reintegration support.

The College houses Japan's first and only national prosthetist and orthotist training institution. To enhance the expertise of medical professionals across the country, it conducts an annual workshop of assistive device fitting for doctors, focusing on improving their knowledge of prosthetic and orthotic prescriptions and optimal fit assessments.



Persons with Congenital Upper Limb Deficiencies

Our interdisciplinary team conducts prosthetic rehabilitation to enable the social participation of children with upper limb deficiencies.

Congenital upper limb deficiency is defined as the condition in which the arms and/or fingers are missing, short, or small at birth. These children can perform various daily activities without prostheses, although some activities may be performed more successfully or faster with prosthetic use. School activities requiring greater mobility or dexterity, such as those in gym and music classes, are difficult to perform without prostheses. Thus, such situations are not ideal from the viewpoint of social participation. We support their social participation by providing prostheses rehabilitation in collaboration with medical doctors, occupational therapists (OTs), certified prosthetists-orthotists (CPOs), and engineers.

Various types of prostheses are available. For children, we often recommend cosmetic prostheses with passive grip functions, activity-specific prostheses for sports and other activities, and

Types of prostheses for children



Cosmetic prosthesis



Activity-specific prosthesis (for mat exercises)



Myoelectric prosthesis

myoelectric prostheses that control hand movements using electric potential caused by muscle contraction. The type of prostheses prescribed considers the characteristics of each child, such as development, upper limb condition, and the activities in which prostheses are required to participate.

As children develop, the size of their residual limb changes. CPOs can make adjustments and renew the devices as needed. Children need to spend sufficient time in prosthetic rehabilitation under the guidance of OTs to acquire skills to control the prostheses. In rehabilitation for myoelectric prostheses, we use toys developed by OTs and engineers to improve prosthetic training. Medical doctors conduct routine examinations of patients, checking on the condition of the upper limb and the influence on other body parts caused by the deficient limb.

Through these efforts, we strive to create environments where children can positively participate in activities at nurseries and schools and establish meaningful relationships and friendships. We also hope to help create a foundation for their future social participation.



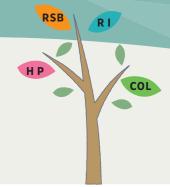
Jumping over the vaulting horse using the activity-specific prosthesis



Rehabilitation to control the myoelectric prosthesis using beanbags

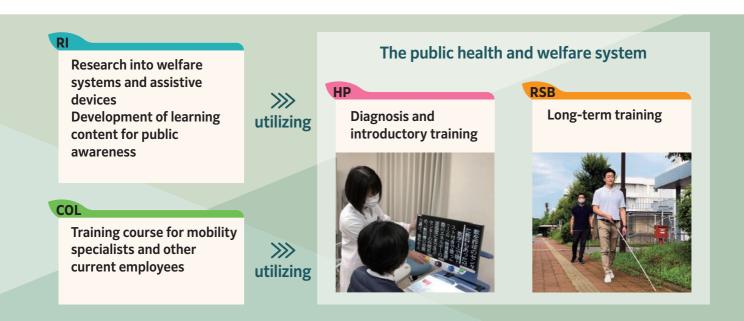
Persons with Visual Impairments

We offer assistance to people with various visual impairments, such as low vision and visual field constriction, enabling them to live their lives with confidence.



Impaired visual function interferes with daily life and work that people were previously able to do reflexively. We provide effective low vision care for those who begin to experience visual difficulties from whatever cause. Our ophthalmologists, certified orthoptists (COs), and orientation and mobility specialists provide collaborative support to people with visual impairments in their daily lives and in workplace re-entry. If further in-depth training is required, we provide welfare services at the Rehabilitation Services Bureau in addition to the medical services provided at the Hospital. Throughout this supportive process, we execute team effort to help them to reduce their anxiety about their visual impairments. To support the visually impaired in finding employment, we have developed courses to train people to become nationally qualified masseurs, acupuncturists, and moxibustionists, catering to a wide range of generations.

As a provider of logistical support, the College offers a training course on orientation and mobility as one of the only two institutions that do so in Japan. We also focus on training currently working staff, such as by holding annual trainings for ophthalmologists and COs from all over the country. At the Research Institute, we also conduct research related to visual impairments and strive to empower people with visual impairments.



Children with Hearing Loss

H P

We offer support services for children with hearing loss, mainly through the specialized outpatient clinic at the Hospital, where otolaryngologists and speech-language-hearing therapists collaborate to treat hearing loss.

The Hospital has established an outpatient clinic for treating children with hearing loss at the Department of Otorhinolaryngology. When a child with hearing disorders visits the outpatient clinic, an otolaryngologist performs a comprehensive diagnostic evaluation based on recent hearing loss research, including genetic analysis, detailed hearing tests, diagnostic imaging, and tests for congenital cytomegalovirus infection using preserved umbilical cord. Speech-language-hearing therapists (SLHTs) also perform early fitting of hearing aids and cochlear implants and conduct detailed hearing rehabilitation.

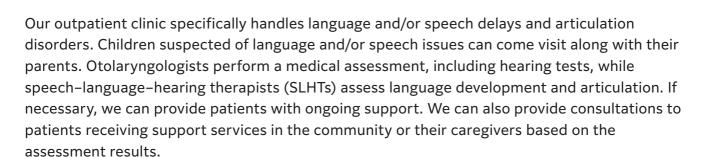
SLHTs provide guidance regarding the use of hearing aids, communication, and support for parents as well as share information with rehabilitation institutions, nursery schools, kindergartens, and schools attended by children with hearing loss. For children entering elementary school, we offer an annual study session on hearing loss for their teachers and provide other support throughout their lives to ensure they flourish at school and in social participation. We also conduct workshops on hearing disorders twice a year for parents of children with hearing loss who attend the Hospital to improve their understanding of hearing loss and their ability to communicate with their children.

The otolaryngologists and SLHTs at the Hospital collaborate with the speech-language-hearing therapy training department at the College for promoting education about hearing disorders. Furthermore, the speech-language-hearing therapy lectures at the College contribute to the clinical management of children with hearing loss at the Hospital, thereby fostering mutual cooperation.

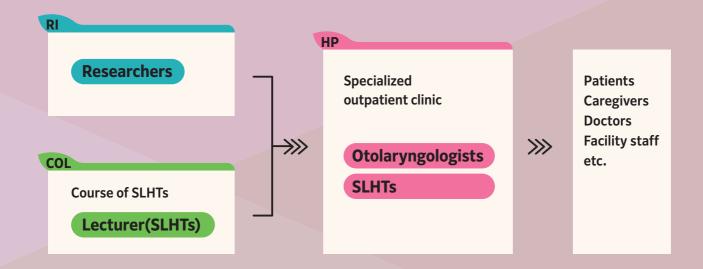


Persons with Language Developmental Disorders, Speech Delays, and/or Articulation Disorders

We offer support for language developmental disorders, speech delays, and/or articulation disorders in children and adults, primarily through a specialized outpatient clinic at the Hospital.



In addition to language/speech delays, we also help evaluate and manage intellectual developmental and various articulation disorders. These include cases with comorbidities, such as autism spectrum disorder, stuttering, hearing impairment, and speech disorders due to cerebral palsy. We collaborate with researchers specializing in communication devices from relevant research institutes in cases requiring assistive technologies and devices, including Information and Communication Technology. Otolaryngologists and SLHTs at the Hospital work together with the SLHT faculty in conducting trainings offered at the College to develop future speech therapists. The SLHTs under the College's SLHT department are also involved in clinical work at the Hospital and collaborate with the Hospital's SLHTs.



Persons with Stuttering

We provide medical treatment and rehabilitation services for people with stuttering, regardless of age, conduct relevant research, and host training sessions and seminars for speech-language-hearing therapists who treat stuttering in clinical settings.

The Hospital, the Research Institute, and the College work together to tackle stuttering in three major areas: 1) medical treatment and rehabilitation, 2) research, and 3) training for certified speech-language-hearing therapists (SLHTs).

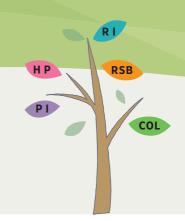
Medical treatment and rehabilitation at the Hospital are primarily performed by doctors and SLHTs. The Department of Otorhinolaryngology has outpatient clinics for pediatric and adult stuttering consultations and can provide medical treatment and rehabilitation for patients of all ages. For preschool children, we provide a full range of speech therapy and support services to foster an environment that facilitates speaking, in line with the Clinical Guidelines for Early Childhood Stuttering. Similarly, for elementary school children, we provide speech therapies and support services and collaborate with the school-based speech and language disorder resource room. For adolescents and adults who stutter, our services include not only speech therapy but also cognitive behavioral therapy and various other psychological therapies, as the symptoms of stuttering and possible underlying psychological concerns, such as worries and difficulties related to stuttering, become more severe during these stages in life.

In addition to fundamental research aimed at elucidating the pathophysiology through feedback mechanisms and brain function, we have been developing assessment tools for stuttering while also developing and verifying the efficacy of various training approaches. Over the last few years, we have conducted a multicenter joint survey of the incidence and prevalence of stuttering in Japan, leading to the publication of new epidemiological findings on stuttering in young children.

Training for certified SLHTs includes "Speech-Language-Hearing Therapist Training Seminars," which are mainly conducted by the College, and clinical observation training at the Hospital. The training seminars focus on basic content and are currently conducted in a lecture format. Participants come from all over Japan, including islands where training opportunities are scarce. Clinical observation training at the Hospital allows participants to actually observe SLHTs at our center as they conduct rehabilitation for stuttering. Participants who attended each type of training have commented that they have "started working in clinical stuttering" and "now have the confidence to work in clinical stuttering." We believe that our trainings have significantly contributed to raising the standard of stuttering clinical therapy in Japan.

Persons with Higher Brain Dysfunctions

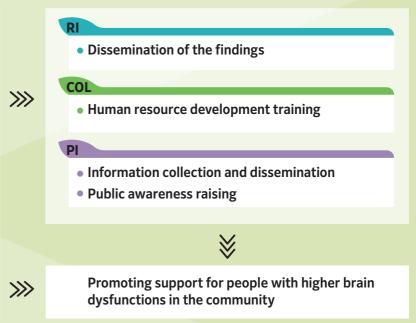
We offer services in the diagnosis, evaluation, rehabilitation, participation support, research, and public awareness of higher brain dysfunctions.



In Japan, disorders of memory, attention, executive function, and social behavior that result from traumatic brain injury or cerebrovascular disease and restrict daily or social life are called higher brain dysfunctions. Prefectural governments provide consultation support and have established support networks for persons affected by these disorders.

- At the Hospital, we engage a multidisciplinary team to diagnose and evaluate higher brain dysfunctions, set goals for patients such as school or workplace re-entry, and provide rehabilitation. We also emphasize providing educational and psychological support to patients' families.
- Following medical rehabilitation, the Rehabilitation Services Bureau provides various trainings to improve daily life and social abilities, training for employment, and support for social participation.
- The Information and Support Center for Pearsons with Higher Brain Dysfunctions collaborates with prefectures to improve the support network for higher brain dysfunctions and provides a variety of relevant information through its website.
- Together with experts from various disciplines, we have developed a training curriculum and textbook to train supporters for people with higher brain dysfunctions. The College is working to train professionals by providing training curricula for instructors for dissemination in each prefecture.





Persons with **Developmental Disorders**

We provide a range of multi-departmental initiatives to support persons with developmental disorders, such as autism spectrum disorder and attention deficit hyperactivity disorder, as well as the lives of their families.

At the pediatric and child psychiatry departments of the Hospital, we perform diagnostic evaluations of patients with developmental disorders. When warranted, we hold case conferences and collaborate with related institutions, such as schools and welfare organizations, in treating the patients. At the Department of Dentistry we hold preparation sessions tailored to the characteristics of the disorder to familiarize patients with dental treatment.

The Rehabilitation Services Bureau offers employment transition support services for individuals with developmental disorders, enabling them to acquire the knowledge and skills necessary to gain employment.

At the Research Institute, we examine the sensory and cognitive characteristics underlying the real-life difficulties experienced by people with developmental disorders and aim to develop strategies to support them. We conduct surveys, clarify the cognitive and neural bases, and develop support strategies for sensory hypersensitivity and hypesthesia. We also conduct studies on facial recognition and language, which are essential for communication, and on enhancements in information accessibility and education/employment support based on the characteristics of the disorder.

The College mainly provides trainings, workshops, and specialized training programs to develop professionals with theoretical knowledge and practical skills to support individuals with developmental disorders. Students enrolled in the Course of Support Worker for Children with Intellectual Disabilities study for 1 year. The workshop division offers training programs tailored for support staff. The specialized training programs include on-demand courses that run for 6 months that enable students to study while working.

The Information and Support Center for Persons with Developmental Disorders aspires to promote public understanding of developmental disorders by collecting, analyzing, and disseminating reliable information. Furthermore, the center organizes national training programs and holds seminars to foster human resources and improve the quality of welfare professionals, while also undertaking various initiatives to build regional support systems. Since fiscal year 2021, the center has been jointly operating a government-sponsored Developmental Disorders Web Portal in collaboration with the National Institute of Special Needs Education.



A child with developmental disorders undergoing dental treatment



Health Promotion for Persons with Disabilities

Advances in medical care and welfare have increased the average life expectancy of people with disabilities. Our organization is committed to ensuring that persons with disabilities receive the necessary care and support to maintain their overall health, thereby reducing the likelihood of secondary disabilities and empowering them to live independently.



To ensure longevity, the patient's current health condition must first be determined. During the physical examination, we perform at least a medical examination, blood test, urinalysis, chest X-ray, and electrocardiography. The physician will explain the results of the physical examination to the persons and, if necessary, work with the public health nurse, nutritionist, and exercise therapist to help improve the current state. More focused support will be provided to those with reduced activity and nutritional deviations in their daily lives. From the viewpoint of preventive medicine, the Center of Sports Science and Health Promotion periodically holds nutrition study

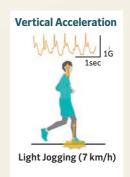
and health guidance classes for small groups. An educational video created by dentists affiliated with the Hospital, entitled "Oral Health Management for People with Intellectual Disabilities and Developmental Disorders," is available on SNS and is used by patients' families and facilities for people with disabilities. Recent achievement in research at NRCD is shown below.



Mechanical Intervention to Restore the Benefits of Exercise for Individuals with Impaired **Motor Functions**

Exercise is both preventative and therapeutic for many diseases and disorders, particularly those related to age or lifestyle. However, individuals with impaired motor functions cannot enjoy the benefits of exercise. To address this, we have developed the VOC (Vertically Oscillating Chair), which replicates the vertical accelerations (peak magnitude: 0.6-1.0 G) produced at the time of foot contact with the ground during fast walking or light jogging.

This recapitulates the positive effects of exercise on various health issues, such as hypertension (1).





(1) Murase et al. Interstitial-fluid shear stresses induced by vertically oscillating head motion lower blood pressure in hypertensive rats and humans. Nat Biomed Eng. 7:1350-1373, 2023

International Cooperation

ADMIN NRCD shares its accumulated knowledge and techniques across the counties and cooperates with international organizations and overseas institutions to promote rehabilitation, mainly in the Asia-Pacific region.

World Health Organization (WHO) Collaborating Centre

As a WHO Collaborating Centre for Disability Prevention and Rehabilitation, NRCD has supported the policies and programs of the WHO since 1995. NRCD conducts activities based on the WHO Terms of Reference and Work Plan to promote the enhancement of rehabilitation in the Western Pacific Region. Our center makes every effort to perform the following as the WHO Collaborating Centre.

- Information exchange among WHO Collaborating Centres
- Organization of International Seminars/Symposiums
- Participation in meetings organized by WHO
- Submission of reports on NRCD's distinct activities



RSB

Training for overseas ophthalmologists

Collaboration with Overseas Institutions

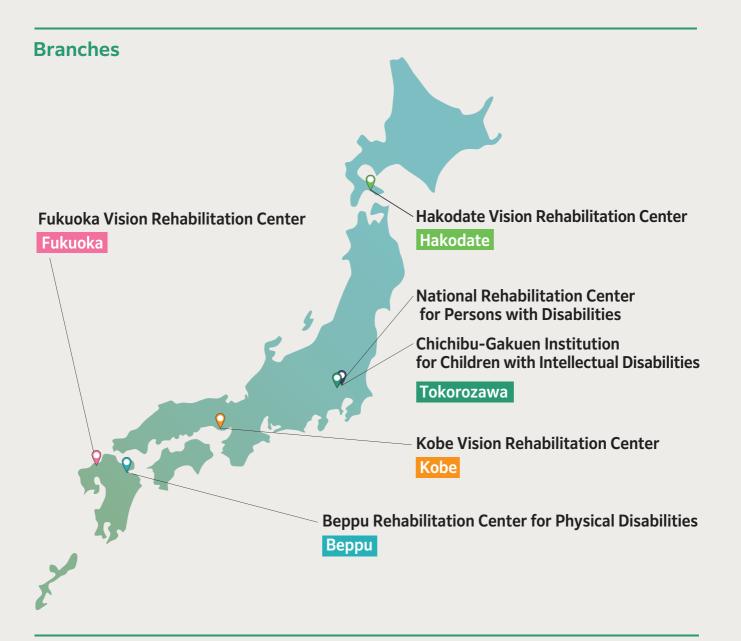
NRCD concluded an agreement for cooperation with the Korea National Rehabilitation Center and the China Rehabilitation Research Center in 2011 and has continued mutual collaboration through technical exchanges among rehabilitation specialists, sharing academic information, and organizing seminars/symposiums.

Introduction of NRCD Activities to Overseas Visitors

Since its establishment in 1979, NRCD has introduced its rehabilitation, research, and education activities to over 11,000 visitors from approximately 160 countries and regions. NRCD has also conducted training for over 800 overseas doctors and rehabilitation therapists, generously sharing the knowledge and skills accumulated through its unwavering efforts.

Collaboration on revision and dissemination of WHO ICF

NRCD collaborates on the revision and dissemination work of the International Classification of Functioning, Disability and Health (ICF) issued by WHO. The ICF provides a classification of functions related to body functions and structures, activities and participation, and the terminology used to describe them. It also provides a definition for "disability," which is a negative aspect of functioning. Therefore, the ICF plays an important role in the rehabilitation space and provides a basic framework and key perspectives. NRCD, in collaboration with the International Classification and Information Management Office of the Ministry of Health, Labour and Welfare, participates in the discussions on the revision of the ICF and collects relevant information. In addition, NRCD implements projects to promote the ICF, which achieve the development of a search system for assistive technologies based on ICF codes, enabling the selection of assistive technologies suitable for each individual user.



Website

Top Page



https://www.rehab.go.jp/

Pamphlet



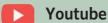
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SNS





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