

シンポジウム 1

The role of forest medicine in post-COVID-19 health management and disease prevention

ポストコロナの健康管理・病気予防に対する森林医学の役割

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Purpose of the Symposium

Since the first outbreak of the new virus, more than 265 million people have been infected in the world so far. The death toll increased to over 5.25 million people.

1. Elderly people, patients with underlying diseases such as diabetes, hypertension, heart diseases and respiratory diseases are easy to develop COVID-19 and become more severe, and the mortality rate is also higher because of the reduced immune function in these patients. Therefore, immune function is very important to prevent COVID-19.
2. Shinrin-yoku may have preventive effect on COVID-19 by boosting immune function.
3. Mental stress and various mental disorders due to "lockdown" and "isolation" are also major social problems.
4. Shinrin-yoku reduces the negative emotions, mental stress and stress hormones, and increases vigor. Therefore, Shinrin-yoku may have preventive effect on COVID-19-induced mental stress and mental disorders.
5. Shinrin-yoku also has preventive effects on hypertension and heart diseases to prevent COVID-19.
6. Shinrin-yoku will play a very important role on the preventive of COVID-19 by boosting immune function and by reducing mental stress in post-COVID-19 health management and disease prevention.

Currently, the term "Shinrin-yoku" is internationally accepted.

Based on the above background, we invited the outstanding researchers from China, Korea, Canada, Germany, Italy, and United Kingdom, and organized this symposium to discuss the role of forest medicine in post-corona health management and disease prevention in the world.

シンポジウム 1

SY1-01

The role of forest medicine in post-COVID-19 health management and disease prevention in Japan

Qing Li

Department of Rehabilitation Medicine, Nippon Medical School

Researchers in Japan have tried to find a new method to reduce stress by visiting forests and have proposed a new concept called “Shinrin-Yoku or Forest Bathing”.

In Japan, since 2004, serial studies have been conducted to investigate the effects of Forest Bathing/Shinrin-Yoku on human health. We have established a new medical science called Forest Medicine. We have reported the following beneficial effects of Shinrin-Yoku:

1. Shinrin-Yoku boosts immune function.
2. Shinrin-Yoku reduces stress hormones (adrenaline, noradrenaline and cortisol).
3. Shinrin-Yoku shows preventive effect on depression by improving positive feelings and serotonin in serum and reducing negative emotions.
4. Shinrin-Yoku reduces blood pressure and heart rate showing preventive effect on hypertension and heart diseases.
5. Shinrin-Yoku has preventive effect on lifestyle related diseases by reducing stress.

On the other hand, elderly people, patients with underlying diseases such as diabetes, hypertension, heart diseases and respiratory diseases are easy to develop COVID-19 and become more severe, and the mortality rate is also higher because of the reduced immune function in these patients. Therefore, immune function is very important to prevent COVID-19, thus, Shinrin-yoku may have preventive effect on COVID-19 by boosting immune function.

Mental stress and various mental disorders due to “lockdown” and “isolation” are also major social problems. Shinrin-yoku reduces the negative emotions, mental stress and stress hormones, and increases vigor. Therefore, Shinrin-yoku may have preventive effect on COVID-19-induced mental stress and mental disorders.

Shinrin-yoku also has preventive effects on hypertension and heart diseases to prevent COVID-19.

Because forests occupy 67% of the land in Japan, Shinrin-yoku is easily accessible. In addition, there are 65 forest therapy bases in Japan. Therefore, Shinrin-yoku will play a very important role on the preventive of COVID-19 by boosting immune function and by reducing mental stress in post-COVID-19 health management and disease prevention in Japan.

SY1-02

The role of forest medicine in post-COVID-19 health management and disease prevention in China

Min Du

Executive Secretary General of the forest health research committee, the World Federation of Chinese Medicine Societies

From the global epidemic situation, the post epidemic era will be an era of long-term coexistence between COVID-19 and mankind. How to apply forest medicine to China's forest health industry and let people obtain immunity from the forest health industry will become the main direction of the development of China's forest health industry. As the application of Chinese traditional medicine in forest health care industry, how to help the healthy development of forest health care industry with the medical evidence-based achievements of forest medicine will be the main goal of China's forest health care industry research. By learning from the forest health care policies and regulations of Japan, South Korea and Europe, combined with China's green development concept, promote the development direction of forest health care industry from concept to practice at the national level. Carry out effective scientific inquiry on the enhancement of human immunity by forest medicine and traditional Chinese medicine in the representative forest health base in China. The report will also introduce some of the performance of China's forest health care in the process of COVID-19 prevention and control, and put forward a series of cooperation mechanisms between China and the developed countries in forest health care. In short, through this report, we believe that forest health care should be guided by forest medicine to play a more healthy and effective COVID-19 control mode and health management method.

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SY1-03

The role of forest medicine in post-COVID-19 health management and disease prevention in Korea

Won Sop Shin

Graduate Department of Forest Therapy,
Chungbuk National University, Korea

The COVID-19 pandemic we are experiencing is deepening our concerns regarding the importance and utilization of forests in relation to our health. In the post-COVID era, the role of forests, especially in terms of 'forest medicine', will become greater and more significant. Forest is regarded as a natural/eco-vaccine or cure medicine for COVID because forest is the place of no crowding, no close contact, and open air.

In Korea, use pattern of forest resources for people has changed from outdoor recreational to human health promotion. Background to forest medicine was the strengthening scientific evidence of the effectiveness of forest therapy through investment in research and development and conducting the national plans, the revision of laws in relation to forest healing policy.

The presentation will deliver the Korean's history of using forest for medicine and relating cases. Especially the presentation will focus on national plans to use forest for during and post COVID-19 health management and disease prevention.

The presentation also reports the results of more than 100 forest medicine programs for COVID-19 related health management and disease prevention, run and managed by Korea Forest Welfare Institute, and suggests more efficient ways of using forest for treating post COVID health management.

SY1-04

The role of forest medicine in post-COVID-19 health management and disease prevention in Canada

Bernadette Rey

Lecturer, guide in Forest Therapy, UQAM (Universite du Quebec a Montreal), Quebec, Canada,
President of Canada chapter of INFOM

In Canada, the following trends have been reported.

1. The pandemic in Canada, the provinces and the increase in illnesses related to this situation
2. Increase in consultations and requests for consultations with doctors and therapists during the pandemic
3. The evolution of the need to visit forests and natural environments during the pandemic and the consequences of this need for frequentation on the environment

Following the review of the written literature and the statistics available, throughout the pandemic in Canada and in provinces, concerning the beneficial effects of forest environments on human health of one or more stays in the forest, what we can conclude?

The forest medicine in Canada needs to have the practice officially recognized as an alternative medicine by the different levels of government related to public health and education and the **role of forest medicine** is to offer session and educate the public:

- Curative sessions due to the increased need for consultation among doctors and therapists for those suffering from diseases (mental health and physical) related to the pandemic and those already existing due by the stress and lifestyle-related diseases.
- Preventive sessions following the increase in attendance needs for stays in the forest
- Preventive sessions at different educational institutions

Finally, the role of forest medicine in post-COVID-19 health management and disease prevention in Canada will be discussed in the presentation.

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SY1-05

The role of forest medicine in post-COVID-19 health management and disease prevention in Germany

Melanie H. Adamek¹⁾, Volker Lieftring²⁾,
Christian Poklitar³⁾

¹⁾ Head of IM-WALD-SEIN® Institute for Forest Medicine and Forest Therapy based in Munich

²⁾ Chief physician of department for orthopedic rehabilitation at Sana Clinic Sommerfeld/Berlin

³⁾ Senior physician at department for orthopedic rehabilitation at Sana Clinic Sommerfeld/Berlin

During Corona pandemic restrictions, forests in Germany experienced a renaissance as a destination for individual excursions. Urban forests in particular are an important resource in crisis situations. However, forests become relevant in the context of complementary medicine measures for the prevention and therapy of various diseases.

At Sana Rehabilitation Clinic Sommerfeld, patients have been rehabilitated after severe corona infections since April 2020. Patients with typical symptoms of Long Covid Syndrome have been treated since 2021. Physical therapy, dosed endurance training on the treadmill with and without oxygen, targeted chest massage and outdoor therapy are elements of this treatment concept.

As a traditional pulmonary sanatorium, Sommerfeld has a rich experience in forest therapy. Since 1914, tuberculosis patients have been treated in forest halls and with dosed terrain cures. Guest books from the 1920s/1930s show hundreds of entries of observation and training of foreign doctors, also from Japan.

Now it is important to adapt these established treatment methods to today's requirements and new patient groups. The presentation will provide an overview of the discussed applications of forest medicine and forest therapy in medical care and address the challenges posed by Covid-19 in everyday clinical practice.

Finally, the role of forest medicine in post-COVID-19 health management and disease prevention in Germany will be discussed in the presentation.

SY1-06

The role of forest medicine in post-COVID-19 health management and disease prevention in Italy

Francesco Riccardo Becheri

Pian dei Termini Forest Therapy Station,
San Marcello Piteglio, Italy

From the very early stages of the lockdowns imposed to counteract the spreading of Covid-19, it was clear that the forced lack of contact with nature could contribute to the uncomfortable conditions and mental disorders experienced by many people in a highly urbanized world.

On March 21st, 2020, during the International Day of Forests, we published a video made with images and sounds of our forests called "A Health Pill for the Emergency". The goal was to bring the forests inside our homes during the lockdown, as well as to carry out a research aimed at measuring the effects on the reduction of anxiety. With 90 participants divided into two groups, one looking at and listening to the forest video and the other an urban video as a control, we found significant short-term effects.

Pursuing the goal of promoting forest medicine as a health promotion strategy in Italy, an extensive research project was carried out in 2020 and 2021 together with Italian Alpine Club (CAI), National Research Council (CNR) and the Reference Centre for Phytotherapy (CERFIT) at the University Hospital of Careggi, Florence, Italy.

The research involves 40 forest sites and about 1000 participants. All sessions were led by professional psychologists, however according to an original, simpler and interoperable conduction method. In this research project, sociodemographic and psycho-physiological measurements were collected together with data concerning meteorological comfort, environmental coherence, and concentration of biogenic volatile organic compounds (BVOC). Currently, data are under investigation.

Forest therapy research in Italy is currently undergoing an accelerated expansion due to the establishment of an important research agreement involving CAI, CNR, CERFIT, governmental agencies and the main Universities. Such agreement is aimed at the standardization, characterization and scientific qualification of green areas for the promotion of health, including the development of Forest Therapy Stations across the Italian territory.

シンポジウム 1

SY1-07

The role of forest medicine in post-COVID-19 health management and disease prevention in the UK

Gary Evans¹⁾, Kirsten McEwan²⁾

¹⁾ The Forest Bathing Institute <https://tfb.institute>

²⁾ The University of Derby

Gary Evans, Director of the Forest Bathing Institute (TFBI), will share the work TFBI has been conducting to gain support and funding from the UK Government in widening access to Forest Bathing as a public health initiative. In partnership with numerous UK Universities, TFBI is spearheading the replication of Japanese research in the UK. Their current research projects include an NHS evaluation of Forest Bathing for cancer rehabilitation and Forest Bathing as a mental health treatment. Gary will also provide a snapshot of the future, including developments to NICE (National Institute for Clinical Excellence) guidelines.

Associate Professor Dr Kirsten McEwan from the University of Derby will then share research findings from the first UK trial of Forest Bathing, and an urban Forest Bathing project called ParkBathe which aimed to support mental health recovery and reduce social isolation post Covid-19. If available, early findings will be shared from research evaluating whether Forest Bathing can reduce Long Covid symptom severity, improve mental health and social connection.

As part of a multinational study Kirsten has been monitoring self-reported mental health, trauma and post-traumatic growth in a UK sample. The data indicate that the UK has experienced similar rates of depression, anxiety and stress to other Countries and these rates have been moderated by fears of developing or spreading Covid-19 and social isolation. Over time though trauma has reduced and post-traumatic growth has increased. In other UK data collected by the ONS and Mental Health Foundation, visits to nature increased during the pandemic and 45% of adults reported using nature to cope with stress.

Finally, the role of forest medicine in post-COVID-19 health management and disease prevention in the UK will be discussed in the presentation.

SY1-08

The role of forest medicine in post-COVID-19 health management and disease prevention in the world

Qing Li

Department of Rehabilitation Medicine, Nippon Medical School

“Shinrin-Yoku or Forest Bathing” was first proposed in Japan in 1982. To scientifically investigate the beneficial effects of Shinrin-Yoku, in Japan, the forest therapy research group was established in 2004 and developed to the Society of Forest therapy in 2008, the society of forest medicine in was established in 2007 in Japan, the International Society of Nature and Forest Medicine was established in 2011. Since 2004, serial studies have been conducted to investigate the effects of Forest Bathing/Shinrin-Yoku on human health. Forest Medicine as a new preventive/environment medicine was published in 2012. Then, the Forest Medicine was translated into Chinese in 2013 and into Korean in 2017. In 2018, Shinrin-Yoku and Forest Bathing were published in the UK and in the US respectively and subsequently Shinrin-Yoku was translated into 26 languages. Since then, Shinrin-Yoku and/or Forest Medicine, which originated in Japan, has spread all over the world as stress management, health promotion and disease prevention methods. Currently, the term “Shinrin-yoku” is internationally accepted.

On the other hand, since the first outbreak of the new virus in 2019, more than 270 million people have been infected in the world so far. The death toll increased to over 5.3 million people. Because Shinrin-Yoku boosts immune function, reduces stress hormones, improves positive feelings and serotonin in serum, reduces negative emotions, reduces blood pressure and heart rate, showing preventive effect on hypertension and heart diseases, has preventive effect on lifestyle related diseases by reducing stress; therefore, Shinrin-yoku may have preventive effect on COVID-19 by boosting immune function and by reducing stress. Based on the above background, many countries have tried to apply Shinrin-yoku to prevent COVID-19.

At this symposium, we will share and discuss the studies from Canada, China, Germany, Italy, Japan, South Korea, the United Kingdom on the role of forest medicine in post-COVID-19 health management and disease prevention.

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演者略歴

SY1-01, SY1-08 Qing Li

Dr. Qing LI (MD, PhD) graduated from Shanxi Medical University and got PhD from Kagoshima University. He is professor at Nippon Medical School, President of the Japanese Society of Forest Medicine, Director of the Forest Therapy Society, Vice-President and Secretary General of INFOM. He has studied at Stanford University. He received Society Award from the Japanese Society for Hygiene in Forest Medicine in 2022 and University Award from Nippon Medical School in Forest Medicine in 2011.



SY1-02 Min Du

Dr. Min Du graduated from Huanggang Normal University and got PhD from Huazhong Science and Technology University. He is the Doctor of management, senior international financial manager of the United States (IFMA), member of the Central Economic Committee of the Democratic League of China, Secretary General of the new class association of the Hubei Provincial Committee of the Democratic League of China, member of the social and legal Committee of the Hubei Provincial Committee of the Democratic League of China, and Executive Secretary General of the forest health research committee of the World Federation of traditional Chinese medicine.

SY1-03 Won Sop Shin

Won Sop Shin obtained his Ph.D. in forestry in 1992 from University of Toronto, Canada. Dr. Won Sop Shin is a professor at Chungbuk National University in Korea and holding Chair of Korea Forest Therapy Forum. He has lots of experience in research and conducting projects on forest and human health for about 30 years. His main research interest is psychological benefits from forest and nature experiences. During the years of 2013-2017, he also served as Minister of Korea Forest Service (KFS), and Chair of Committee on Forestry, FAO. During his term, KFS developed many new forest policies relating to using forest for human health and welfare. He is now a Head of Graduate Department of Forest Therapy at Chungbuk National University enrolling about 150 students in masters' and Ph.D. programs. Won Sop Shin is also working actively with international organizations such as International Society of Nature and Forest Medicine.

SY1-04 Bernadette Rey

Mrs. Bernadette Rey graduated from University of Montréal and sensitized by the practice of Shinrin Yoku since 2009, environment medicine, sustainable and medicine textiles and fibres, a member of different organizations as the Foundation of Mont Saint Bruno and INFOM, president of the Canadian Chapter of INFOM, a researcher and lecturer as a guide in Forest Therapy, Pure Science college diploma and certificate in anthropology

SY1-05 Melanie H. Adamek

Dr. jur. Melanie H. Adamek graduated from Ludwig Maximilians Universität, Munich, Germany, and got Doctoral Degree at Ludwig Maximilians Universität, Munich, law school. Lawyer, author, managing director of a publishing house specialized in nature and health, forest and health expert, head of IM-WALD-SEIN® Institute for Forest Medicine and Forest Therapy based in Munich.

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演者略歴

SY1-05 Volker Lieftring

Dr. med. Volker Lieftring (MD) graduated from Humboldt-Universität zu Berlin, Berlin, Germany and got Doctoral Degree at Humboldt-Universität zu Berlin, Berlin, medical school.

Specialist in physical and rehabilitative medicine, additional qualifications in naturopathy, physical therapy and balneology, pain medicine, social medicine and manual medicine, chief physician of department for orthopedic rehabilitation at Sana Clinic Sommerfeld/Berlin.

SY1-05 Christian Poklitar

Dr. med. Christian Poklitar (MD) graduated from Martin-Luther Universität Halle-Wittenberg, Halle (Saale), Germany.

Specialist for physical and rehabilitative medicine, senior physician at department for orthopedic rehabilitation at Sana Clinic Sommerfeld/Berlin; Interests: Japanese martial arts, culture, tradition.

SY1-06 Francesco Riccardo Becheri

Dr. Francesco Riccardo Becheri graduated from School of Psychology University of Florence, and received his specialization in Psychotherapy at Institute of Integrative Psychotherapy. He has always been fascinated by contact with nature, and combined his profession as a psychologist with personal passion by creating an innovative forest therapy project in Italian northern Apennines. His work has attracted the attention of universities, research centres and public institutions with which he currently cooperates.

SY1-07 Gary Evans

Gary Evans, director of The Forest Bathing Institute, is a peer-reviewed author and researcher on forest bathing. Gary pioneered Forest Bathing+ alongside his wife, Olga. Gary regularly consults with the UK government and universities and has been featured in countless publications; his media appearances include BBC print and TV.

SY1-07 Kirsten McEwan

Dr. Kirsten McEwan graduated from Nottingham Trent University and got PhD from University of Derby. She is an Associate Professor of health and wellbeing research at the University of Derby. Her research aims to provide the evidence-base for public health interventions such as Forest Bathing, reduce health inequalities and promote more pro-environmental attitudes. She has published extensively on compassion-based and nature-based wellbeing interventions.