Lower your blood pressure with dance: a study on the effectiveness of at-home dance exercise for hypertensive patients

Submission date	Recruitment status	Prospectively registered
30/08/2024	No longer recruiting	[_] Protocol
Registration date	Overall study status	[] Statistical analysis plan
13/09/2024	Ongoing	[_] Results
Last Edited	Condition category	Individual participant data
11/09/2024	Circulatory System	[X] Record updated in last year

Plain English summary of protocol

Background and study aims

High blood pressure (hypertension) is a leading risk factor for cardiovascular, brain, and kidney diseases. The treatment is medications and exercise. This study aimed to investigate the effect of regular dance therapy interventions on blood pressure in hypertensive patients.

Who can participate?

Outpatients aged 20 years and over with high blood pressure

What does the study involve?

Patients were randomly assigned to either an intervention group (dance) or a control group (selfselected exercise). The intervention group performed daily dance exercises using modern dance videos (10 minutes per video) uploaded to YouTube. The control group performed non-dance exercises for 10 min daily. Blood pressure and body composition were measured at baseline and after 2 months. The dance intervention for the intervention group was primarily conducted at the patients' homes, while the exercise for the control group was performed at a location of the patients' choosing.

What are the possible benefits and risks of participating? By participating in this study, one potential benefit is the improvement of blood pressure. As for the risks, there is a possibility of injury during exercise.

Where is the study run from? Juntendo University (Japan)

When is the study starting and how long is it expected to run for? December 2022 to March 2026

Who is funding the study? Juntendo University (Japan) Who is the main contact? Taiju Miyagami, tmiyaga@juntendo.ac.jp

Contact information

Type(s) Public, Scientific

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Type(s)

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Additional identifiers

EudraCT/CTIS number Nil known

IRAS number

ClinicalTrials.gov number Nil known

Secondary identifying numbers Nil known

Study information

Scientific Title

Dance your way to lower blood pressure: a randomized controlled trial on the efficacy of unsupervised dance exercise for hypertensive patients

Study objectives

Performing the same movements without monitoring using self-made dance videos could lower blood pressure and be useful as a non-pharmacological treatment for high blood pressure.

Ethics approval required

Ethics approval required

Ethics approval(s)

Approved 28/12/2022, Ethics Committee of Juntendo University (Bunkyo-ku Hogno 3-1-3, Tokyo, 113-8421, Japan; +81 (0)3 5802 1584; hongo-rinri@juntendo.ac.jp), ref: E22-0387

Study design

Non-blinded two-armed randomized trial

Primary study design Interventional

Secondary study design Randomised controlled trial

Study setting(s) Hospital

Study type(s) Treatment

Participant information sheet Not applicable

Health condition(s) or problem(s) studied

Hypertension

Interventions

A random number table was created in Excel, and the intervention and control groups were divided based on whether the number was greater than or less than 0.5. Hypertensive patients were randomly assigned to either an intervention group (dance) or a control group (self-selected exercise), with each group comprising 20 participants. The intervention group performed daily dance exercises using modern dance videos (10 minutes per video) uploaded to YouTube. The control group performed non-dance exercises for 10 min daily. The activity levels of the participants were monitored using a triaxial accelerometer. Blood pressure and body composition were measured at baseline and after 2 months.

Intervention Type

Behavioural

Primary outcome measure

Blood pressure measured using HBP-9035 KENTARO™ (OMRON HEALTHCARE Co., Ltd.,Kyoto City, Kyoto Prefecture, Japan) at baseline and after 2 months

Secondary outcome measures

Body weight and muscle mass measured using multi-frequency body composition analyzer MC-780A (Tanita Corporation, Itabashi City, Tokyo Prefecture, Japan) at baseline and after 2 months

Overall study start date 28/12/2022

Completion date 31/03/2026

Eligibility

Key inclusion criteria

Outpatients with high blood pressure from the Juntendo University Department of General Medicine

Participant type(s) Patient

Age group Adult

Lower age limit 20 Years

Upper age limit 99 Years

Sex Both

Target number of participants 40

Total final enrolment 40

Key exclusion criteria

1. Patients with complications rendering them unsuitable for exercise, such as cardiovascular disease and cerebral vascular disease

Patients on newly prescribed antihypertensive drugs or who were administered antihypertensives later
Unable to balance on one leg

Date of first enrolment

01/04/2023

Date of final enrolment 30/06/2024

Locations

Countries of recruitment Japan

Study participating centre Juntndo University Hospital Bunkyo-ku Hogno 3-1-3 Tokyo Japan 113-8421

Sponsor information

Organisation Juntendo University

Sponsor details

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Sponsor type University/education

Website http://www.juntendo.ac.jp/english/

ROR https://ror.org/01692sz90

Funder(s)

Funder type University/education **Funder Name** Juntendo University

Alternative Name(s)

Funding Body Type Private sector organisation

Funding Body Subtype Universities (academic only)

Location Japan

Results and Publications

Publication and dissemination plan

Planned publication in the Journal of Medical Internet Research

Intention to publish date 01/04/2025

Individual participant data (IPD) sharing plan

The datasets generated during and/or analysed during the current study will be available from Taiju Miyagami (tmiyaga@juntendo.ac.jp)

IPD sharing plan summary

Available on request