ISRCTN13941002 https://doi.org/10.1186/ISRCTN13941002

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

Submission date
30/08/2024

Recruitment status
No longer recruiting

Registration date
13/09/2024

Overall study status
Completed

Last Edited
16/10/2025

Condition category
Circulatory System

[_] Prospectively registered
[_] Protocol
[_] Statistical analysis plan
[X] Results
[_] Individual participant data

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 (self-selected 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

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Public, Scientific

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Additional identifiers

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

Primary study design
Interventional

Study design
Non-blinded two-armed randomized trial

Study type(s)
Treatment

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

Key secondary outcome(s)
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

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

Healthy volunteers allowed
No

Age group
Adult

Lower age limit
20 Years

Upper age limit
99 Years

Sex
All

Total final enrolment
40

Key exclusion criteria
1. Patients with complications rendering them unsuitable for exercise, such as cardiovascular disease and cerebral vascular disease
2. Patients on newly prescribed antihypertensive drugs or who were administered anti-hypertensives later
3. 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
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113-8421

Sponsor information

Organisation
Juntendo University

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

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

Study outputs

Output type	Details	Date created	Date added	Peer reviewed?	Patient-facing?
Results article		09/01/2025	16/10/2025	Yes	No