

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	<input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol
Registration date 13/09/2024	Overall study status Completed	<input type="checkbox"/> Statistical analysis plan <input checked="" type="checkbox"/> Results
Last Edited 16/10/2025	Condition category Circulatory System	<input type="checkbox"/> 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 Hongo 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

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

Juntendo University Hospital

Bunkyo-ku Hongo 3-1-3

Tokyo

Japan

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