

Table 1: Interventions of yoga for hypertension

First author (year)	Study Design	Number and characteristics of participants	Intervention condition	Control condition	Results (between conditions)	Adverse Events	Author conclusions	Limitations
Blom et al. (2014)	RCT with two parallel groups	101 participants (female=63; male=38; mean age=57 ± 12 years) with stage 1 hypertension and mean awake ambulatory systolic or diastolic BP ≥ 135/85mm Hg or mean 24-hour ambulatory BP ≥ 130/80mm Hg.	MBSR consisting of gentle stretching, mindful yoga, meditative body scans, and mindful walking: Eight weeks, 2.5-hour sessions weekly, and one 6-hour session/silent retreat. Participants agreed to complete 45 minutes of homework meditation practice per day	Wait list control	1. SBP: No differences; 2. DBP: No differences	One death in control group; deemed unrelated to study	MBSR did not significantly lower ambulatory BP relative to the wait-list control group. It is uncertain whether MBSR might be useful for lowering BP by improving adherence in treated hypertensive participants.	No active control group. Participants and study coordinator were not blinded to randomization. Participants predominately active, educated, White individuals. No income data reported.
Cramer et al. (2018)	RCT with three parallel groups	75 participants (female=54; male=21; mean age=58.7 ± 9.5 years) taking medications for primary arterial hypertension (>140 mmHg systolic and/or >90 mm Hg DBP	Yoga: 12 weeks, one 90 minute in-person session per week focusing on yoga postures and meditation with prompting to complete every day at home; Yoga without postures: 12 weeks, one 90-minute session per week focused on meditation with prompting to complete at home every day	Wait list control	1. SBP: Sig. lower in yoga with postures (p=0.045) and yoga without postures (p=0.035); 2. DBP: No differences	None reported	Yoga with and without postures led to significantly reduced SBP relate to wait-list control. Yoga can be considered a complementary therapy for individuals with hypertensive who are medicated.	No active control group. Participants were not blinded. Participants were predominately well-educated females. No data on race or income of participants.

Dhungana et al. (2021)	RCT with two parallel groups	121 participants (female=58; male=63; mean age=47.8 ± 10.8 years) with hypertension (SBP of ≥140mmHg and < 160 mmHg or DBP of ≥85 mmHg and < 100 mmHg or had been taking antihypertensive medication with SBP of ≥130 mmHg and < 160 mmHg or DBP of ≥85 mmHg and < 100 mmHg)	Yoga: Initial daily structured two-hour yoga training in-person lasting five days followed by 30-minute home-based yoga (postures, breathing exercises, and meditation) for five days a week for the following 90 days	Wait list control	1. SBP: Sig. lower in yoga (p<0.001); 2. DBP: Sig. lower in yoga (p<0.01)	None reported	A yoga program delivered both in-person and remotely significantly improved SBP relative to the wait-list control. Given the real world setting of this study, yoga can be considered as an effective form of therapy for individuals with hypertension.	No active control group. Participants and study coordinator were not blinded to randomization. Participant adherence not tracked.
Punita et al. (2016)	RCT with two parallel groups	55 participants (female=11; male=44; mean age=43.38 ± 7.6) diagnosed with hypertension (no inclusion criteria listed for BP) currently taking medication	Yoga: In-person instruction three times per week for 45-minute sessions with further instruction to practice daily at home with yoga consisting of postures and meditation for 12 weeks	No treatment	1. SBP: Sig. lower in Yoga (p<0.05); 2. DBP: Sig. lower in Yoga (p<0.05)	None reported	Individuals in the yoga intervention experienced significant lowering in SBP and DBP relative to the control group.	Small sample size. No active control group. Participants and study coordinator were not blinded to randomization. Lack of power analysis. Participant adherence was only partially tracked. Predominantly male sample. No follow up. No data on race, education, or income of participants.

Roche & Hesse (2014)	RCT with two parallel groups	20 participants (female=13; male=7; mean age=57.8 ± 8.2 years) diagnosed with primary arterial hypertension (no inclusion criteria listed for BP) taking medication	Yoga: Two days per week for two months totaling 26, 90-minute sessions focused on postures, breathing, relaxation, and meditation at a public health center	No treatment	1. SBP: Sig. lower in Yoga (p=0.028); 2. DBP: Sig. lower in Yoga (p=0.001)	None reported	The significant lowering of SBP and DBP of participants in the yoga condition relative to the control indicate yoga can serve as a treatment for hypertension.	Small sample size. No active control group. Participants and study coordinator were not blinded to randomization. Lack of power analysis. Predominantly female sample. No follow up. No data on race, education, or income of participants.
Roche et al. (2017)	RCT with four parallel groups	55 participants (female=35; male=20; mean age=57.69 ± 9.1 years) diagnosed with arterial hypertension (no inclusion criteria listed for BP)	YPP: Two days per week for two months consisting of postures, breathing, and meditation for 75 minutes; Pranayama: Two days per week for two months consisting of breathing for 40 minutes; HT Meditation: Two days per week for two months consisting of relaxation, meditation, and breathing for 50 minutes.	No treatment	1. SBP: Sig. lower in HT Meditation (p=0.035), no differences for Yoga Practice Program or Pranayama; 2. DBP: No differences	None reported	Given the significant reduction in SBP in HT meditation relative to the control and the accessibility of yoga, there should be an emphasis placed on using yoga as a treatment for hypertension.	Small sample size. No active control group. Participants and study coordinator were not blinded to randomization. Predominantly female sample. No follow up. No data on race, education, or income of participants.

Thanalakshmi et al. (2020)	RCT with two parallel groups	100 participants (female=57; male=23; mean age=38.5 ± 11.5 years) diagnosed with primary arterial hypertension (no inclusion criteria listed for BP)	Sheetali pranayama Yoga: 30-minute sessions daily for three months with instructors	No treatment	1. SBP: Sig. lower in Sheetali Prayanama Yoga (p=0.04); 2. DBP: Sig. lower in Sheetali Pranayama Yoga (p=0.05)	None reported	Sheetali pranayama resulted in significantly lower SBP and DBP relative to the control. This can be considered an effective form of treatment complementary to medication for hypertension.	No active control group. Participants were not blinded to randomization. Predominantly male sample. No follow up. No data on race, education, or income of participants.
Wang et al. (2018)	Counterbalanced crossover with two parallel groups	30 participants (female=13; male=17; mean age=57.23 ± 11.3 years) diagnosed with hypertension (no inclusion criteria listed for BP) currently taking medication	MSRT: One 30-minute session consisting of a yoga-based relaxation technique	Supine rest: Laying on back for one 30-minute session	1. SBP: Sig. lower in MSRT (p<0.001); 2. DBP: Sig. lower in MSRT (p<0.001)	None reported	A single session of MSRT was effective in lowering SBP and DBP relative to the control. These findings encourage further studies with larger sample size and long-term interventions with a robust research design.	Small sample size. No randomization. Crossover design. Lack of power analysis. No follow-up. Well-educated sample. No data on race or income of participants.
Wolff et al. (2016)	RCT with two parallel groups	191 participants (female=99; male=92; mean age=64.7 years ± 8.4 years) with BP of 130–160mmHg SBP and/or 85–100 mm Hg DBP	Kundalini yoga: 15 minute, twice-daily, home-based sessions during the 12-week intervention period	No treatment	1. SBP: No differences; 2. DBP: No differences	None reported	Yoga did not lower BP relative to the control. Further clinical trials are needed to confirm these findings.	No active control group. Participants were not blinded to randomization. No data on race, income, or education of participants

Note: BP=Blood Pressure; DBP=Diastolic Blood Pressure; HR=Heart Rate; HT=Himalayan Tradition; MBSR=Mindfulness-Based Stress Reduction; MSRT=Mind sound resonance technique; RCT=Randomized Control Trial; SBP=Systolic Blood Pressure; YPP=Yoga Practice Program

