Supplementary Box 1. Exercise prescription recommendations for people with hypertension.[81,356,357] Legend: DBP – diastolic blood pressure; RPE – rating of perceived exertion via a 10-point scale: 0 (no effort) to 10 (maximal effort); SBP – systolic blood pressure.

Exercise	Days/week	Intensity	Duration	Examples
AEROBIC (cardiovascular)	**Moderate intensity**			
	5	***3-4 out of 10*** Increased breathing rate but able to maintain a full conversation uninterrupted	***30 min***	▪ Walking on flat ground at a moderate or brisk pace ▪ Slow bicycling / stationary cycling
	Vigorous intensity			
	3	***5-6 out of 10*** Hard breathing making it challenging to maintain a full conversation uninterrupted	***20 min***	▪ Jogging or running ▪ Fast cycling / stationary cycling
	High-intensity interval training			
	3	Work interval: ***6-8 out of 10*** (see vigorous intensity)	***25 min*** 4 x 4-min work	▪ Walking uphill at a pace faster than moderate (interval) ▪ Walking on flat ground at a moderate or brisk pace (recovery)

		Recovery interval: ***3-4 out of 10*** (see moderate intensity)	intervals interspersed by 3-min recovery intervals	
DYNAMIC RESISTANCE (muscle strengthening)	***2 or more non-consecutive***	***8-12 repetitions of a given exercise resulting in substantial fatigue***	***30 mins*** Commencing at 1 set of 8-10 exercises. Aim at incorporating a combination of sets -	Progressive resistance exercises incorporating major muscle groups including: ▪ Weight-based exercises (e.g., bench press, seated row, leg press) ▪ Body weight exercises (e.g., push-ups, supine row, squats) ▪ Resistance band exercises (e.g., chest press, straight arm row, seated single leg press) ▪ House-hold equipment (e.g., chair triceps dips, milk bottle bent over rows, washing basket deadlifts)
ISOMETRIC RESISTANCE	***3 non-consecutive***	***3 out of 10***	***4 x 2-min contractions interspersed by 2-3 min recovery***	***Arms*** Single-arm or alternating arm handgrip exercise (e.g., squeezing a stress ball or handgrip strengthener) ***Legs*** Single or double-leg muscle activation (e.g., wall sitting, sustained heel raises)
Special considerations	• Supervision from an exercise specialist (e.g., accredited exercise physiologist, physiotherapist) or medical practitioner proficient in exercise testing and/or training is			

	initially recommended to establish the safety of the exercise prescription (e.g., exercise blood pressure response). However, for most people, exercise performed up to a moderate intensity is considered safe. Appropriate supervision and prescription of exercise beyond a moderate intensity (e.g., high intensity) is recommended.
	• Practitioners should be aware of the precautions to exercise and termination criteria, observing that other chronic conditions (e.g., type 2 diabetes) and risk factors (e.g., obesity) may be present and noting specific blood pressure cut-offs
	  o Exercise should be postponed for people presenting to exercise with poorly controlled blood pressure (SBP≥180 mmHg and/or DBP≥110 mmHg). Medical clearance before re-commencing exercise is advised.
	  o Exercise should be terminated if SBP>250 mmHg and/or DBP>115 mmHg)
	• Blood pressure medications (e.g., beta-blockers) can: 1) blunt the heart rate response to exercise and 2) alter thermoregulation. As such, the use of subjective monitoring strategies (i.e., RPE) may be more appropriate to prescribe exercise intensity. People taking these medications may also wish to avoid exercise in hot weather, ensure appropriate clothing, and maintain adequate hydration.
	• Education around the Valsalva manoeuvre and changes in body position (e.g., overhead exercises) that may acutely increase blood pressure, particularly during resistance exercise, is encouraged to avoid exceeding thresholds that may be unsafe and warrant exercise termination in people with hypertension.
	• A warm-up and cool-down of 5-10 minutes is recommended before and after aerobic and resistance exercise. Cool-down is important to avoid episodes of hypotension and is of particular emphasis for individuals aged >65 years who are at higher risk of cardiovascular events (including hypotension and arrhythmias), as well as for people on blood pressure medication.
	• If resources are available, consider monitoring blood pressure before, during and after exercise for people with hypertension regularly.

Supplementary Box 2. Dietary consumption goals for blood pressure maintenance and reduction and cardiovascular health.[358-360] Serving sizes are based on a daily diet of 2000 kcal.[358]

Diet component	Serving sizes	Intake goal
Encourage		
Fruit	1 medium-sized fruit, 1/2 cup of fresh, frozen or unsweetened canned fruit	3 servings/day
Vegetables	1 cup of raw leafy vegetables, 1/2 cup of cut-up raw vegetables or cooked vegetables	3 servings/day
Whole grains	1 slice of whole-grain bread; 1 cup of high-fibre, whole-grain cereal; 1/2 cup of cooked whole-grain rice, pasta or cereal	3 servings/day
Low-fat and fat-free dairy and cheese	1 cup of milk or yogurt, 28.4 g (1 oz) of cheese	2-3 servings/day
Legumes and nuts	28.4 g (1 oz)	4 servings/week
Plant oils (e.g., olive, peanut, sunflower oils)	1 teaspoon oil; 1 tablespoon vegetable spread	2-6 servings/day
Fish and seafood	100 g (3.5 oz)	≥2 servings/week
Moderate		
Sodium	<1 teaspoon of salt	≤2 g/day

Unprocessed red meats	100 g (3.5 oz)	1-2 serving/week
Refined grains (minimally processed grains)	1 slice of white bread, 1/2 cup of rice or cereal	≤2 servings/day
Poultry	100 g (3.5 oz)	2 servings/week
Avoid		
Added sugar, sugar-sweetened beverages, sweetened foods, and sweets		Do not consume
Ultra-processed foods (e.g., packaged snacks, fast-food, frozen meals)		Do not consume
Processed meats (e.g., deli meats, bacon, hot dogs)		Do not consume
Partially hydrogenated vegetable oils (e.g., margarine, vegetable shortening, trans fatty acids)		Do not consume
Alcohol	1 standard drink ~ 10 g pure alcohol	≤1 standard drink/day for women; ≤2 standard drinks/day for men. If you do not drink, do not start.

Supplementary Box 3. Dietary recommendations for governments and healthcare sector.

Important considerations
Healthcare sector: • "Optimize dietary and weight counselling to pregnant women as part of antenatal care, together with physical activity counselling, tobacco and alcohol cessation, and measure gestational weight gain."[361,362] • "Measure both weight and height of all infants and children aged less than 5 years presented to primary health care facilities, in order to determine their weight-for-height and their nutritional status according to WHO child growth standards."[363,364] • "Provide counselling to parents and caregivers on nutrition and physical activity including promotion and support for exclusive breastfeeding in the first 6 months and continued breastfeeding until 24 months or beyond."[365] Food systems: • "Build a more coherent and enabling agricultural policy to promote safe, healthy diets sustainably produced, including a reduction in the number of daily calories consumed from fats and sugars, and an increase in the number of daily portions from whole grains, legumes, nuts, vegetables and fruits."[24] • "Reshape the food environment (including digital environments) through fiscal and cost policies (taxation and incentives) that emphasize consumption of a healthy diet and reduce the demand for products excessive in fats, sugars and salt/sodium."[366]

- "Design public food procurements and service policies, which support procuring, distributing, selling, and/or serving foods that support healthy diets in schools and other public institutions such as government offices, childcare centres, nursing homes, hospitals, health centres, community centres, residential care settings, military bases and prisons."[367]
- Establish nutrition labelling to support consumers' understanding of nutrients contents in food
- Regulate marketing of foods and beverages high in fats, sugars and salt/sodium including digital marketing
- "Guarantee the access to healthy diets, from production to distribution and promotion. Manufacturers, importers, exporters, and suppliers can reformulate their portfolios, particularly the ones with products intended for children (reducing sugars and salt) and reducing portion sizes."

Health literacy and education:

- "Implement campaigns for the promotion of healthy diets and physical activity, as a complement to other actions shaping the food environment and orienting people's lifestyles."[368]

Supplementary Box 4. How might genetics influence and trigger lifestyle changes?

Polygenic risk scores (PRS) use an individual's genetic information to improve risk prediction of developing hypertension based on genetic variants. The use of PRS is particularly useful as they can be determined at any time in the lifespan. When considered together with traditional risk factors, a PRS could improve prediction of hypertension, particularly early-onset hypertension, which confers substantial cardiovascular disease (CVD) risk.[369-371] PRS improves risk stratification for atherosclerotic CVD and other related conditions and identifies individuals who may benefit from primary and secondary prevention and personalised preventative measures.

Importantly, it can empower individuals to change their lifestyle, for example by improving their diet, starting to exercise, decreasing stress, etc., consequently improving their overall health risk scores and lowering their risk of developing hypertension or having a CVD event. The recommendation for lifestyle changes is supported by a significant positive association between PRS grouping and an absolute risk reduction based on lifestyle adherence for CVD.[369-374]