Supplementary Table S-F10-2. Hypertension Professional Committee Recommendations

| Professional Committee/Organization                |   |  |   |  |   |   |   |   |   |  |
|--|---|--|---|--|---|---|---|---|---|--|
| The <i>FITT</i> of<br>the Exercise<br>Prescription | Joint National<br>Committee, 8 <sup>th</sup><br>Report (James<br>2014) and the<br>AHA/ACC<br>Lifestyle Work<br>Group (Eckel,<br>2014) | Joint National<br>Committee,<br>7 <sup>th</sup> Report<br>(Chobanian,<br>2003) | American<br>Heart<br>Association<br>(Brook,<br>2013)      | American<br>College<br>of Sports<br>Medicine<br>(Pescatello,<br>2004)    | European Society<br>of Hypertension/<br>European Society<br>of Cardiology<br>(Mancia, 2014) | Canadian<br>Hypertension<br>Education<br>Program<br>(Dasgupta,<br>2014) | Taiwan<br>Society of<br>Cardiology<br>(Chiang,<br>2010) | Australian<br>Association for<br>Exercise and<br>Sports<br>(Sharman,<br>2009) | American College of<br>Cardiology/American<br>Heart Association<br>(2017) |  |
| <u>F</u> requency<br>(how often?)                  | 3-4 sessions/week<br>≥12 weeks  | Most days of<br>the week   | Most days of<br>The week                                  | Most,<br>preferably all,<br>days of the<br>week                          | 5-7 days/week   | 4-7 days/week in<br>addition to<br>habitual,<br>daily activity          | 5 days/week   | Up to 5 days/week   | NA  |  |
| <u>/</u> ntensity<br>(how hard?)                   | Moderate to<br>Vigorous <sup>a</sup>  | None specified   | Moderate to<br>high <sup>a</sup><br>>40-60% of<br>maximum | Moderate <sup>a</sup><br>40-<60% of<br>VO <sub>2reserve</sub>            | Moderate <sup>a</sup>   | Moderate <sup>a</sup>   | Moderate <sup>a</sup>                                   | Moderate to<br>Vigorous <sup>a</sup>  | Moderate to<br>Vigorous <sup>a</sup>                                      |  |
| <u>∏</u> ime<br>(how long?)                        | 40 min/session  | ≥30 min/day  | 150 min/week  | 30-60 min<br>continuous<br>or accumulated<br>in<br>bouts ≥10 min<br>each | <u>&gt;</u> 30 min/day  | Accumulation<br>of<br>30-60 min/day                                     | 30 min/day  | 20-30 min/day   | 90-150 min/week   |  |
| <u>T</u> ype<br>(what kind?)<br><i>Primary</i>     | Aerobic   | Aerobic  | Aerobic   | Aerobic  | Aerobic   | Dynamic<br>exercise<br>(Aerobic)  | Aerobic   | Aerobic   | Aerobic   |  |

| Evidence<br>rating                        | "High" <sup>b</sup><br>Grade B <sup>b</sup> , Class IIa<br>level of evidence A <sup>c</sup> | NA  | Class I level of<br>evidence A <sup>c</sup>   | Evidence<br>category A <sup>c,d</sup><br>Evidence<br>category B <sup>c,d</sup>      | Class I level of<br>evidence A-B <sup>e</sup>         | Grade D <sup>f</sup>                     | NA       | NA   | Class I level of<br>evidence A <sup>c</sup>   |
|---|---|-----|---|---|---|--|----------|--|---|
| Adjuvant                                  | NA  | NA  | Dynamic RT                                    | Dynamic RT<br>2-3 days/week,<br>moderate 60-<br>80% of<br>1-RM, 8-12<br>repetitions | Dynamic RT<br>2- days/week                            | Dynamic,<br>Isometric,<br>or Handgrip RT | NA       | Dynamic RT<br>≥2 non-<br>consecutive<br>days/week,<br>substantial<br>fatigue, 8-12<br>repetitions, 8-10<br>exercises | Dynamic RT, 90-150<br>min/week, 50-80% 1-RM,<br>10 repetitions of 3 sets, 6<br>exercises; Isometric 4x2<br>min, 1 min rest, 30-40%<br>MVC, 3 sessions/week for<br>8-10 wk |
| Evidence rating                           | NA  | NA  | Class IIa level of<br>evidence B <sup>c</sup> | Evidence<br>category B <sup>c,d,</sup>  | NA  | Grade D <sup>f</sup>                     | NA       | NA   | Class I level of<br>evidence A <sup>c</sup>   |
| Blood<br>Pressure<br>Reduction<br>(mm Hg) | 1-5   | 4-9 |   | 5-7 among<br>adults with<br>hypertension  | 2-3 overall; 5-7<br>among adults with<br>hypertension |  | 3-7 mmHg | 6-7 mmHg<br>Aerobic,<br>2-3 mmHg<br>Dynamic RT   | 5-8 mmHg Aerobic, 4<br>mmHg Dynamic RT, 5<br>mmHg Isometric RT  |

Legend: AHA/ACC=American Heart Association/American College of Cardiology, FITT=<u>F</u>requency, <u>I</u>ntensity, <u>T</u>ime and <u>Type</u>, NA=Not applicable, RT=Resistance training, VO<sub>2reserve</sub>=Oxygen uptake reserve.

Notes: <sup>a</sup> Moderate intensity: 40-<60% VO<sub>2reserve</sub> or an intensity that causes noticeable increases in heart rate and breathing; Vigorous or high intensity:  $\geq 60\%$  VO<sub>2reserve</sub> or an intensity that causes substantial increases in heart rate and breathing. <sup>b</sup> Evidence statement: "Aerobic exercise lowers blood pressure (BP)" was rated *High*. <sup>c</sup> Guideline criteria from the American Heart Association [Brook, 2013]. <sup>d</sup> Criteria from the National Heart, Lung, and Blood Institute [NIH, 1998]. <sup>e</sup>Criteria from the European Society of Cardiology (Mancia, 2014). <sup>f</sup> Evidence grading was assigned based on the underlying level of evidence (Dasgupta, 2014), where *grade A* is the strongest evidence (i.e., based on high-quality studies) and *grade D* is the weakest evidence (i.e., based on low-power imprecise studies or expert opinion alone); "higher intensity exercise is not more effective" was assigned *grade D*.

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