

Supplemental Material

Supplemental Table 1: AHA/ACSM Preparticipation Questionnaire (AAPQ)

Assess your health status by marking all TRUE statements	
<p>History You have had: <input type="checkbox"/> a heart attack <input type="checkbox"/> heart surgery <input type="checkbox"/> cardiac catheterization <input type="checkbox"/> coronary angioplasty (PTCA) <input type="checkbox"/> pacemaker/implantable cardiac defibrillator/rhythm disturbance <input type="checkbox"/> heart valve disease <input type="checkbox"/> heart failure <input type="checkbox"/> heart transplantation <input type="checkbox"/> congenital heart disease</p> <p>Symptoms <input type="checkbox"/> You experience chest discomfort with exertion <input type="checkbox"/> You experience unreasonable breathlessness <input type="checkbox"/> You experience dizziness, fainting, or blackouts <input type="checkbox"/> You take heart medications</p> <p>Other health issues <input type="checkbox"/> You have diabetes <input type="checkbox"/> You have asthma or other lung disease <input type="checkbox"/> You have burning or cramping in lower legs when walking short distances <input type="checkbox"/> You have musculoskeletal problems that limit your physical activity <input type="checkbox"/> You have concerns about the safety of exercise <input type="checkbox"/> You take prescription medications <input type="checkbox"/> You are pregnant</p>	<p><i>If you marked any of these statements in this section, consult your physician or other appropriate health care provider before engaging in exercise. You may need to use a facility with a medically qualified staff</i></p>
<p>Cardiovascular risk factors <input type="checkbox"/> You are a man older than 45 years <input type="checkbox"/> You are a woman older than 55 years, have had a hysterectomy, or are postmenopausal <input type="checkbox"/> You smoke, or quit smoking within the previous 6 months <input type="checkbox"/> Your blood pressure is > 140/90 mm Hg <input type="checkbox"/> You do not know your blood pressure <input type="checkbox"/> You take blood pressure medication <input type="checkbox"/> Your blood cholesterol is > 200mg/dL <input type="checkbox"/> You do not know your cholesterol level <input type="checkbox"/> You have a close blood relative who had a heart attack or heart surgery before age 55 (father or brother) or age 65 (mother or sister) <input type="checkbox"/> You are physically inactive (i.e., you get <30 minutes of physical activity on at least 3 days per week) <input type="checkbox"/> You are >20 lbs overweight</p>	<p><i>If you marked two or more of the statements in this section you should consult your physician or other appropriate health care provider before engaging in exercise. You might benefit from using a facility with a professionally qualified exercise staff† to guide your exercise program</i></p>
<p><input type="checkbox"/> None of the above</p>	<p><i>You should be able to exercise safely without consulting your physician or other appropriate health care provider in a self-guided program or almost any</i></p>

facility that meets your exercise program needs.

Adapted from ACSM Guidelines for Exercise Testing and Prescription, 8th Edition⁴

†Professionally qualified exercise staff refers to appropriately trained individuals who possess academic training, practical and clinical knowledge, skills, and abilities commensurate with the credentials defined in appendix F of the Guidelines for Exercise Testing and Prescription⁴

Supplemental Table 2: Items from the AAPQ and their corresponding items from NHANES 2001-2004.

AAPQ ITEM			
HISTORY (you have had:)	NHANES SECTION	NHANES VARIABLE	NHANES TEXT
Heart attack	MCQ	MCQ160E	Has a doctor or other health professional ever told you that you had a heart attack (aka MI)?
Heart surgery	MCQ	MCQ160C	Has a doctor or other health professional ever told you that you had coronary heart disease?
Cardiac catheterization			
Coronary angioplasty (PTCA)			
Pacemaker/ICD/Rhythm disturbance	n/a	n/a	Likely captured with meds (antiarrhythmics)
Heart valve disease	n/a	n/a	Likely captured with meds (anticoagulants)
Heart failure	MCQ	MCQ160B	Has a doctor or other health professional ever told you that you had congestive heart failure?
Heart transplantation	n/a	n/a	Likely captured under CHD, CHF, medication use
Congenital heart disease	n/a	n/a	Likely captured with meds
Symptoms	SECTION	VARIABLE	TEXT
You experience chest discomfort with exertion	CDQ	CDQ0001	Ever had pain or discomfort in chest?
		CDQ0002	Do you get it (per 0001) when you walk uphill or in a hurry?
		CDQ0003	Do you get it (per0001) when you walk at an ordinary pace on level ground?
You experience unreasonable breathlessness	CDQ	CDQ010	Have you had shortness of breath either when hurrying on the level or walking up a slight hill?
You experience dizziness, fainting, or blackouts	BAQ	BAQ010	During the past 12 months, have you had dizziness, difficulty with balance, or difficulty with falling?
You take heart medications	RXQ_RX	RXDDRGID	Multum first level class 40 (CVD) or 81 (Coagulation modifiers)
Other Health Issues	SECTION	VARIABLE	TEXT
You have diabetes	DIQ	DIQ010	(Other than during pregnancy) have you ever been told by a doctor or health professional that you have diabetes or sugar diabetes?
You have asthma or other lung disease	MCQ	MCQ010	Has a doctor or other health professional ever told you that you had asthma?
		MCQ160G	Has a doctor or other health professional ever told you that you had emphysema?
		MCQ160K	Has a doctor or other health professional ever told you that you had chronic bronchitis

You have burning or cramping in lower legs when walking short distances	DIQ	DIQ140	Do you ever get pain in either leg while walking? (>40y old)
You have musculoskeletal problems that limit your physical activity	MCQ	MCQ160A	Has a doctor or other health professional ever told you that you had arthritis?
	OSQ	OSQ060	Has a doctor ever told you that you had osteoporosis, sometimes called thin or brittle bones
You have concerns about the safety of exercise	n/a	n/a	Not assessed in NHANES
You take prescription medications	RXQ	RXD030 or RXDUSE	In the past month, have you used or taken medication for which a prescription is needed?
You are pregnant	RHQ	RHQ140	Do you think that you are pregnant now?
		RHQ141	Do you think that you are pregnant now?
		RHD143	Are you pregnant now?

Cardiovascular risk factors	SECTION	VARIABLE	TEXT
You are a man older than 45 years	DEMO	RIDAGEYR	Age in years
		RIAGENDR	Gender
You are a woman older than 55 years, have had a hysterectomy, or are postmenopausal	DEMO	RIDAGEYR	Age in years
		RIAGENDR	Gender
	RHQ	RHD280	Have you had a hysterectomy including a partial hysterectomy, that is, surgery to remove your uterus or womb? (F20-150y)
		RHQ040	What is the reason you have not had regular periods in the past 12 months? (ans 5, going-gone through menopause)
You smoke, or quit smoking within the previous 6 months	SMQ	SMQ020	Have you smoked at least 100 cigarettes in your entire life?
		SMQ040	Do you now smoke cigarettes?
		SMQ050Q	How long has it been since you stopped smoking cigarettes? (+SMQ050U for unit)
		SMQ120	Have you smoked a pipe at least 20 times in your entire life?
		SMQ140	Do you now smoke a pipe?
		SMQ150	Have you smoked a cigar at least 20 times in your entire life?
		SMQ170	Do you now smoke cigars?
		SMQ170	Do you now smoke cigars?
Your blood pressure is > 140/90 mm Hg	BPQ	BPQ020	Have you ever been told by a doctor or other health professional that you had hypertension, also called high blood pressure?

You do not know your blood pressure	BPQ	BPQ010	About how long has it been since you last had your blood pressure taken by a doctor or other health professional?
You take blood pressure medication	BPQ	BPQ040A	Because of your hypertension/HBP, have you ever been told to take prescribed medicine?
	RXQ_RX	RXDDRGID	Multum first level class ID 40 (CVD) and second class 41-44, 47-49, 52-56
Your blood cholesterol is > 200mg/dL	BPQ	BPQ080	Have you ever been told by a doctor or other health professional that your blood cholesterol was high?
You do not know your cholesterol level	BPQ	BPQ060	Ever had blood cholesterol checked?
		BPQ070	About how long has it been since you last had your blood cholesterol checked?
You have a close blood relative that had a heart attack or heart surgery before age 55 (father or brother) or age 65 (mother or sister)	MCQ	MCQ250G	Including living and deceased, were any of your biological that is, blood relatives including grandparents, parents, brothers, sisters ever told by a health professional that they had a heart attack or angina before the age of 50?
You are physically inactive (i.e., you get <30minutes of physical activity on at least 3 days per week)	PAQ	Various	Physical activity questionnaire with individual activities
You are >20 lbs overweight	WHQ	WHD010	How tall are you without shoes?
		WHD020	How much do you weigh without clothes or shoes?

Supplemental Table 3: PAR-Q items and their corresponding NHANES items

PARQ # and prompt	NHANES SECTION	NHANES VARIABLE	NHANES TEXT
(Instructions) If you are over 69 years of age and you are not used to being very active, check with your doctor	DEMO	RIDAGEYR	Age in years at screening
1. Has your doctor ever said that you have a heart condition <u>and...</u>	PAQ	Various	Physical activity questionnaire with individual activities,
	MCQ	MCQ160B	Has a doctor or other health professional ever told you that you had congestive heart failure?
		MCQ160C	Has a doctor or other health professional ever told you that you had coronary heart disease?
		MCQ160E	Has a doctor or other health professional ever told you that you had a heart attack (aka MI)?
		MCQ160D	Has a doctor or other health professional ever told you that you had angina, also called angina pectoris?
...that you should only do physical activity recommended by a doctor	n/a	n/a	n/a
2. Do you feel pain in your chest when you do physical activity?	CDQ	CDQ0001	Ever had pain or discomfort in chest?
		CDQ0002	Do you get it (per 0001) when you walk uphill or in a hurry?
		CDQ0003	Do you get it (per0001) when you walk at an ordinary pace on level ground?
3. In the past month, have you had chest pain when you were not doing physical activity? (not temporally matched)	CDQ	CDQ0001	Ever had pain or discomfort in chest?
4. Do you lose your balance because of dizziness or do you ever lose consciousness?	BAQ	BAQ010	During the past 12 months, have you had dizziness, difficulty with balance, or difficulty with falling?
5. Do you have a bone or joint problem (for example, back, knee, or hip) that could be made worse by a change in your physical activity?	MCQ	MCQ160A	Has a doctor or other health professional ever told you that you had arthritis?
	OSQ	OSQ060	Has a doctor ever told you that you had osteoporosis, sometimes called thin or brittle bones

6. Is your doctor currently prescribing drugs (for example, water pills) for your blood pressure or heart condition?	RXQ_RX	RXDDRGID	Multum first level class 40 (CVD) or 81 (Coagulation modifiers)
7. Do you know of <u>any other reason</u> why you should not do physical activity?	n/a	n/a	n/a