Lifestyle Medicine Health Behavior Scale

The Lifestyle Medicine Health Behavior (LMHB) scale is a valid and reliable tool to assess the six lifestyle medicine pillars (sleep, social connection, stress management, physical activity, nutrition, and substance use) (Pangalangan et al., 2024).

How to score: Each of the six lifestyle pillars can be scored individually by adding the point values seen by the response they selected for each question. A higher score is indicative of a healthier lifestyle in that pillar. Scores can be plotted on the lifestyle pillar visual.

*Note that all of the social connection items and 2 of the stress items are reverse coded. These items are highlighted. The scoring beside these items are already reversed for ease of scoring.

Use: This is a self-report tool to obtain an overall picture of wellbeing. If used in practice or an academic setting, please be sure to include the appropriate citation:

Pangalangan J, Puma J, Tollefson M, Frates B. Development and Psychometric Evaluation of the Lifestyle Medicine Health Behavior Scale. American Journal of Lifestyle Medicine. 2024;0(0). doi:10.1177/15598276241280207

Q1. **Sleep**

The following questions are about your typical sleep patterns.

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Q1.1 Are you satisfied with your sleep?

○ Never (0)

○ Rarely (1)

○ Sometimes (2)

○ Usually (3)

○ Always (4)

Q1.2 Do you spend less than 30 minutes awake at night? (This includes the time it takes to fall asleep and awakenings from sleep)

○ Never (0)

○ Rarely (1)

○ Sometimes (2)

○ Usually (3)

○ Always (4)

Q1.3 Do you sleep between 6 and 8 hours per day?

○ Never (0)

○ Rarely (1)

○ Sometimes (2)

○ Usually (3)

○ Always (4)

Scoring: ranges from 0-12

*a score of 12 meets the recommendations for sleep

Q2. **Social Connection**

The following questions are about how connected you feel to others.
<mark>all four items are reverse coded</mark>

Q2.1 I feel distant from people.

○ Strongly disagree (5)

○ Disagree (4)

○ Mildly disagree (3)

○ Mildly agree (2)

○ Agree (1)

○ Strongly agree (0)

Q2.2 I see myself as a loner.

○ Strongly disagree (5)

○ Disagree (4)

○ Mildly disagree (3)

○ Mildly agree (2)

○ Agree (1)

○ Strongly agree (0)

Q2.3 I don't feel related to most people.

○ Strongly disagree (5)

○ Disagree (4)

○ Mildly disagree (3)

○ Mildly agree (2)

○ Agree (1)

○ Strongly agree (0)

Q2.4 I feel like an outsider.

○ Strongly disagree (5)

○ Disagree (4)

○ Mildly disagree (3)

○ Mildly agree (2)

○ Agree (1)

○ Strongly agree (0)

Scoring: ranges from 0-20

*a score of 16-20 meets the recommendations for social connectedness

Q3. **Stress Management**

 Please answer these questions by selecting the option that represents how often you felt or thought a certain way in the **last month**.
Q3.1 and Q3.4 are reverse coded

Q3.1 In the last month, how often have you felt that you were unable to control the important things in your life?
Reverse coded

○ Never (4)

○ Almost Never (3)

○ Sometimes (2)

○ Fairly often (1)

○ Very often (0)

Q3.2 In the last month, how often have you felt confident about your ability to handle your personal problems?

○ Never (0)

○ Almost Never (1)

○ Sometimes (2)

○ Fairly often (3)

○ Very often (4)

Q3.3 In the last month, how often have you felt that things were going your way?

○ Never (0)

○ Almost Never (1)

○ Sometimes (2)

○ Fairly often (3)

○ Very often (4)

Q3.4 In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?
Reverse coded

○ Never (4)

○ Almost Never (3)

○ Sometimes (2)

○ Fairly often (1)

○ Very often (0)

Scoring: ranges from 0-16

*a score of 12-16 meets the recommendations for stress

Q4. **Physical Activity**

Please answer these questions based on your typical **week.**

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Q4.1 On a typical week, how much time do you spend in total on **moderate and vigorous physical activities** where your heartbeat increases and you breathe faster (e.g. brisk walking, cycling as means of transport or as exercise, heavy gardening, running or recreational sports)?
  Only include activities that lasted at least 10 minutes at a time.

  ○ Less than 1/2 hour (less than 30 min) (0)

  ○ ½ an hour - 1 ½ hours (30-90 min) (1)

  ○ 1 ½ - 2 ½ hours (90-150 min) (2)

  ○ 2 ½ - 5 hours (150-300 min) (3)

  ○ More than 5 hours (more than 300 min) (4)

Q4.2 How much of the time that you spend on physical activities in a typical week, which you indicated above, do you spend **in total** on **vigorous physical activities**?   This includes activities that get your heart racing, make you sweat and leave you so short of breath that speaking becomes difficult (e.g. swimming, running, cycling at high speeds, cardio training, weightlifting or team sports such as football).
  Only include activities that lasted at least 10 minutes at a time.

  ○ Less than ½ hour (less than 30 min) (0)

  ○ ½ an hour - 1 hours (30-60 min) (1)

  ○ 1 - 1 ½ hours (60-90 min) (2)

  ○ 1 ½ - 2 ½ hours (90-150 minutes) (3)

  ○ More than 2 1/2 hours (more than 150 min) (4)

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Q4.3 Do you do **muscle-strengthening exercise** in a **usual week**?

○ Yes (1)

○ No (0)

Q4.4 How **many days,** in a **usual week,** do you do muscle strengthening exercise?

Includes using weight machines, bodyweight exercises, resistance exercises, free weights like dumbbells or resistance bands, and holistic exercises (including yoga, tai-chi, or Pilates)

Days per week:

▼ 0 -7

0-1 days per week (0)
2-7 days per week (1)

Scoring: ranges from 0-10

*A score of 3 or above for first these two items meets the recommendations for physical activity (At least 150 minutes of moderate-intensity activity or a combination of both moderate- and vigorous activity per week).

Additionally, participants should indicate that they do muscle-strengthening exercises at least twice per week.

Q5. **Nutrition**

The following questions are about your typical eating patterns.

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Q5.1 How often do you eat fresh fruits?
Examples: Apples, bananas, pears, oranges, grapes, strawberries, blueberries, etc. Include fresh fruits and frozen fruits with no added sugar. Please do not include preserved or dried fruits or fruit juice in your estimates.
 [One servings equals: 1 small apple or ½ large banana (approximately 1 cup, size of small fist); 1 cup mandarin oranges, melon, or raspberries; ¼ cup blueberries, 1 ½ cup whole strawberries]

- ○ Less than 1 serving per week (0)

- ○ 1-2 servings per week (1)

- ○ 3-4 servings per week (2)

- ○ 5-6 servings per week (3)

- ○ 1 serving per day (4)

- ○ 2-3 servings per day (5)

- ○ 4 or more servings per day (6)

Q5.2 How often do you eat vegetables?
 Examples: Tomatoes, peppers, cucumbers, broccoli, carrots, green beans, cabbage, spinach, arugula, and other leafy vegetables. Include raw or cooked non-starchy vegetables. Please do not include starchy vegetables (such as potatoes) in your estimates.
 [One serving equals: 1 cup raw vegetables (e.g. tomatoes, baby carrots, celery, green peas); ½ cup cooked vegetables (such as broccoli and spinach); 1 cup arugula]

○ Less than 3 servings per week (0)

○ 3-4 servings per week (1)

○ 5-6 servings per week (2)

○ 1 serving per day (3)

○ 2-3 servings per day (4)

○ 4 or servings per day (5)

Q5.3 How often do you eat legumes, nuts, and seeds?
 Examples:
 Legumes - cooked or canned beans, lentils, chickpeas or peas; miso, tofu, tempeh, hummus
 Nuts - almonds, walnuts, hazelnuts, peanuts, etc.
 Seeds - sesame, sunflower, pumpkin, flax seeds, etc.
 [One serving equals: ½ cup of cooked or canned legumes; ⅓ hummus or bean dip; ½ cup tofu; ¼ cup tempeh; a small handful of nuts or seeds.]

○ Less than 1 serving per week (0)

○ 1-2 servings per week (1)

○ 3-4 servings per week (2)

○ 5-6 servings per week (3)

○ 1 serving per day (4)

○ 2 or more servings per day (5)

Q5.4 How often do you eat whole grains?
Examples: Whole grain bread, whole grain bread roll, muesli, unsweetened ready to eat cereal, cooked grits/porridge, brown rice, whole grain pasta, corn tortilla. Please do not include white bread, white roll or bagels; white rice or pasta; or wheat tortilla in your estimates.
  [One servings equals: 1 slice of whole grain bread; ½ cup cooked cereal (oats, oatmeal, quinoa); ½ cup cooked brown rice or whole grain pasta; 1 small corn tortilla; ½ cup cooked grits; 1 cup ready-to-eat-cereal flakes].

○ I do not eat it at all (0)

○ Less than 1 serving per week (1)

○ 1-2 servings per week (2)

○ 3-4 servings per week (3)

○ 5-6 servings per week (4)

○ 1 serving per day (5)

○ 2 or more servings per day (6)

Scoring: ranges from 0-22

Q6. **Substance-use**

 Please answer the following questions based on the past **12 months**.

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Q6.1 How often have you used any tobacco product?

For example, cigarettes, e-cigarettes, cigars, pipes, or smokeless tobacco.

○ Daily or almost daily (0)

○ Weekly (1)

○ Monthly (2)

○ Less than monthly (3)

○ Never (4)

Q6.2 [Male]: How often have you had 5 or more drinks containing alcohol in one day?
 [Female]: How often have you had 4 or more drinks containing alcohol in one day?   1
standard drink is about 1 small glass of wine (5 oz), 1 beer (12 oz), or 1 single shot of liquor.

○ Daily or almost daily (0)

○ Weekly (1)

○ Monthly (2)

○ Less than monthly (3)

○ Never (4)

Q6.3 How often have you used any drugs including marijuana, cocaine or crack, heroin, methamphetamine (crystal meth), hallucinogens, ecstasy/MDMA?

○ Daily or almost daily (0)

○ Weekly (1)

○ Monthly (2)

○ Less than monthly (3)

○ Never (4)

Q6.4 How often have you used any prescription medications just for the feeling, more than prescribed, or that were not prescribed for you? Prescription medications that may be used in this way include:
 Opiate pain relievers (for example, OxyContin, Vicodin, Percocet, methadone).
 Medications for anxiety or sleeping (for example, Xanax, Ativan, Klonopin).
 Medications or ADHD (for example, Adderall or Ritalin)

○ Daily or almost daily   (0)

○ Weekly (1)

○ Monthly (2)

○ Less than monthly (3)

○ Never (4)

Scoring: ranges from 0-16

*A score of 16 meets the recommendations for substance use