

THE BETTER BRAIN SOLUTION

WITH DR. STEVEN MASLEY



WORKBOOK AND SELF-QUIZ GUIDE

CHECKLIST FOR YOUR PHYSICIAN:

- WHAT TESTS SHOULD YOU HAVE?
- WHICH ARE OPTIONAL?
- WHAT SHOULD YOUR RESULTS BE?

GET RESULTS IN JUST 30 DAYS

Younger Brain

Workbook & Self-Quiz Guide

This guidebook provides information and quizzes that will help you assess how your brain functions and give you realistic goals you can achieve to reverse and prevent cognitive decline. It will also help you determine if you are meeting your nutrient and activity needs.

This program guidebook is designed to be shared with your doctor to measure your improvement over time. I suggest you use these materials to clarify your status before you start the program, after 30 days, and again after 3 and 12 months. Use this as a guide to help you track, and more importantly, optimize your cognitive function.

THE FOLLOWING TABLES ARE INCLUDED:

- Tips on How to Work with your Physician
- Do You Have Metabolic Syndrome?
- Are you at High Risk for Alzheimer's disease?
- Glycemic Load Guide

THE FOLLOWING QUIZZES ARE INCLUDED:

- Brain Performance Symptom Score
- Beck's Depression Score
- Sleep Apnea Assessment

HOW TO WORK WITH YOUR PHYSICIAN:

Most doctors are thrilled to learn that their patients are pro-actively making changes to improve their health. Although many doctors may not ask about your food and nutrient intake, fitness and activity, and stress management, they do want you to lead a healthy life and they believe that the healthier you live, the less invasive medical care you will need.

I recommend that you empower yourself by letting your physician know that you want to extend your health span for decades to come. Commit to taking steps to improve your food intake, meet your key nutrient needs, perform both aerobic and strength training, and manage your stress. When you let them know that you are taking steps to improve your health, they become much more motivated to help you along this same path.

Keep in mind that this program contains advice and information related to health. It should only be used to complement your ongoing medical care, not replace it. Rely on the advice of a doctor that knows you and your personal medical history.

I always recommend that you include your own medical provider in any health care decisions you make, including changes related to supplements, exercise, and food choices. If your doctor seems interested yet does not have expertise in optimal lifestyle options, then I'd highly recommend you give them a copy of *The Better Brain Solution*, so they can see the extensive reference section in the book. Whenever my patients buy me a book that they value, I always read through it, as I appreciate their time and consideration and I want to better understand their concerns. The book content will get you and your doctor working towards the same goals and speaking in the same terms (a huge benefit to your relationship), and the reference section will satisfy your doctor showing this program is based upon solid, scientific principles.

Start by sharing your goals and the changes you are willing to make with your medical provider.

LIST YOUR GOALS (What Improvements Do You Want to See?)

Goal 1: _____

Goal 2: _____

Goal 3: _____

LIST THE CHANGES YOU ARE MAKING (Address food, nutrient intake, activity, and stress management)

Change 1: _____

Change 2: _____

Change 3: _____

Change 4: _____

Once you have shared with your doctor your goals and the changes you have made, that is a good opportunity about asking about medical testing. Your goals should be realistic but they should make a difference in your health. For example, a goal can be to double the amount of activity you do weekly, or add 15 min to your current aerobic exercise daily, or adding 1 full cup of green vegetables daily, going to bed 1 hour earlier at night, etc.

WHICH TESTS TO ORDER?

If you are high risk for memory loss (see quiz no. 1), or feeling you are losing some memory, below are some testing options that you should discuss with your physician. Ask your physician to consider the following:

SCREENING TESTS

• Detailed physical and neurological examination by your healthcare practitioner	
• Assessment for Depression	Take the quiz
• Testing for sleep apnea	Take the quiz
• Metabolic Syndrome	Take the assessment

BLOOD TESTS

• Fasting blood sugar level	result should be < 95 mg/dL
• Vitamin B12 level	result should be > 500 pg/ml
• TSH (thyroid stimulating hormone)	result should be < 3.0, ideally < 2.0*
• High-sensitivity CRP	result should be < 1.0 mg/L
• Lead level	especially if you live in a home built before 1978, a normal level should show zero
• Whole blood mercury level	normal is a level less than 11 mcg/L
• Chemistry profile	result should show a normal sodium level and normal kidney function
• Genetic testing for ApoE	refer to Chapters 2 & 10 in <i>The Better Brain Solution</i>
• Genetic methylation test	or take a quality multivitamin with mixed folates
*Consider a full thyroid panel if you have normal TSH levels, but still have symptoms of low thyroid function.	

If you have at least 2-3 signs of the metabolic syndrome, then I also recommend that you have a fasting insulin test performed. People with metabolic syndrome almost always have insulin resistance, and commonly high insulin levels. Your result will hopefully be below 5 µU/ml, but anything over 10 µU/ml should be considered abnormal.

SIGNS OF METABOLIC SYNDROME INCLUDE:

- Waistline: ≥ 40 inches for men, ≥ 35 inches for women
- Blood pressure: $> 135/85$ mm Hg
- Triglycerides: ≥ 150 mg/dL
- HDL cholesterol < 40 mg/dL for men and < 50 for women
- HS-CRP level is > 1.0
- Often last to appear, elevated fasting blood sugar levels (a fasting glucose ≥ 100 mg/dL)

If you have at least 3 of these six signs, I would say you have metabolic syndrome, although many doctors do not include the CRP test in this calculation.

If you feel, or your loved ones believe, that you are losing your memory, be aware that there is computerized cognitive testing that may be covered by your insurance. In that case, ask about this type of testing, such as Central Nervous System Vital Signs (CNS VS). I perform this type of testing on most of my patients annually, but without established memory loss, this type of testing is usually not covered by insurance and has to be paid for out of pocket.

There are also imaging studies to assess for cognitive function. With a diagnosis of progressive memory loss, often medical insurance will cover a brain scan with MRI or CT imaging. Further testing with beta amyloid scanning or functional MRI scanning may not be covered by insurance, and can be very expensive.

ARE YOU HIGH RISK FOR ALZHEIMER'S DISEASE?

As you can see from the table below, lifestyle choices, medical conditions, your age, and genetic makeup all impact your risk for Alzheimer's disease in a major way.

CONDITION:	RISK INCREASE COMPARED TO HEALTHY IS:
Age	At age 65, 7-10% of people have Alzheimer's At ≥ 65 , 13% have Alzheimer's At age 80, 17-25% have Alzheimer's At ≥ 85 , 40% have Alzheimer's
Elevated fasting glucose (≥ 100 mg/dL)	Up to a 60% greater risk (which is now 30% of the adult population and 50% of baby boomers)
Diabetes, not using insulin therapy	300% greater risk
Diabetes, using insulin therapy	400% greater risk
Hypertension ($> 140/90$ mm Hg)	24% at midlife, up to 300% increased risk late in life
Tobacco use	50% greater risk for Alzheimer's
Obesity	70-100% greater risk
History of Depression	Increases risk for dementia 200% in women Increases risk for dementia 400% in men
Severe Head Injury	450% increased risk
ApoE4 Genotype <ul style="list-style-type: none"> • 1 of 2 alleles • 2 of 2 alleles 	Increases the risk for Alzheimer's 3-fold (300%) Increases the risk for Alzheimer's 15-fold (1500%)

If after you look at all the combined risk factors and you find that you are at 100% or more elevated risk for Alzheimer's disease, then I would call that high risk. This does not mean that you will develop Alzheimer's disease. It does mean that you should do everything possible to reduce your risk factors, and following this program is an excellent start.

If you are high risk, then meeting with your doctor regularly also becomes more important. See the workbook section on testing to do with your physician.

WHAT IS YOUR GLYCEMIC LOAD?

If we want to address the #1 cause for cognitive dysfunction and memory loss—which is abnormal blood sugar regulation--then we need to stop brain disrupting insulin resistance. The easiest way to improve insulin sensitivity is to exercise daily and to choose foods with a low sugar load, also known as a low glycemic load.

Individual foods with a low glycemic load have a glycemic load score less than 10. Foods with a score of 10-19 are moderate. Foods with a score of 20 and above have a high glycemic load.

In general, you should eat more foods with a low glycemic load and short of a very special occasion, totally avoid high glycemic load foods. To find foods not included in this list, visit the University of Sydney's www.glycemicindex.com website and search for foods you commonly use.

To help you select foods that have a low glycemic load, nearly all fruits (including berries, cherries, pineapple, and watermelon) as well as carrots, beets, peas, and nearly every vegetable except the potato have a low glycemic load. So this helps kill the myth that you should avoid all carbs. Other foods with a low GL include all forms of beans, dark chocolate, avocado, all nuts and seeds, and all forms of protein, like steak, chicken, fish, and eggs. What we should all eat more of is clean protein, vegetables, fruits, beans, and nuts, along with spices and herbs, plus some extra virgin olive oil, to protect our brains and make our meals taste fantastic.

Now, you may not always be able to eat low GL foods, so let me mention some common foods with a medium glycemic load - starchy carbs - and with them, you'll want to be careful about portion size.

Things like...

- quinoa
- sweet potatoes
- wild rice
- barley
- tortillas
- whole wheat and whole grain pasta
- bananas
- whole grain cereals (like muesli)

Finally, I want you to avoid high glycemic foods entirely. They're refined carbs and sugars "foods" such as: a donut, ice cream, potato chips, nachos, candy bars, mashed potatoes, white bread, white rice, and sodas.

But, short of celebrating a special occasion, here are some more high glycemic load foods you need to avoid that might surprise you, like gluten-rich foods such as whole wheat bread, regular pasta, and a bagel, plus granola, brown rice, instant oatmeal, a baked potato, and any whole grain that has been processed into flour...all of these have a high glycemic load and increase blood sugar levels.

With the tables below, you can score a typical day by meals: breakfast, lunch, afternoon snack, dinner, and dessert. Hopefully your combined meal never has more than a moderate glycemic load (lower is better): with a total meal glycemic score less than 19, and a snack or dessert on a typical day not more than a score of 10-15.

BREAKFAST

SAMPLE FOOD ITEMS

GLYCEMIC LOAD SCORE

• Unsweetened almond milk	0
• Nitrosamine-Free Bacon, steak, eggs	0
• Coffee, tea	0
• Vegetable omelet (2 eggs, 1 cup veggies)	2
• Protein shake (20 grams whey protein)	2
• Honey, sugar (1 tsp)	3
• 1 medium orange	4
• 1 cup cow's milk (skim or whole)	4
• 1 cup fruit (blueberry, cherry, plum, melon)	5
• Cooked steel cut oatmeal (1 cup)	9
• 1 cup plain yogurt (skim or whole)	10
• 1 medium banana (medium-ripe)	12
• 1 cup orange juice (most fruit juices)	12
• Cooked rolled oats (1 cup)	13
• Cheerios (1 cup)	13
• Cooked grits (1 cup)	14
• Grapenuts, muesli, or Kashi Go Lean (1 cup)	16
• Instant oatmeal (1 cup)	16
• Raisins (1/4 cup)	18
• Fruit flavored yogurt (1 cup)	15-20
• Toast (2 slices, white or whole wheat)	20
• Corn flakes, Raisin bran, (1 cup)	25
• White bagel, 3.5 inch	34
• Granola, Kashi (1 cup)	37
• Donuts, 4-inch (two)	44
• Hash browns (1 cup)	52

Add the items together that you would consume on a typical day. That is your combined glycemic load score. For example: whey protein + 1 cup berries + 1 cup of almond milk has a total glycemic meal load of 4, or a vegetable omelet has a GL of 2. Those are the glycemic loads of my typical breakfasts.

**WHAT IS YOUR TYPICAL
SCORE FOR BREAKFAST?:**

LUNCH

SAMPLE FOOD ITEMS

GLYCEMIC LOAD SCORE

• Mixed greens, with chicken, avocado, cabbage, carrots, eggs, almonds, & oil and vinegar	4
• Chicken and Vegetable Soup (250g)	5
• Black Beans (1/2 cup)	7
• Chickpeas (1/2 cup)	8
• Pizza, Supreme (1 slice)	9
• Baked Beans (1/2 cup)	10
• Gatorade (8oz)	12
• Chicken wrap w/lettuce & cheese, 1 flour tortilla	15
• Pizza, cheese (1 slice)	16
• Sushi, salmon (100g)	17
• Hamburger with bun	18
• Turkey & Cheese Sandwich on wonder bread	20
• Ham & cheese sandwich on whole wheat bread	20
• Potato chips (3oz bag)	23
• Coca Cola, or any cola (12oz can)	25
• Fanta (12oz can)	35
• Nachos, tortilla chips (3oz bag)	35

**WHAT IS YOUR TYPICAL
SCORE FOR LUNCH?:**

AFTERNOON SNACK

SAMPLE FOOD ITEMS

GLYCEMIC LOAD SCORE

• Hummus (Chickpea salad dip) (1 oz/30g)	0
• Guacamole (1/4 cup)	0
• Most Nuts (1 oz) (almonds, hazelnuts, macadamia, pistachios, walnuts, peanuts)	0
• Cashews, salted (1 oz)	3
• Popcorn, popped (2 cups)	12
• Vanilla Wafers (6 cookies/1oz)	14
• Granola bar (2oz bar)	18
• Rice Cakes (1 oz)	18
• Potato Chips (4oz bag)	30
• Pretzels, oven-baked (2oz bag)	33

**WHAT IS YOUR TYPICAL
SCORE FOR SNACK TIME?:**

DINNER

SAMPLE FOOD ITEMS

GLYCEMIC LOAD SCORE

Typically, dinner consists of a protein, a starch, and a vegetable. Choose a typical dinner for you, then add the items together for the total Glycemic Load of your dinner.

• Salmon, Steak, Pork, Chicken (6oz)	0
• Red or White Wine	0
• Avocado, Olive, Almond and Coconut Oil (1 tbs)	0
• Broccoli, Cauliflower (1 cup)	0
• Green bell pepper (1 cup)	2
• Red or yellow bell pepper (1 cup)	3
• Asparagus (1 cup)	3
• Beer (12oz)	3
• Peas, frozen or fresh (1 cup)	5
• Black bean soup (1 cup)	7
• Sweet Potato (1 medium, 1/2 cup)	10
• White or purple potatoes, boiled (1 cup)	14
• Wild Rice, Cooked (1 cup)	16
• Instant Mashed Potatoes (1 cup)	17
• Lasagna, Beef (300g)	17
• Fajitas, chicken (300g with 2 tortillas)	18
• Quinoa, Cooked (1 cup)	18
• Brown Rice, Medium Grain, Cooked (1 cup)	22
• Baked Russet Potato (1 medium/5oz)	26
• White rice, Long-grain, cooked (1 cup)	27
• Couscous, boiled 5 minutes (1 cup)	30
• Spaghetti, Whole-meal, boiled (2 cups)	30
• Macaroni and cheese (Kraft) (1 cup)	32
• Spaghetti, white, boiled (2 cups)	44

**WHAT IS YOUR TYPICAL
SCORE FOR DINNER?:**

DESSERT

SAMPLE FOOD ITEMS

- Ice Cream, Regular (1 cup)
- 1 cup watermelon
- 1 medium apple with 1 ounce cheddar cheese
- 2 ounces dark chocolate with 1 ounce almonds
- $\frac{3}{4}$ cup low fat, plain yogurt with $\frac{3}{4}$ cup berries
- Oatmeal Cookies (1.5oz)
- Chocolate cake with frosting (4 oz)
- Ginger Snap cookies (1.5oz)
- Mars Bar (2oz bar)

GLYCEMIC LOAD SCORE

24
4
6
8
10
18
20
24
27

**WHAT IS YOUR TYPICAL
SCORE FOR DESSERT?:**

BRAIN SYMPTOM SCORE

With help from colleagues, I have developed a more detailed Brain Symptom Score, which should help to identify memory loss early. Here are the ten questions I like to use in my clinic when there is a question of memory loss. The QUIZ is pretty easy, just answer yes or no.

- | | |
|--|----------|
| 1. Do I lose things often? (keys, pens, phones, glasses) | Yes No |
| 2. Is it harder to find my car in a big parking area? | Yes No |
| 3. Is it difficult to remember a 7 digit phone number to dial it? | Yes No |
| 4. Do I find myself writing lists to help my memory more than I used to? | Yes No |
| 5. Am I forgetting names of movie & sport stars I once knew well? | Yes No |
| 6. Is it easier to remember an event from 20 years ago than 2 days ago? | Yes No |
| 7. Do I have trouble dealing with math problems? (Balancing my check book, calculating percentages for tipping) | Yes No |
| 8. When reading, do I have to re-read a passage as I lose focus? | Yes No |
| 9. During a detailed lecture or meeting, does my mind drift sooner than it used to? | Yes No |
| 10. When working on a project, do I find it hard to get back into the groove after being interrupted by a phone call or visitor? | Yes No |

Scoring: Count ALL of your "Yes" responses and enter it in the box.

WHAT IS YOUR BRAIN SYMPTOM SCORE?

If you've answered yes to:

- **0-1 Questions:** Congrats, You're doing great! I'd suggest you ask yourself this battery of questions at least yearly, and follow the materials in this program to improve your brain performance and prevent memory loss.
- **2-3 Questions:** Pretty good, but you likely can do more to prevent future cognitive loss, and even make your brain sharper and more productive. Some people have never been good with names, or finding their car in a large parking lot, so if this has not changed, it is reassuring. Adding the foods, nutrients, and activities discussed in this program will help you improve your brain function.
- **4 Questions:** Perhaps you were overly critical about your responses, or, there might be something important that you should change. This score suggests that you are a bit sluggish, likely not as sharp as you used to be. At some point, you should also check in with your physician and clarify if you have other signs of cognitive dysfunction, or something easy to fix, such as low thyroid function or a low Vitamin B12 level. Review the testing materials suggested and follow the 5-step recommendations outlined in this program.
- **5 or More Questions:** Perhaps you were overly critical about your responses, or perhaps you are losing some of your cognitive function. Especially if you have symptoms of memory loss, I suggest that you schedule an appointment with your physician to discuss if further testing is needed. You may have something easy to fix, such as low thyroid function or a low Vitamin B12 level. Review the testing materials suggested in this workbook, and be sure to follow the 5-step recommendations outlined in this program so that you can improve your brain performance and prevent memory loss.

DO YOU HAVE SIGNS OF DEPRESSION?

Taking the Beck's Depression Inventory Quiz will help you determine if you should talk to your doctor about depression. Circle the number next to the statement that most accurately describes you for each question.

1. 0 I do not feel sad
 1 I feel sad
 2 I am sad all the time and can't snap out of it
 3 I am so sad and unhappy that I can't stand it

2. 0 I am not particularly discouraged about the future
 1 I feel discouraged about the future
 2 I feel I have nothing to look forward to
 3 I feel the future is hopeless and that things cannot improve

3. 0 I do not feel like a failure
 1 I feel I have failed more than the average person
 2 As I look back on my life, all I can see is a lot of failures
 3 I feel I am a complete failure as a person

4. 0 I get as much satisfaction out of things as I used to
 1 I don't enjoy things the way I used to
 2 I don't get real satisfaction out of anything anymore
 3 I am dissatisfied or bored with everything

5. 0 I don't feel particularly guilty
 1 I feel guilty a good part of the time
 2 I feel quite guilty most of the time
 3 I feel guilty all of the time

6. 0 I don't feel I am being punished
 1 I feel I may be punished
 2 I expect to be punished
 3 I feel I am being punished

7. 0 I don't feel disappointed in myself
 1 I am disappointed in myself
 2 I am disgusted with myself
 3 I hate myself

8. 0 I don't feel I am any worse than anyone else
 1 I am critical of myself for my weaknesses or mistakes
 2 I blame myself all the time for my faults
 3 I blame myself for everything bad that happens

9. 0 I don't have any thoughts of killing myself
1 I have thoughts of killing myself, but I would not carry them out
2 I would like to kill myself
3 I would kill myself if I had the chance
10. 0 I don't cry any more than usual
1 I cry more than I used to
2 I cry all the time now
3 I used to be able to cry, but now I can't cry even though I want to
11. 0 I am no more irritated by things than I ever was
1 I am slightly more irritated now than usual
2 I am quite annoyed or irritated a good deal of the time
3 I feel irritated all the time
12. 0 I have not lost interest in other people
1 I am less interested in other people than I used to be
2 I have lost most of my interest in other people
3 I have lost all of my interest in other people
13. 0 I make decisions about as well as I ever could
1 I put off making decisions more than I used to
2 I have greater difficulty in making decisions more than I used to
3 I can't make decisions at all anymore
14. 0 I don't feel that I look any worse than I used to
1 I am worried that I am looking old and unattractive
2 I feel there are permanent changes in my appearance that make me look unattractive
3 I believe that I look ugly
15. 0 I can work about as well as before
1 It takes an extra effort to get started at doing something
2 I have to push myself very hard to do anything
3 I can't do any work at all
16. 0 I can sleep as well as usual
1 I don't sleep as well as I used to
2 I wake up 1-2 hours earlier than usual & find it hard to get back to sleep
3 I wake up several hours earlier than I used to and cannot get back to sleep
17. 0 I don't get more tired than usual
1 I get tired more easily than I used to
2 I get tired from doing almost anything
3 I am too tired to do anything

18. 0 My appetite is no worse than usual
 1 My appetite is not as good as it used to be
 2 My appetite is much worse now
 3 I have no appetite at all anymore
19. 0 I haven't lost much weight, if any,
 lately 1 I have lost more than 5 pounds
 2 I have lost more than 10 pounds
 3 I have lost more than 15 pounds
20. 0 I am no more worried about my health than usual.
 1 I am worried about physical problems like aches, pains, upset stomach, or constipation.
 2 I am very worried about physical problems and it's hard to think of much else.
 3 I am so worried about my physical problems that I cannot think of anything else.
21. 0 I have not noticed any recent change in my interest in sex.
 1 I am less interested in sex than I used to be.
 2 I have almost no interest in sex.
 3 I have lost interest in sex completely.

INTERPRETING THE BECK DEPRESSION SCORE

Now that you have completed the questionnaire, add up the score for each of the twenty-one questions by counting the number you circled for each question. The highest possible total for the whole test would be sixty-three. This means you circled number 3 on all twenty-one questions. Since the lowest possible score for each question is 0, the lowest possible score for the test would be 0. This would mean you circled 0 on each question. You can evaluate your depression according to the table below. ***If you score more than 10, share your score with your medical provider.***

TOTAL SCORE	LEVELS OF DEPRESSION
1-10	These ups and downs are considered normal
11-16	Mild mood disturbance
17-20	Borderline clinical depression
21-30	Moderate depression
31-40	Severe depression
> 40	Extreme depression

DEPRESSION TOTAL SCORE:	
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SLEEP APNEA

Sleep apnea is a serious sleep disorder that occurs when breathing is interrupted during sleep, meaning the brain, heart, and lungs are deprived of oxygen. People with daytime fatigue, morning headaches, and a history that they stop breathing during sleep may suffer from sleep apnea. People with signs of sleep apnea should consider either home or in-hospital sleep apnea testing. Take the quiz below to assess your risk for sleep apnea.

SLEEP APNEA SCREENING TEST		SCORE
Do you snore loudly?	Yes=1 /no=0	
Do you often feel tired, fatigued or sleepy during the day?	Yes=1 /no=0	
Do you have or are you being treated for high blood pressure?	Yes=1 /no=0	
Are you obese/very overweight –BMI >35?	Yes=1 /no=0	
Neck circumference >16 inches?	Yes=1 /no=0	
Are you male?	Yes=1/no=0	
TOTAL SCORE		

HERE'S HOW TO EVALUATE YOUR SCORE.

- None of these questions: You're doing great!
- 0-2 questions: You're likely fine and don't have sleep apnea (low risk)
- 3-4 questions: Some reason for concern. Check with your doctor for further testing (intermediate risk)
- 5-8 questions: Check with your doctor sooner rather than later and have a sleep study performed (high risk)

SLEEP APNEA TOTAL SCORE:	
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BETTER BRAIN

WORKBOOK AND SELF-QUIZ GUIDE

This Workbook and Self-Quiz Guide will help you assess your brain function and risk for cognitive decline.

The Workbook is designed to be shared with your physician, and to be able to monitor your improvement over time. The following material comes in the workbook:

- Tips on How to Work with Your Physician.
- What Tests To Order?
- What Should Your Results Be?
- Do You Have Metabolic Syndrome and Insulin Resistance?
- Are You at High Risk for Alzheimer's Disease?
- Glycemic Load Guide

The following Quizzes are Included:

- Brain Symptom Score
- Beck's Depression Score
- Sleep Apnea Assessment