The Mind Health Report
Secrets to Unlocking Your Mind for Work, Love and Life
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Think Faster, Think Smarter:
How to Speed Up Your Mental Performance

Who doesn't want to think faster? Thinking faster enables you to react more effectively to everyday situations. It improves your ability to access information you already know, such as remembering someone's name or face, and allows you to absorb and process new information more effectively. Quick thinking makes it easier to switch from one task to another, to multi-task with less stress, and even to solve problems in more creative, effective ways.

People who can think faster are, in practical terms, smarter — but they weren't necessarily born that way. Genes play an important part, but like athletic ability, genetic gifts aren't exceptionally valuable unless they are trained to perform at peak levels.

The good news is that, regardless of genetic endowment or age, it is possible to rev up your mental speedometer. To find out how, The Mind Health Report spoke to Eric Braverman, M.D., an integrative physician and founder of PATH Medical in New York, who has developed a program specifically designed to speed up the thinking process.

"Brain speed is governed by the neurotransmitter acetylcholine, which controls the speed at which electrical signals from the brain are sent throughout the body," explains Dr. Braverman. "It also regulates the rate at which we process sensory input and access stored information."

In addition to speeding up brain function, higher levels of acetylcholine make it easier to achieve and maintain a healthy weight, and can reduce the chances of developing diabetes. Low levels of the neurotransmitter are linked to impaired insulin production in the brain, which contributes to diabetes.

The same mechanism is linked to increased risk for Alzheimer's disease, as acetylcholine levels are lower among people suffering from Alzheimer's. The neurotransmitter is now the target of a class of medications known as cholinesterase inhibitors. Cholinesterase is an enzyme that breaks down acetylcholine, and drugs that inhibit the enzyme help to elevate acetylcholine levels.

In addition to faster thinking, increasing levels of the neurotransmitter produces multiple benefits

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for healthy people. Patients who have followed Dr. Braverman's program have reported weight loss, lower cholesterol, remission of Type 2 diabetes, and a much-improved outlook on life.

Nutrition and exercise play pivotal roles in stimulating natural production of acetylcholine, but lifestyle also plays an important role. Certain types of entertainment — for instance, movies and television with violent or aggressive content, or images or language that you find offensive — can drain your supply of the neurotransmitter. Better to opt for more gentle programming. Spending part of each day in a restful environment will also help to restore low levels of acetylcholine.

Intellectual and creative activities are also beneficial. These include mastering new skills, reading, solving puzzles, engaging in discussions or debates, and creating artwork.

It's also important to reduce exposure to environmental toxins. Pesticides, in particular, have been found to disrupt acetylcholine and can be avoided by eating organic foods as much as possible.

A Quick Guide to Choline-Rich Foods

Below are some foods that are high in choline. These amounts of choline are found in a 6- to 8-ounce serving of each food.

- **Almonds** (100 mg)
- **Artichokes** (60 mg)
- **Beef: lean, ground** (170 mg)
- **Broccoli** (80 mg)
- **Brussels sprouts** (80 mg)
- **Cabbage** (80 mg)
- **Egg, whole** (500 mg)
- **Fish: cod** (160 mg), **salmon** (130 mg), **tilapia** (160 mg)
- **Hazelnuts** (90 mg)
- **Liver: beef** (840 mg), **chicken** (600 mg), **turkey** (440 mg)
- **Macadamia nuts** (90 mg)
- **Oat bran** (120 mg)
- **Peanut butter** (130 mg)
- **Pine nuts** (100 mg)
- **Pork** (180 mg)
- **Shrimp** (160 mg)
- **Soy protein powder** (160 mg)
- **Tomato paste** (80 mg)
- **Wheat bran** (150 mg)
- **Wheat germ, toasted** (300 mg)

Other foods that are naturally high in choline include blueberries, cauliflower, caviar, celery, chicken, cod roe, coffee, fava beans, grape juice, lettuce, oranges, and soybeans. You will benefit most by including a variety of these foods in your meals and snacks. Obviously, a 6- to 8-ounce serving of some of these (such as the nuts) would be far too high in calories, and it isn't realistic to eat 6 ounces of protein powder or tomato paste in a meal — but you get the idea.

Choline: Fuel for Brain Speed

Choline, one of the B vitamins, is a key building block of acetylcholine, and therefore critical for healthy brain speed. Choline allows our bodies to produce membranes that act as insulation for neurons, the cells that make up the brain and nervous system, which are designed to transmit information. When the integrity of this insulation is damaged, signals can become disrupted and transmission slows.

Studies have shown that choline is beneficial for people suffering from neurodegenerative diseases such as Huntington's and Alzheimer's diseases and Tourette's syndrome, as well as psychiatric disorders. The nutrient is also essential for healthy liver function, may aid in recovery from liver diseases, and may play a role in protecting against liver cancer.

A diet that contains generous amounts of

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choline will enable your body to produce ample acetylcholine. Men need at least 550 milligrams of choline daily, while women require at least 425 milligrams. However, too much choline can produce digestive discomfort; 3.5 grams (3,500 milligrams) is the safe upper limit for daily intake.

Avoid the Vicious Cycle

Believe it or not, being overweight can actually injure brain cells. A healthy brain consists of 60 percent fat, but excess fat makes the brain work harder. As a result, cell membranes may become damaged. Oddly enough, excess fat can also increase mental alertness because fat insulates nerve fibers and facilitates transmission of signals. But being overweight is not the right way to speed thinking.

Because the brain needs healthy fats, when the body doesn't get enough of these, it naturally develops a preference for fatty foods. Low levels of acetylcholine can trigger cravings for fatty foods and contribute to weight gain. The trick is to get an adequate amount of choline-rich foods without consuming surplus calories, enabling enough acetylcholine to be produced without adding excess body fat.

High-fat foods such as fried and fast foods, ice cream, pastries, and others that are high in calories but low in nutrients produce an acetylcholine boost, triggering a desire for more of the same. In addition to causing weight gain, these foods contain trans fats and saturated fats that interfere with the brain's natural ability to produce acetylcholine, and can damage the heart and other organs.

In short, eating bad fats can give you a brief mental boost and create a craving for high-fat foods. By reducing your ability to produce acetylcholine, this begins a vicious cycle.

Luckily, this process can be reversed, enabling weight loss (if necessary), higher natural acetylcholine production, improved brain speed, and better overall health. Here are some ways to control your weight and consume choline with less overall fat and calories:

- Eat Canadian bacon instead of regular bacon
- Drink skim milk or buttermilk instead of whole milk
- Eat lean chicken or turkey instead of bologna, hot dogs, or sausage
- Replace avocado with cucumber, zucchini, and/or lettuce
- Eat ice milk or frozen, low-fat yogurt instead of ice cream
- When you want a hot fudge sundae, eat low-fat, frozen yogurt or ice milk with sliced or crushed fruit
- Instead of fatty meats, eat lean meats with all the fat trimmed
- Replace sour cream with low-fat yogurt, and cream with skim milk
- When you want creamy or high-fat cheese, eat low-fat or cottage cheese
- Substitute reduced-calorie salad dressing for regular versions
- Eat poached, boiled, or baked eggs instead of fried ones
- Eat fish in place of marbled meats
- Substitute lean pork or ham for fatty pork such as spare ribs
- When eating grain foods, aim for whole grains
- Use olive oil for salads and safflower oil for cooking

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Eric Braverman

Eric Braverman, M.D., is founder of PATH Medical in New York City. He began researching the harmful effects of toxins and nutritional antidotes in 1975. In his practice, he combines conventional medicine with his unique knowledge of the workings of the brain to unravel the mysteries of aging and how disease in one area can affect the entire body. Dr. Braverman is the author of numerous scientific articles and texts for health practitioners and several popular books for the general public, such as *The Edge Effect: Achieve Total Health*. More at www.pathmed.com.

By Dr. Daniel G. Amen

Unchain Your Brain From Addictions

Jessica had way too much to drink at her company holiday party and ended up coming on to the boss . . . in front of his wife! The next day she got fired. Jessica felt humiliated and vowed never to get drunk again. And she never did. Robbie went to his company's holiday party and got so trashed he went up to his supervisor and called her nasty names in front of the CEO. Robbie got fired on the spot. The next night, he went out with a friend to "celebrate." He got drunk again and got a DUI when he drove home.

Why do some people who overdo it with alcohol — or food, caffeine, drugs, sex, gambling, shopping, or other things — learn from their mistakes and avoid repeating the behavior? Why do others minimize the consequences and continue to engage in the same destructive behavior?

The answer lies in the way your brain is wired. Balancing your neurotransmitters is a critical step in getting control of your behavior. It depends in large part on the brain's reward system, which is an intricate network of neurotransmitters that is critical to human survival. Let's look at four neurotransmitters involved in this reward system, how they can get knocked out of whack, and what you can do to optimize them and unchain your brain from all the nasty addictions that wreak so much havoc in our lives.

Dopamine is a feel-good chemical. Whenever we do something enjoyable, it's like pressing a button in the brain that releases a little bit of dopamine to make us feel pleasure. However, if we push this pleasure button too often or too strongly, we reduce dopamine's effectiveness. Eventually, it takes more and more stimulation to feel anything at all.

Cocaine, alcohol, and nicotine all cause dopamine surges two to 10 times greater than your brain produces for natural rewards. Playing video games and gambling can produce the same effect, as can eating foods such as pizza, chocolate chip cookies, and milkshakes.

How can you boost dopamine naturally? Aerobic exercise and green tea have been shown to increase dopamine levels in the brain. I recommend 30 to 45 minutes of aerobic exercise at least four times a week, and drinking two to three cups of green tea a day, or taking a green tea leaf extract.

Serotonin is thought of as the "happy" chemical. Many antidepressants work on this neurotransmitter. When serotonin levels are low, people tend to be worried, rigid, and argumentative. They suffer with anxiety, depression, and obsessive or compulsive behaviors. Serotonin levels are raised in the brain by its amino acid precursor, L-tryptophan. Unfortunately, L-tryptophan does not compete well against other proteins to get into the brain.

Simple carbohydrates increase L-tryptophan in the brain, which is why some people get hooked on cookies, bread, or sugar. Low serotonin levels make it hard to feel pleasure from anything other than what you are addicted to; you then feel compelled to chase that "high" feeling. For example, because of low serotonin levels, a gambler's life may seem boring any time he isn't gambling.

How can you boost serotonin? Exercise increases L-tryptophan in the brain because other proteins go into the muscles, thereby decreasing the competition in the brain. The natural supplements 5-HTP, inositol, and saffron also boost serotonin.

GABA is an inhibitory neurotransmitter that calms the brain. If you have suffered an emotional trauma or are under a lot of stress, GABA may be depleted, and the emotional center of your brain (the limbic brain) may become excessively active, making you feel anxious, uptight, or sad. This can drive you to eat or drink excessively in an attempt to calm your limbic brain.

How can you boost GABA? Amino acid supplements of GABA can help, as can B6, magnesium, lemon balm, kava kava, and valerian.

Endorphins are the brain's natural pleasure producers and pain-killers. They are the body's natural morphine-like substances, and are heavily involved in addiction.

How can you boost endorphins? Exercise can activate the same pathways in the brain as morphine, and increases the release of endorphins. Cocoa and dl-phenylalanine also have been shown to increase endorphin production in the brain.

Daniel G. Amen, M.D., is a psychiatrist, brain-imaging specialist, and the CEO and medical director of Amen Clinics, Inc. (ACI) in Newport Beach and Fairfield, Calif.; Tacoma, Wash.; and Reston, Va. ACI has the world's largest database of functional brain scans related to psychiatric medicine and the clinics have seen patients from 75 countries. Dr. Amen is an assistant clinical professor of psychiatry and human behavior at the University of California, Irvine School of Medicine. He is the author of 22 books and wrote and produced two PBS specials.

Are Multivitamins Just a Waste of Time and Money?

What You Need to Know About America's Most Popular Supplement

It may be hard to believe, but 9 in 10 Americans have a nutritional deficiency that puts them at risk for serious health problems. For example, 93% do not get enough vitamin E to maintain optimal heart function; 75% lack the magnesium for strong bones; and few older people get enough B12, folic acid or vitamin D to keep their brains and bodies from deteriorating.

Can Multivitamins Fill in the Gaps?

Today's fast-paced lifestyle makes it difficult to eat well. We're surrounded by processed foods, and fresh produce is less nutritious than it was years ago due to industrial farming practices. To make up for dietary deficiencies, over 100 million Americans take multivitamins, but research shows that the associated benefits vary widely depending on the multivitamin's quality.

Most Multivitamins Are Way Behind the Times

Experts agree that most multivitamins are simply not potent enough to support optimal wellness and longevity. This is because they are formulated according to an antiquated standard — the Recommended Daily Allowance (RDA), which defines the bare minimums we need for survival. While some of the RDA levels may be adequate, a growing number of experts believe that our health would improve substantially with higher levels of select nutrients.

Vitamins & Minerals Alone Are Not Enough

Today, we are exposed to an increasing amount of toxins, which generate cell-destroying free radicals within the body — something the RDA does not even take into account. According to Jean Carper, best-selling author and founder of *Stop Aging Now*, "an estimated 80 – 90% of all degenerative diseases involve free radical activity." Science shows that the best protection is "super antioxidants," such as CoQ10, Green Tea, Alpha Lipoic Acid, Curcumin and Ginkgo. Most multivitamins, unfortunately, have little antioxidant firepower.

A Simple Way to Live Longer *and* Better

A recent NIH study showed that people who take multivitamins daily may live almost 10 years longer! Additional studies have shown that multi users experience better cognitive health, lower stress levels, stronger immunity and better vision. The bottom line is if you aren't taking a high quality multivitamin, you are needlessly jeopardizing your health and longevity.

People Who Take High Quality Multivitamins

- ☑ Have fewer sick days
- ☑ Are mentally sharper
- ☑ Have stronger bones
- ☑ Report better moods
- ☑ Are less likely to be overweight
- ☑ Spend less on medical bills

How to Pick the Right Multivitamin for You

Choosing the best multivitamin can be hard, unless you know what to look for. First and foremost, look for a product made in the USA to pharmaceutical grade standards in an FDA inspected facility. Stay away from 1-a-day formulas — there's no way they can fit everything you need into one pill! If most of the ingredient levels are equivalent to 100% or less of the RDA, chances are it's too weak to be effective. A good multi will also include significant doses of super antioxidants.

Helping Thousands Live Long, Vibrant Lives

The multivitamin most recommended by doctors and experts in the field of nutrition is *Stop Aging Now's* Multi Nutrient PLUS™ . It's an ultra-premium, high potency formula that provides support for complete nutritional balance with research-based doses of 27 essential nutrients, including powerful doses of key antioxidants. According to leading experts, Multi Nutrient PLUS™ is the most effective multi on the market. At just $18.49 per bottle, it's dollar-for-dollar the best value of any comprehensive multi out there. Don't let this offer pass you by!

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- Eat asparagus frequently, as it blocks an enzyme that destroys acetylcholine
- Season food with these herbs and spices that boost acetylcholine and brain speed: lemon balm, turmeric, basil, black pepper, sage, mint, rosemary, allspice, cumin, thyme, and peppermint
- Drink herbal teas.

Aim for a diet that is 80 percent vegetables, fruits, and whole grains, along with a moderate amount of lean protein. Favor fish over meat. Include beans, chicken, and turkey, but keep red meat and fried foods to a minimum. In cooking, use garlic liberally, as it promotes healthy blood flow. And take a multivitamin with antioxidants such as vitamins C and E, zinc, alpha-lipoic acid and CoQ10.

Supplements Can Boost Acetylcholine

To augment your diet, choline is available in various forms of dietary supplements that work to enhance acetylcholine levels and improve overall brain function. In addition, antioxidants, healthy fats found in fish oil, and nutrients designed to support overall brain health can all contribute to maintaining optimum acetylcholine levels, increasing thinking speed, and helping maintain a healthy weight.

The optimum amount of each nutrient for you depends on your own levels of acetylcholine and overall nutritional status. Below are Dr. Braverman's recommendations. Start with the lower daily amounts and see how you feel after a few weeks, as it takes time for nutrients to build up in cell membranes and improve function.

- **GPC choline (100 to 500 mg)** and **phosphatidylcholine (500 to 2,000 mg)** are two nutrients that imitate acetylcholine.
- **Acetyl-L-carnitine (250 to 1,000 mg)** is a specific form of the amino acid L-carnitine, found in meat, and is helpful in building acetylcholine. It also supports energy production and heart health.
- **Alpha-lipoic acid (100 to 400 mg)** is an antioxidant that preserves acetylcholine. It is found in some multivitamin supplements.
- **Huperzine A (50 to 200 mcg)** is an extract from a type of moss, Huperzia serrata, that blocks an enzyme that breaks down acetylcholine.
- **N-Acetyl Cysteine, or NAC (600 to 1,200 mg)** is a form of an amino acid that binds with toxins and helps eliminate them, protecting against acetylcholine depletion triggered by pesticides and other toxins.
- **Fish oil (500 to 3,000 mg)** provides omega-3 fats that feed and protect the brain and nervous system, as well as supporting the heart and overall health.
- **Phosphatidylserine, or PS (100 to 300 mg)** is an essential component of cell membranes and boosts mental functioning.
- **Multivitamin** ingredients that enhance natural acetylcholine production include 25 to 100 mg of B1 (thiamine), 25 to 100 mg of pantothenic acid, and 100 to 500 mcg of B12. The mineral manganese (2 to 10 mg) preserves acetylcholine.
- **Lecithin,** found in all plant and animal cells, contains choline and other beneficial fats. Lecithin granules, usually made from soy, are an alternative source of choline. The granules can be sprinkled on foods or mixed in smoothies, drinks, sauces, and dressings without altering taste, and may be heated. Look for lecithin made from soy that is not genetically modified

Exercise Accelerates Thinking

Studies show that any type of aerobic exercise that increases heart rate and gets the blood

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Mind Health Insights

"Happy Hour" Doubles Stroke Risk

Moderate drinking has been linked to lower risk of stroke. However, research shows that in the short term, alcohol actually multiplies the risk. Researchers at Harvard Medical School found that after one drink — be it wine, beer, or hard liquor — this is how risk of an ischemic stroke (caused by a blood clot) changes:

- 2.3 times higher in the first hour
- 1.6 times higher in the second hour
- 30 percent lower after 24 hours

These conclusions are based on interviews with 209 men and 181 women who had suffered an ischemic stroke. Heavy drinking increases risk, both in the long and the short term.

Nature Boosts Mood and Self-Esteem

Just five minutes of walking, gardening, or other outdoor exercise lifts mood and improves self-esteem, especially among people who are generally inactive, stressed, or suffer from mental health problems. This is the conclusion of British researchers who analyzed 10 studies with a total of 1,252 people of all ages, ranging from children to the elderly.

According to the research, a short spurt of exercise in a "green" setting produces the most change in mood. Benefits increase with longer sessions, though at a less dramatic rate. Any type of natural environment will work, including a garden, a park, or a natural space in a city or in a rural area. The presence of water increases benefits.

The studies looked at the effects of different types of exercise, including walking, gardening, cycling, fishing, rowing a boat, horseback riding, farm work, and sailing. All types of activity were beneficial, and did not need to be physically intense.

To reduce stress and boost your mood and self-esteem:

- Instead of spending your entire lunch break indoors, seek out some green space near your office.
- At home, make gardening part of your routine. If you don't have a garden, go for a walk in a park or near a river, lake, or beach.
- On the weekend, explore state parks or walking trails.
- When planning a vacation, look for destinations with natural settings.
- During family gatherings, make a nature walk one of the activities.

Vitamins Defend Against Dementia, Depression

In its naturally occurring form, vitamin E is a family of eight nutrients, rather than the single substance, alpha-tocopherol, most often found in dietary supplements. A Swedish study of 232 people over the age of 80 found that higher levels of the complete form of the vitamin, consumed from food, reduce risk of Alzheimer's disease by up to 54 percent.

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Top sources of vitamin E include raw sunflower seeds, dry-roasted almonds, mustard and turnip greens, chard, spinach, collard greens, kale, olives, Brussels sprouts, tomatoes, bell peppers, broccoli, papaya, blueberries, and kiwi.

Vitamins B6 and B12 reduce the odds of depression among older people, according to a study that tracked 3,502 people, age 65 or older, for seven years. Researchers at Rush University Medical Center in Chicago found that people who were least likely to be depressed were consuming up to 200 milligrams of B6, and up to 250 micrograms of B12.

The beneficial sources of both vitamins appeared to be dietary supplements rather than food. One reason for this may be that among people in the age group that was studied, these nutrients are not absorbed well from food.

Vitamin B6 is used in our natural production of the neurotransmitter serotonin, the target of antidepressant medications, and has previously been shown to relieve depression among pre-menopausal women. Lack of vitamin B12 is known to accelerate age-related mental decline.

Lucky Charms Really Work

Superstition is, by definition, not scientific. But among true believers, it actually has the power to improve mental performance.

German researchers drew this conclusion from an experiment using a memory test, during which some people were allowed to keep their lucky charms while others were not. Those who kept their charms, such as old stuffed animals, wedding rings and lucky stones, received higher scores because they felt more confident and set higher goals for themselves. Giving someone a thumbs-up or simply wishing them good luck can also improve performance.

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pumping can help restore healthy levels of acetylcholine. Practiced a few times a week, aerobic activity will improve your mental reaction time and overall function. (If you're only taking a brisk walk, aim to do so on most days for at least 30 minutes.)

Resistance training designed to build or preserve muscle and strength isn't related directly to acetylcholine levels or mental function. However, a study at Rush University Medical Center in Chicago found that people who maintain muscle strength are less likely to suffer from Alzheimer's or any other type of mental decline. Additional research shows that working all the major muscle groups correctly with weights, twice a week, can reverse age-related muscle loss in just four to eight weeks.

"A study at Rush University Medical Center in Chicago found that people who maintain muscle strength are less likely to suffer from Alzheimer's or any other type of mental decline. Additional research shows that correctly working all the major muscle groups with weights, twice per week, can reverse age-related muscle loss in just 4 to 8 weeks."

In addition, specific types of exercise can develop your ability to think faster, both in sports and in life. To find the best types of exercise to accomplish this, The Mind Health Report spoke to Ryan Halvorson, a certified personal trainer specializing in training athletes, and a spokesman for IDEA Health & Fitness, the world's largest membership organization of fitness professionals.

"Look for any type of physical activity that involves movements you're not able to anticipate, and quick changes in direction," recommends Halvorson. Any type of competitive sport that requires agile, quick movements — such as tennis, soccer, basketball, or pingpong — will provide that type of mental challenge. Golf, baseball, and other activities that have long time lags don't provide the same benefit.

Attend a variety of different exercise classes rather than always going to the same one, where the movements are predictable. Or choose a class where the instructor varies the sequence of movements. Personal trainers can also design a suitable program.

"You want an element of surprise," Halvorson says. "That makes you think on your feet." Dance-oriented and martial arts classes or fitness boot camps can fit the bill. The speed should be challenging, and should be suited to your fitness level. For example, tai chi, an Asian system of movement developed for martial arts training, utilizes movements that are carried out very slowly but are complex and require precision. This provides a mental challenge as well as physical benefits.

In addition to classes, you can work out with a partner. Shoot hoops in the driveway, or have one partner do a series of movements with rapid changes while the other one tries to mirror them.

Of course, working out alone is another option. "While it may not be as enjoyable as working with a partner, it is possible to develop faster reaction and cognitive skills by hitting a tennis or pingpong ball against the wall," Halvorson says.

When doing so, these are some ways to challenge yourself:

- Allow only one bounce against the ground or table before hitting the ball.
- To reduce anticipation, hit the ball at different angles.
- Add a timed element to the drill. For example, aim to hit the ball a certain number of times in 30 seconds and attempt to increase that number during subsequent training sessions.

Fast thinking can be acquired through experience. A combination of acetylcholine-boosting foods, supplements, exercise, and lifestyle habits can put your brain on maximum speed, giving you a mental edge at work and allowing you to enjoy life to the fullest.

Ask the Doctors

The Mind Health Report editors seek out top doctors across the nation to provide answers to your mind health concerns. Please include your full name, city, and state when submitting. If you have a question, please e-mail it to: mindreport@newsmax.com.

My wife keeps telling me that human sleeping hours must include 10 p.m. through 2 a.m. for the best mental and physical recovery. Do you agree?

— Mun, San Diego, Calif.

Dr. Steven Rosenblatt responds: The window of time

for the most restorative sleep is actually longer than that. Sleep is complex, but there are a few key factors to consider.

The natural sleep-wake cycle is triggered by the light patterns of day and night. The change to darkness triggers the pineal gland, deep inside the brain, to secrete the hormone melatonin, which promotes sleepiness. This secretion normally begins at around 9 p.m., soon after sunset in most latitudes, and continues until approximately 7:30 a.m. Also, body temperature varies during each 24-hour period, with the lowest temperature usually occurring around 4:30 a.m.

The most beneficial sleep should encompass the hours of maximum melatonin secretion, and should begin at least six hours before the period of the body's lowest temperature. Based on this, an optimum night's sleep should start at about 10 or 10:30 p.m. and should last about eight hours, until 6 or 6:30 a.m., as melatonin secretion decreases by around 7:30 a.m.

The amount of sleep is also important. On average, adults need about seven to eight hours each night. During sleep, we secrete elevated levels of growth hormone, which is important for rebuilding bodily structures. Tissue repair also is increased, and our immune system is activated and strengthened. Lack of sleep can increase risk of hypertension, heart disease, weight gain, and Type 2 diabetes.

Steven Rosenblatt, M.D., Ph.D., L.Ac. is a nationally recognized leader in the field of integrative medicine, and the co-founder and former clinical director of the UCLA Acupuncture Clinic. He has a private practice in Los Angeles.

I just read some great claims for a growth hormone supplement. I'd like to try it, but I'm reluctant to take something I may regret later. Could you give me some guidance about growth hormone?

— Ed, Pensacola, Fla.

Dr. Kent Holtorf responds: Growth hormone, which

our pituitary gland produces naturally, is essential for bone and organ growth in youth. Levels of the hormone diminish rapidly after age 30. This rapid decline results in many of the negative aspects of aging, including declining psychological well-being, increased body fat, decreased muscle mass, increased wrinkles, cancer, and heart disease.

The majority of growth hormone supplements and boosters don't actually increase levels of the hormone. To determine whether a specific product is effective, you should get these tests before and after taking the supplement: IGF-1 (Insulin-like Growth Factor 1) and IGFBP3 (Insulin-like Growth Factor Binding Protein 3). Both are markers of growth hormone levels.

Physicians who are trained in anti-aging medicine may use growth hormone injections as part of a broader program to help patients achieve optimum health based on individual testing, examination, and medical history. For information about this type of medicine, go to www.hormoneandlongevitycenter.com.

Kent Holtorf, M.D., is an integrative physician who specializes in treating hormone imbalances and restoring optimum health. Dr. Holtorf is the Founder of the Holtorf Medical Group in California (www.holtorfmed.com), and a reviewer and guest editor for several medical journals, including Endocrine.