

LIFESTYLE MEDICINE

WELLNESS WEEK

MAY 23, 2023

JAI SUBRAMANI, MD, MPH

OCCUPATIONAL MEDICINE CLINIC



**“The best way to predict the
future is to create it”**

Abraham Lincoln

DEFINITION

Lifestyle medicine is the use of evidence-based lifestyle therapeutic interventions:

- A whole food plant-based eating pattern
- Regular physical activity
- Restorative sleep,
- Emotional Health/Stress management
- Avoidance of risky substances
- Positive social connection



As a primary modality, delivered by certified clinicians to prevent, treat and reverse chronic medical conditions.

STATISTICS

80 % OF PREMATURE DEATHS ARE ATTRIBUTABLE TO 3 MAIN FACTORS

1. TOBACCO USE



2. POOR DIET



3. LACK OF PHYSICAL EXERCISE



Chronic Disease in U.S.



Problem



Chronic diseases - heart disease, cancer, diabetes, stroke, & Alzheimer's are the leading causes of disability and death



88 Million Americans have Pre-Diabetes | 90% do NOT know it
34 Million people live with Type 2 Diabetes

72% of Americans with Overweight or Obesity

36 million men and 29 million women with overweight
32 million men and 36 million women with obesity



Cause

Eliminate



Poor Diet



Sedentary Behavior



Smoking

Prevent

80% of heart disease & stroke

80% of type 2 diabetes

40% of cancer

Solution

Restore Health

Whole-food, plant predominant diet



150 mins/wk of moderate exercise



8 hours of restful sleep



Daily relaxation time to lower stress



No Smoking



Regular connection to positive people



Lifestyle Medicine providers treat and reverse chronic disease

STATISTICS

- **72 %** of the US population are obese or overweight (based on BMI)
- **33%** have pre-diabetes(**90%** do not know it)
- **60%** have a chronic disease (heart disease, cancer , stroke , etc)
- **10-15%** have Diabetes

DIETARY SPECTRUM



THE AMERICAN COLLEGE OF LIFESTYLE MEDICINE DIETARY POSITION STATEMENT

ACLM recommends an eating plan based predominantly on a variety of minimally processed vegetables, fruits, whole grains, legumes, nuts and seeds.

WHAT AMERICA EATS



*Food items are not to scale

Increased risk for Obesity, T2Diabetes, Heart Disease, and some Cancers

Poor nutrition is the leading cause of death globally.

Increase whole plant foods, fruits, vegetables, whole grains, beans, legumes, nuts, seeds, water

Decrease sweets and snacks, fast food, fried foods, refined grains, refined sugar, meat, dairy, eggs, poultry, high sodium foods

WHOLE FOOD PLANT-BASED EATING PLAN



*Food items are not to scale

Decreased risk for Obesity, T2Diabetes, Heart Disease, and some Cancers

Chronic disease treatment and potential reversal



TIPS FOR IMPROVED NUTRITION AND HEALTH

- Any movement toward WFPB eating is positive
- More movement toward a WFPB eating plan increases impact
- Tailored and sustainable approaches are recommended

What We Eat in America (WWEIA) Food Category analyses for the 2015 Dietary Guidelines Advisory Committee. Estimates based on day 1 dietary recalls from WWEIA, NHANES 2009-2010.

Tuso PJ, Ismail MH, Ha BP, Bartolotto C. Nutritional update for physicians: plant-based diets. Perm J. 2013;17(2):61-66.

Food Planet Health. Eatforum.org. Published 2020. Accessed June 4, 2020

Build a Healthy Eating Routine

You know that healthy eating is key to a healthy life — and the good news is that small changes can make a big difference!

Follow these tips to build a healthy eating routine that works for you.



Choose a mix of healthy foods

There are lots of healthy choices in each food group! Choose a variety of foods you enjoy, including:



Whole fruits — like apples, berries, grapefruit, papaya, and bananas



Veggies — like broccoli, sweet potatoes, beets, okra, spinach, peppers, and jicama



Whole grains — like brown rice, millet, oatmeal, bulgur, and whole-wheat bread



Proteins — like lean meats and chicken, eggs, seafood, beans and lentils, nuts and seeds, and tofu



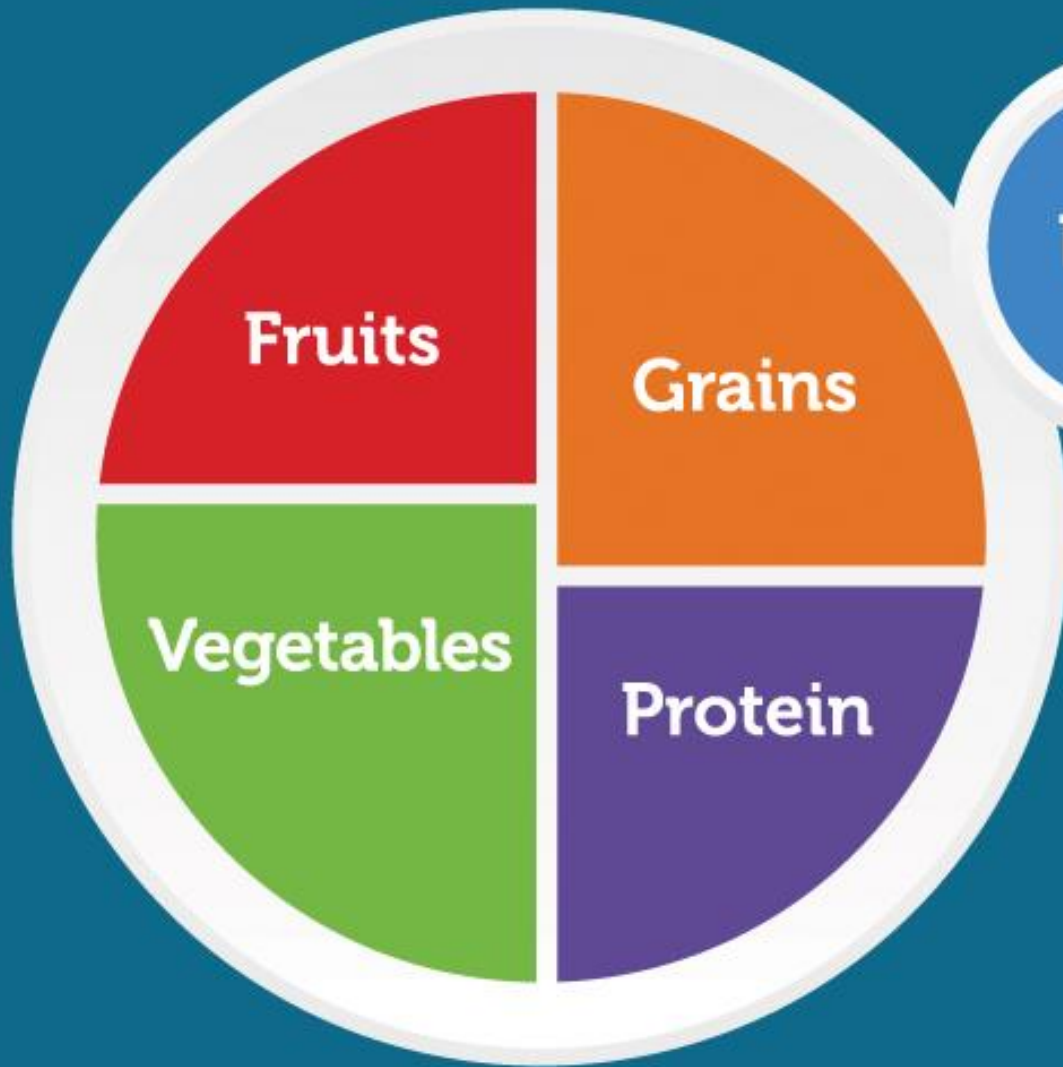
Low-fat or fat-free dairy — like milk, yogurt, cheese, lactose-free dairy, and fortified soy beverages (soy milk) or soy yogurt



Oils — like vegetable oil, olive oil, and oils in foods like seafood, avocado, and nuts



Depending on your culture and tastes, you might choose different foods than the ones listed here — and that's okay! You can find healthy foods that work for you.



MyPlate.gov

MyPlate for Older Adults

Fruits & Vegetables

Whole fruits and vegetables are rich in important nutrients and fiber. Choose fruits and vegetables with deeply colored flesh. Choose canned varieties that are packed in their own juices or low-sodium.

Healthy Oils

Liquid vegetable oils and soft margarines provide important fatty acids and some fat-soluble vitamins.

Herbs & Spices

Use a variety of herbs and spices to enhance flavor of foods and reduce the need to add salt.



Fluids

Drink plenty of fluids. Fluids can come from water, tea, coffee, soups, and fruits and vegetables.

Grains

Whole grain and fortified foods are good sources of fiber and B vitamins.

Dairy

Fat-free and low-fat milk, cheeses and yogurts provide protein, calcium and other important nutrients.

Protein

Protein rich foods provide many important nutrients. Choose a variety including nuts, beans, fish, lean meat and poultry.



Remember to Stay Active!

Tufts
UNIVERSITY

JEAN WATSON
GLORIA
HUMAN
NUTRITION
RESEARCH
CENTER ON
AGING

HNRCA

AARP Foundation

BEST DIETS

& WORLD REPORT
U.S. News

OVERALL
2023



1. **MEDITERRANEAN** Overall Score:4.6

Plant-Based-fruits and vegetables, whole grains, beans, nuts, seafood, lean poultry and unsaturated fat from extra-virgin olive oil is incredibly good for overall well-being.

Gluten-Free ,Vegan and Diabetes friendly



2. **The DASH diet:4.4**

~emphasizes fruits, vegetables, whole grains, lean protein and low-fat dairy, which are high in blood pressure-lowering nutrients, like potassium, calcium, magnesium and fiber.



3. **Flexitarian Diet:4.4**

~ semi-vegetarian diet
~Eating more **plant based** and less meat

Gluten-Free and
Diabetes friendly

Health Benefits of Physical Activity for Adults

IMMEDIATE

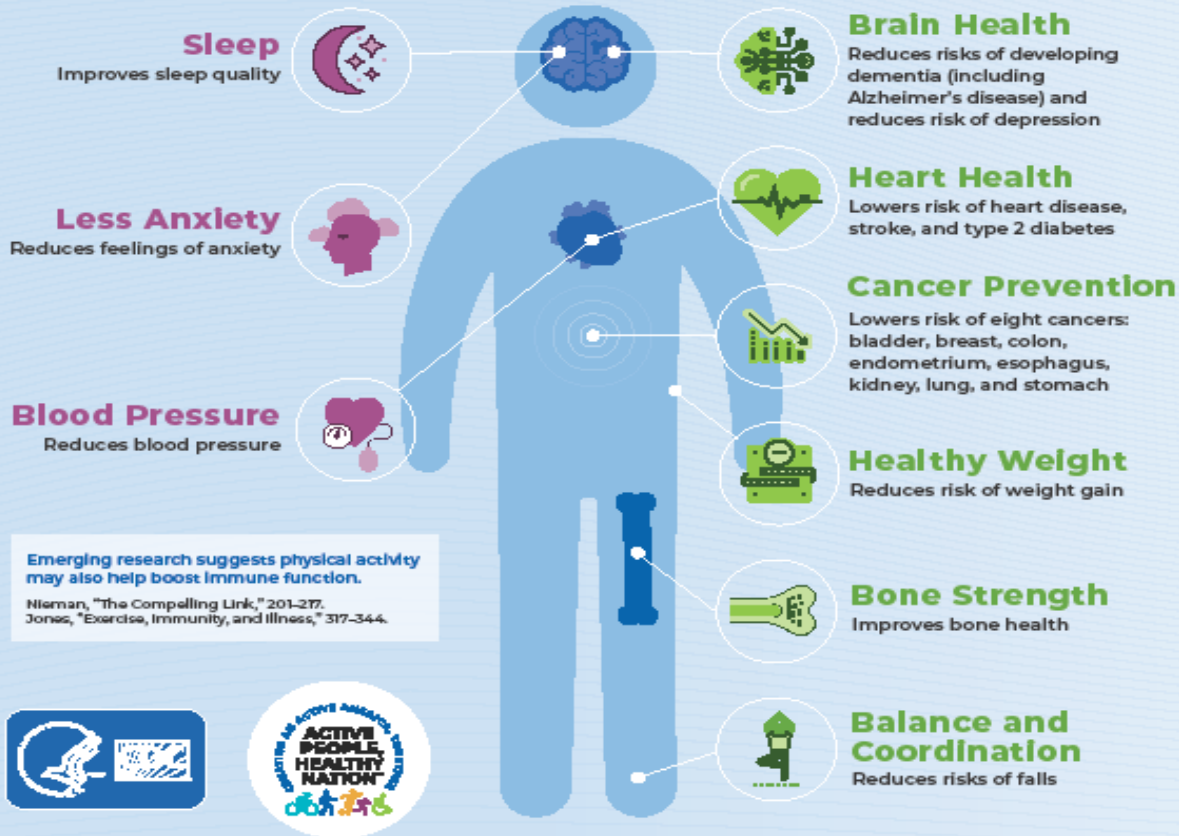


A single bout of moderate-to-vigorous physical activity provides immediate benefits for your health.

LONG-TERM



Regular physical activity provides important health benefits for chronic disease prevention.



Improves

Circulation

Oxygenation

Muscle and Bone health

Increases

Immunity

Endorphins

PHYSICAL ACTIVITY

Strong evidence that physical activity lowers the rate of

- Coronary Artery Disease
- Hypertension
- Type 2 Diabetes
- Breast Cancer
- Colon Cancer
- Depression
- Falls

PHYSICAL ACTIVITY

- Adults **should move more and sit less**
- **They should do at least 150 minutes a week of moderate-intensity, or 75 minutes a week of vigorous-intensity aerobic physical activity**
- Aerobic activity should be spread **throughout the week**
- Adults should also do **muscle-strengthening activities** of moderate or greater intensity and that involve all major muscle groups **on 2 or more days a week**.¹⁴



Benefits Of Exercise

BRAIN



Increased

- cerebral blood flow
- maximal oxygen consumption and delivery of oxygen
- serum concentrations of endocannabinoid receptors
- grey matter
- increased levels of neurotransmitters (e.g., serotonin, beta-endorphins)

Decreases:

anxiety, depression, dysfunctional and psychotic behaviors, hostility, tension, phobias, headaches

IMPROVES:

Emotional stability, cognitive functioning

HEART



Improves

- the muscles' ability to pull oxygen out of the blood, reducing the need for the heart to pump more blood to the muscles
- Works like a beta blocker to **slow the heart rate and lower blood pressure**

Reduces

- **Stress hormones** that can put an extra burden on the heart
- **Increases** high-density lipoprotein (**HDL**) or “good” cholesterol and helps control triglycerides

SLEEP

Normal healthy sleep



- Characterized by sufficient **duration**, good **quality**, appropriate **timing** and **regularity**, and the absence of sleep disturbances and disorders
- **32.8% of Americans** say they sleep less than 7 hours .

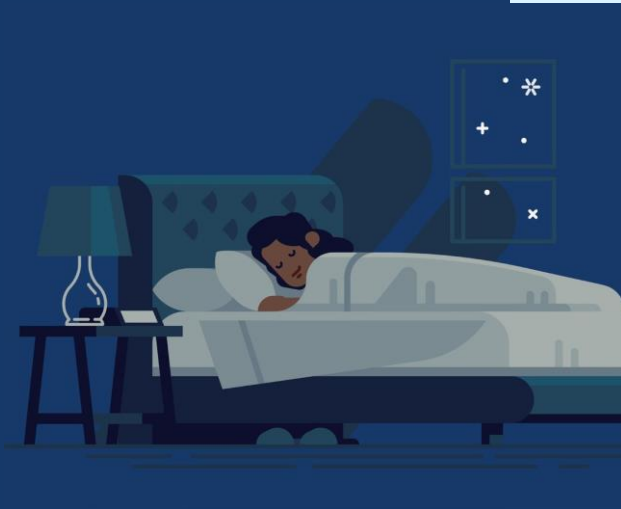
SLEEP

Recommended sleep duration by age group

Age group	Sleep hours per day
Newborns (0-3 months)	14-17
Infants (4-11 months)	12-15
Toddlers (1-2 years)	11-14
Preschoolers (3-5 years)	10-13
School-age children (6-13 years)	9-11
Teenagers (14-17)	8-10
Younger adults (18-25)	7-9
Adults (26-64)	7-9
Older adults (≥ 65)	7-8

Do you know
the difference
between...

**sleep needed to
feel awake and
sleep needed to
be healthy?**



Sleep is important for good health. Studies show that not getting enough sleep or getting poor quality sleep on a regular basis increases the risk of having high blood pressure, heart disease, and other medical conditions.

It's possible to get just enough sleep to stay awake and alert during the day. Research from the National Institutes of Health shows that four key sleep factors are crucial to protect your health:



**Good quality,
uninterrupted
sleep**



**7-8 hours
of sleep each
night (adults)**



**Regular bedtime
and wake-up
time every day**



**Exposure to
sunlight during
the day**



For more information, visit www.nhlbi.nih.gov/sleep.

WHY YOUR BODY LOVES SLEEP



SLEEP DEPRIVATION

Category

Lifestyle

Risk factors

- Consuming excessive amounts of caffeine
- Drinking alcohol
- Drug abuse
- Shift work
- Attending university
- Jet lag

Environmental

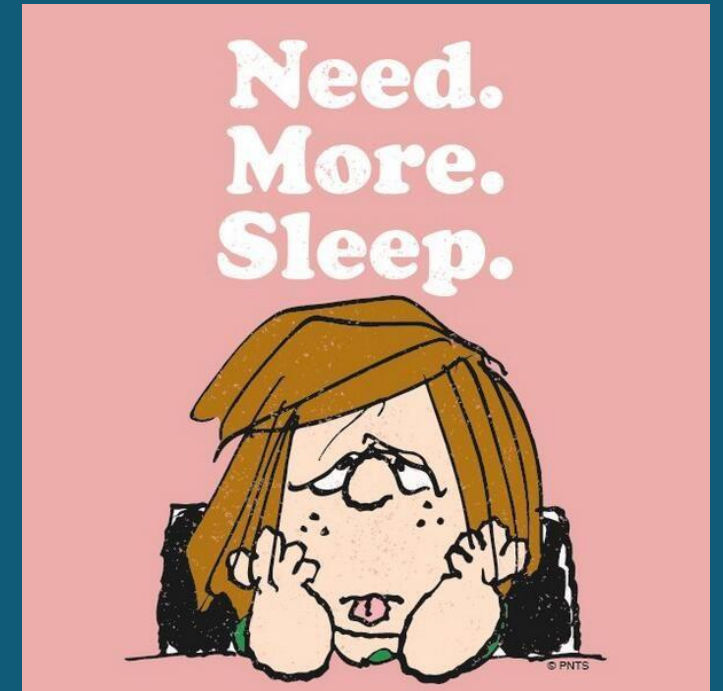
- Excessive noise
- Excessive light

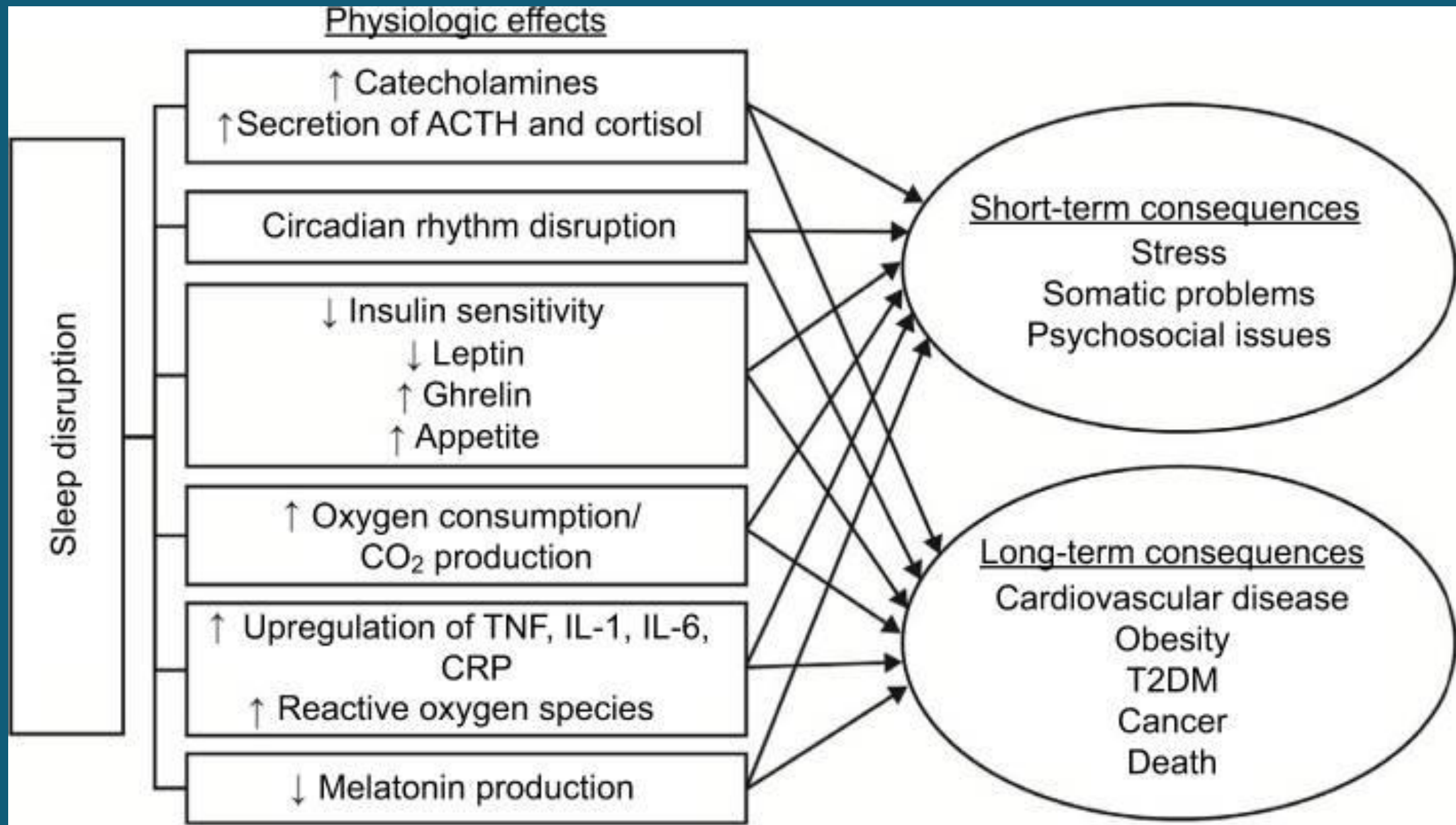
Psychosocial

- Anxiety, worry, and rumination
- Parents of young children
- Caregivers to a family member with a chronic, life-threatening, or terminal illness

Sleep disorder

- Insomnia
- Obstructive sleep apnea
- Restless leg syndrome
- Narcolepsy
- Circadian rhythm disorders





Tips for Getting a Good Night's Sleep



Practice healthy habits during the day:

- Go to bed and wake up at the same time each day.
- Try to get at least 30 minutes of sunlight.
- Exercise regularly, but not within 2-3 hours before bedtime.
- Don't take naps after 3 p.m.
- Avoid caffeine and nicotine.
- Avoid alcoholic drinks before bed.
- Avoid large meals and drinks late at night.
- Avoid medicines that delay or disrupt your sleep, if possible.



Create a good sleeping environment:

- Have a comfortable mattress and pillow.
- Keep the room temperature cool.
- Avoid distractions such as noises, bright lights, clocks, TVs, and computers.



Take time to relax before going to bed:

- Read a book or listen to music, and turn off the TV and electronic devices.
- Take a hot bath, which will adjust your body temperature and help you relax.

If you are awake for more than **20 minutes**, get up and do something relaxing.
If you continue to have trouble sleeping, **talk to your doctor about it.**



For more information, visit www.nhlbi.nih.gov/sleep.

Emotional Well-being

It is defined as an

- Overall positive state of one's emotions
- Life satisfaction
- Sense of meaning and purpose,
- Ability to pursue self-defined goals

Emotional Well-being

Stress causes unhealthy behaviors which leads to:



Increased Catecholamines
&
Cortisol Production

Obesity & HTN



Increased Inflammation
Lowered Immunity

Increased clotting
& Heart disease



Sleep Problems



DOPAMINE

REWARD/MOTIVATION CHEMICAL

- Listen to music
- Get moving
- Get quality sleep Eat enough protein



OXYTOCIN

THE MOOD STABILIZER

- Dinner with family or friends
- Give a hug
- Dance
- Give compliments



SEROTONIN

LOVE /CONTENTMENT HORMONE

- Yoga
- Spend time in nature
- Be in the sun
- Achieve a goal



ENDORPHINS

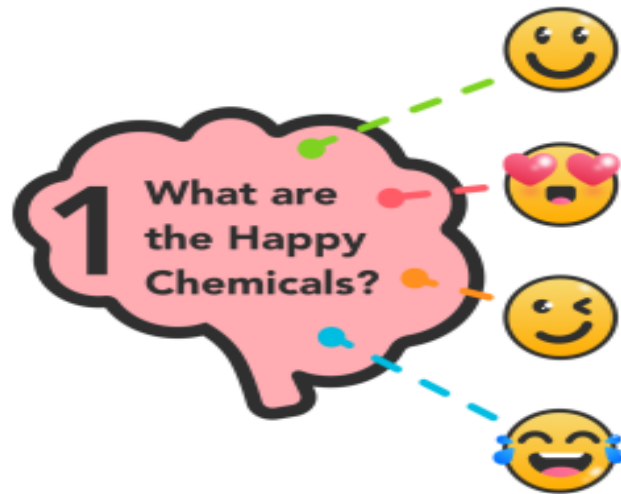
THE PAIN KILLER

- Move your body
- Laugh
- Be creative
- Dark chocolate



GET YOUR DAILY HAPPINESS CHEMICALS

The happy brain chemicals that make you feel good



1 What are the Happy Chemicals?

DOPAMINE

- Enables motivation, learning, and pleasure
- Gives you determination to accomplish goals, desires, and needs

OXYTOCIN

- Feeling of trust, motivates you to build and sustain relationships
- Known as "Cuddle or Love Hormone", plays a role in bonding

SEROTONIN

- Feeling significant or important among peers
- Calm form of accepting yourself with the people around you

ENDORPHINS

- Releases a brief euphoria to mask physical pain
- Response to pain and stress that alleviates anxiety and depression

2 How Deficiency Affects You

- procrastination
- low self-esteem
- lack of motivation
- low energy or fatigue
- inability to focus
- feeling anxious
- feeling hopeless
- mood swings

- feeling lonely
- stressed
- lack of motivation
- low energy or fatigue
- disconnect of relationships
- feeling anxious
- insomnia

- low self-esteem
- overly sensitive
- anxiety/panic attacks
- mood swings
- feeling hopeless
- social phobia
- obsession/compulsion
- insomnia

- anxiety
- depression
- mood swings
- aches and pains
- insomnia
- impulsive behavior

DOPAMINE

OXYTOCIN

SEROTONIN

ENDORPHINS

3 How to Increase Happiness Levels

- meditate
- daily to-do list
- long term goals
- food rich in L-Tyrosine
- exercise regularly
- create something: writing, music, or art

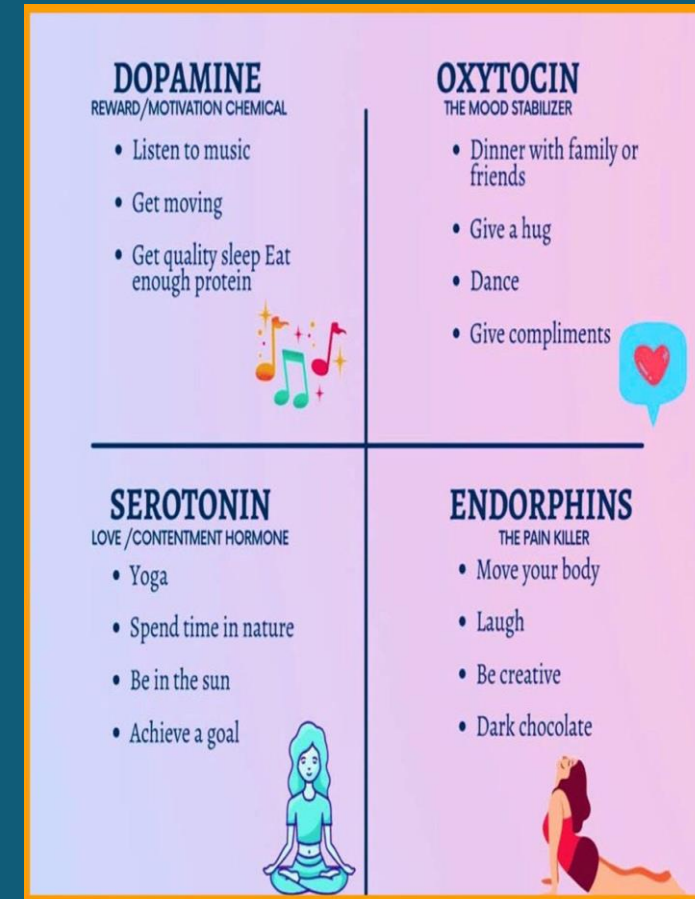
- physical touch
- socializing
- massage
- acupuncture
- listening to music
- exercise
- cold shower
- meditate

- exercise
- cold showers
- sunlight
- massage

- laughter/crying
- creating music/art
- eat dark chocolate
- eat spicy foods
- exercise/stretching
- massage
- meditate

Non-Pharmacological Stress Management

- Light Therapy
- Deep Abdominal Breathing
- Creative Art, listening to music & singing
- Massage
- Reading books to enhance frontal brain function
- Religious and Spiritual activities
- Volunteering for meaningful causes
- Time in Nature, physical exercise
- CBT/Psychotherapy



Depression

Intake of whole grains, olive oil, fruits and vegetables reduces symptoms of depression



30 mins of brisk walking for 10 days can start to show an anti-depressant response

EXERCISE
TO COMBAT
DEPRESSION

START SOMEWHERE

Something is better than nothing at all. Try anything that gets your heart pumping.



START SMALL



Start off with a few minutes of light walking or stretching and build from there.

DO IT WITH OTHERS

Exercising with others can keep you on track and boost social connections. Solo exercise works too!



DON'T WAIT



Don't wait until you feel like it. When you move first, the good feelings often follow.

KARMEI CHOI, PHD
OLIVIA PICKETT
MASSACHUSETTS GENERAL HOSPITAL

Avoid junk food !



BNL's Employee Assistance Program

- Provided through Magellan ---1-800-327-2182
- Provides 5 free visits per family member in a calendar year
Need to mention – “Brookhaven Science Associates”
- Confidential consultations with licensed behavioral health professionals
- Free Webinars on Emotional health ,Financial planning, Relationships, Caregiving
- Get Help Online
[Log on to Magellan Healthcare](#)

Up to five free visits per family member per calendar year provided through Magellan Healthcare

Avoidance of Risky Behavior

- Smoking
- Alcohol
- Drugs



Smoking



- Tobacco products kill **1 in 2** people who use them
- Smokers experience more illness and disability
- **489,000** smoking related deaths occur in the US each yr.
- Accounts for **1 out of 3 cancer deaths**

Smoking can damage every part of the body

Cancers

Head or Neck

Lung

Leukemia

Stomach

Kidney

Pancreas

Colon

Chronic Diseases

Stroke

Blindness

Gum infection

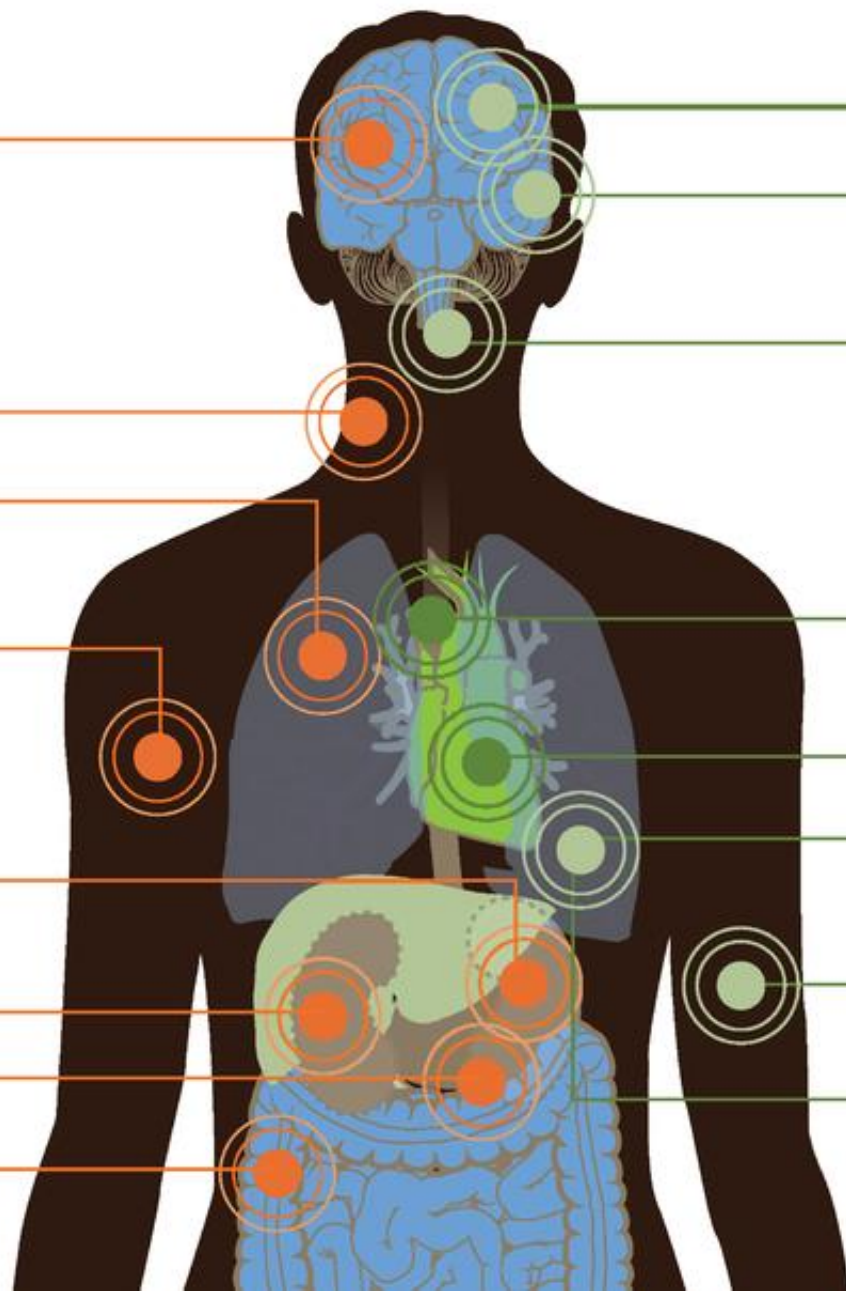
Aortic rupture

Heart disease

Pneumonia

Hardening of the arteries

Chronic lung disease & asthma



WHAT HAPPENS WHEN YOU QUIT SMOKING

Within minutes of smoking your last cigarette, your body starts to recover:

20
MINUTES

Your heart rate and blood pressure drop.

24
HOURS

Chance of heart attack decreases.

2 - 3
WEEKS MONTHS

Your circulation improves and your lung function increases.

1-9
MONTHS

Coughing, shortness of breath and sinus congestion decrease.

1
YEAR

Risk of heart disease drops to half that of a smoker.

5
YEARS

Risk of cancer of the mouth, throat, esophagus and bladder are cut in half.

10
YEARS

Lung cancer risk is half that of a smoker.

15
YEARS

Risk of heart disease is that of a nonsmoker.



TOBACCO DEPENDENCE TREATMENT MEDICATIONS

Type	Form	Common Brand Names
Prescription pills	Pill	Zyban® Wellbutrin® (bupropion SR)
	Pill	Chantix® (varenicline)
Prescription nicotine replacement therapy	Inhaler	Nicotrol®
	Nasal Spray	Nicotrol®
Over-the-counter nicotine replacement therapy	Gum	Nicorette®
	Patch	Nicoderm® Habitrol®
	(can be prescription)	Prostep® Nicotrol®
	Lozenge	COMMIT®

Smoking Cessation Resources

[Quit Assist Information Resource](#)

[NYS Smoking cessation Programs](#)

[NYS Smoker's Quitline](#) 1-866-NY-QUITS

[Smoking Cessation Program - Health Department](#)
suffolkcountyny.gov



Health Benefits of Social Connectedness

Prevents

- Heart disease.
- Stroke.
- Dementia.
- Depression and anxiety.

Helps

- Improve recovery from stress, anxiety, and depression.
- Promote healthy eating, physical activity, and weight.
- Improve sleep, well-being, and quality of life.
- Reduce your risk of violent and suicidal behaviors.
- Prevent death from chronic diseases.

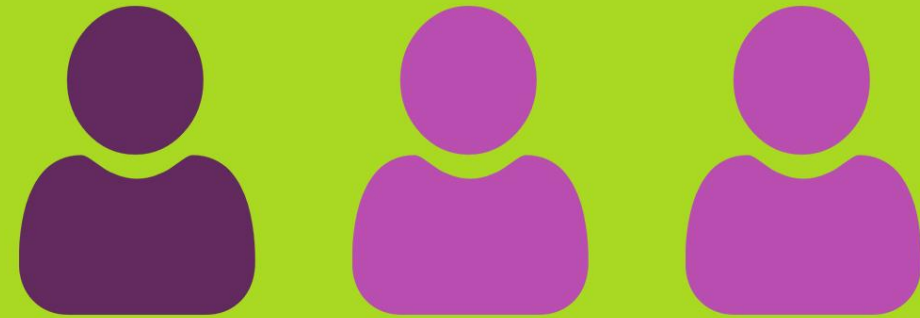


People with stronger social bonds have a 50% increased likelihood of survival than those who have fewer social connections

Increases your risk of:

- Dementia by **50%**
- Heart disease by **29%**
- **Stroke by 32%**

Social isolation and loneliness among older people are widespread:



In some countries, up to **1 in 3 older people are lonely.**

Social Connectedness

OXYTOCIN

- Meal with friends
- Complimenting
- Giving a hug



Endorphins

- Laughing
- Being Creative

Make connections



Connecting to your
community is one of the best
resources for reducing stress.

➔ www.cdc.gov/HowRightNow

Spend time with others in nature



- Spend more quality time with family and friends

Exercise Together



Increase Dopamine, Serotonin, Oxytocin and Endorphins



Provide social support, such as listening to a friend dealing with problems



Getting to know a neighbor

If you cannot connect in person, substitute a phone call for screen time







Increases dopamine, serotonin and endorphins

JOIN A GROUP

Join a club, or class related to an interest or hobby (books, art, sports)



<p>DOPAMINE REWARD/MOTIVATION CHEMICAL</p> <ul style="list-style-type: none">• Listen to music• Get moving• Get quality sleep Eat enough protein 	<p>OXYTOCIN THE MOOD STABILIZER</p> <ul style="list-style-type: none">• Dinner with family or friends• Give a hug• Dance• Give compliments 
<p>SEROTONIN LOVE /CONTENTMENT HORMONE</p> <ul style="list-style-type: none">• Yoga• Spend time in nature• Be in the sun• Achieve a goal 	<p>ENDORPHINS THE PAIN KILLER</p> <ul style="list-style-type: none">• Move your body• Laugh• Be creative• Dark chocolate 

Health is Wealth

Invest in yourself



RESOURCES

How right now- Mental Health

<https://www.cdc.gov/howrightnow/resources/index.html>

Dietary guidelines for Americans

[Home | Dietary Guidelines for Americans](#)

Learn how to eat healthy with MyPlate

[MyPlate | U.S. Department of Agriculture](#)

RESOURCES

Sleep

[Sleep and Sleep Disorders | CDC](#)

Physical Exercise

[How much physical activity do adults need? | Physical Activity | CDC](#)

Social Connectedness

[How Does Social Connectedness Affect Health? | CDC](#)