

THE SUCCESSFUL AGING & YOUR BRAIN PUZZLE PACKET

THE DANA FOUNDATION



Exercise your mind with these puzzles & you may help your brain

STAY SHARP!

Questions/comments? Email us at danainfo@dana.org

lana.orc

Successful Aging & Your Brain

Stay Physically Active

We all know people who stay active into old age, or who seem to blossom creatively late in life. It turns out that these "successful agers" seem to share some common characteristics. Below are some key words related to ways to stay active as we age. To learn more, see the "Successful Aging & Your Brain" booklet from the Dana Foundation at www.dana.org/successful aging.

Words may appear in all directions, including diagonally and backwards.

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D	Е	Р	U	Z	Z	L	Е	S	Т	R	Ε	S	S	С	L

Aerobic Engage Cards Exercise Chess Family Children Friends **Function** Community Dancing Games Diet Laughter Education Learning

ge Lifestyle
ise Network
V Novelty
Is Plasticity
on Practice
es Puzzles
ter Reading

Sharp

Skills Sleep Stress Think Volunteer

dana.org

Successful Aging & Your Brain

Stay Socially Engaged

From the day we are born our brain is primed for learning, ready to capture the experiences of our lives and encode them into its web of nerve connections. Below are some key words related to how learning and memory happen within the brain and the role social engagement plays in both. To learn more, see the "Successful Aging & Your Brain" booklet from the Dana Foundation at www.dana.org/successfulaging.

Words may appear in all directions, including diagonally and backwards.

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Ability	Connection
Action	Education
Amygdala	Engage
Attention	Executive
Axons	Experience
Challenge	Focus
Cognition	Hippocampus
Conceptual	Information

Judgment
Language
Learning
Lobe
Memory
Multitasking
Myelination
Neurogenesis

Vascular Health

Eating well and controlling vascular risk factors such as blood pressure, cholesterol, and stress may contribute to the maintenance of cognitive function throughout life. Below are some key words related to diet, exercise, and vascular health. To learn more, see the <u>"Successful Aging & Your Brain"</u> booklet from the Dana Foundation at <u>www.dana.org/successfulaging</u>.

Words may appear in all directions, including diagonally and backwards.

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Ν	U	Т	R	I	Т	I	0	N	N	W	V	W	F	C	Υ	X	Е	D	N		S	S	Α	M	Υ	D	0	В	X

^{*}note: no spaces, no hyphens

Cardiovascular

Aerobic activity	Cholesterol	Low-fat	Stroke
Antioxidants	Diabetes	Neurogenesis	Vegetables
Balance	Diet	Nutrition	Vitamin D
Blood glucose	Energy	Obesity	Walking
Blood pressure	Exercise	Risk factor	Water
Body mass index	Flexibility	Sleep	Whole-grain
Calories	Food pyramid	Sports	

Strength

Heart disease

See Your Doctor

Nearly one in five Americans is afflicted with a brain disorder – conditions that range from learning disabilities to depression to traumatic brain injury. Seeing your doctor can help keep your brain healthy and help prevent and treat various brain diseases and disorders. See how many key words related to brain diseases and disorders you can find. To learn more, see the "Successful Aging & Your Brain" booklet from the Dana Foundation at www.dana.org/successfulaging.

Words may appear in all directions, including diagonally and backwards.

N	U	J	D	C	S	Е	M	0	R	D	Ν	Υ	S	Ε	Т	Т	Ε	R	U	0	Т	Υ	Υ	R	F	Μ	S	В	Р
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C	Z	W	H	Υ	L	Ш	K	C	U	Q	Т	G	В	כ	Т	Α	L	0		I	S	F	U	Ι	S		О	Ν	D
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^{*}note: no spaces, no hyphens, no apostrophes

Addiction Mental illness Shingles Coma Alzheimer's Deafness Migraine Sleep disorders Muscular dystrophy Spina bifida Anxiety Depression Ataxia Dyslexia Pain Spinal cord injury Autism Panic disorder Stroke Dystonia Birth defects Eating disorders **Paralysis** Tourette syndrome

Blindness Epilepsy Parkinson's

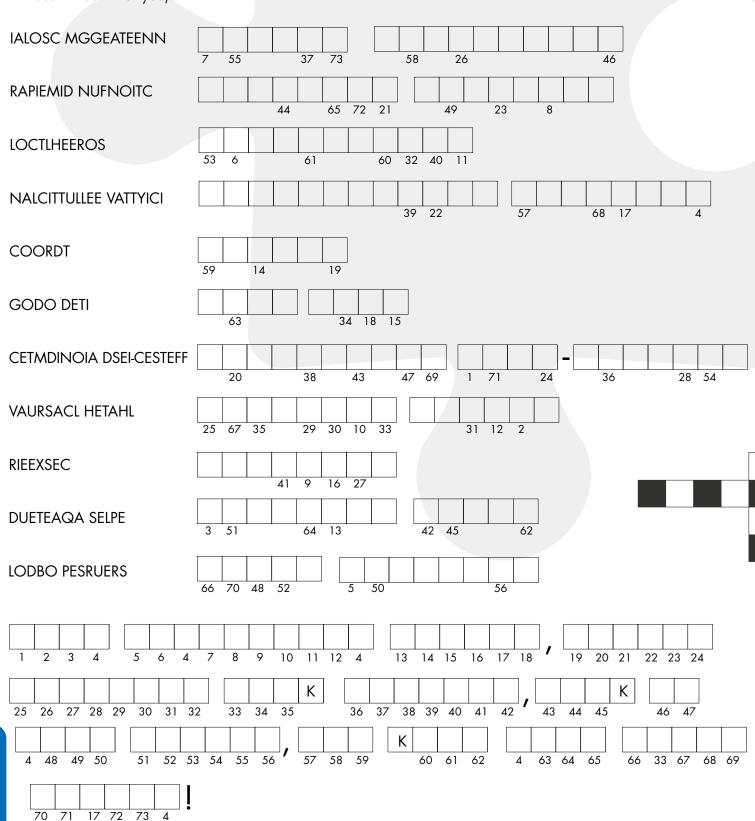
Cerebral palsy Lou Gehrig's Schizophrenia

Suc

Successful Aging & Your Brain

Four Factors Jumble

Unscramble the words below to learn about the four factors of successful aging (hint: for help, see the <u>"Successful Aging & Your Brain" bookmark at www.dana.org/successfulaging</u>). Once you figure out the answers, unscramble the highlighted letters to fill in the healthy brain mystery phrase (three letters have been filled in for you).



Get Moving! Jumble

Unscramble the words below to see what regular exercise can do for your body (hint: for help, see the "Successful Aging & Your Brain" bookmark at www.dana.org/successfulaging. Once you figure out the answers, unscramble the highlighted letters to answer the riddle (two letters have been filled in for you).

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BIOTYSE		
SOENIEGESNUR		
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What happened to the mollusk that went to the gym?



Keep Your Memory Sharp Jumble

What may seem like a faltering memory may in fact be a decline in the rate at which we learn and store new information. Visit www.dana.org for more information on memory, and practice these memory skills to enhance learning and make remembering easier:

The following jumbled words are skills you can practice to help keep your memory sharp (hint: we've underlined the first letter of each word for you). Once you figure out the answers, unscramble the highlighted letters to answer the riddle (eight letters have been filled in for you, and letters can be used multiple times).

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Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

We're Not in Kansas Anymore

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The Sci-Fi Brain

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Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

The Poetry of the Brain

	Α	В	С	D	Е	F	G	Н	I	J	K	L	M	Ν	0	P	Q	R	S	Т	U	٧	W	Χ	Υ	Ζ	
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Beam Me Up!

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Brain Quote Cryptograms

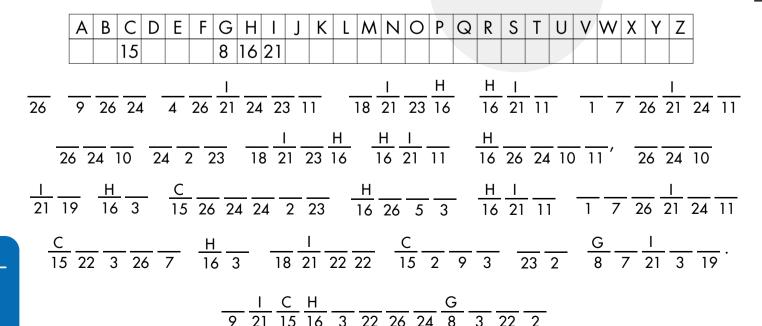
The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

Oh, the Places You'll Go!

Α	В	С	D	Е	F	G	Н	J	K	L	M	Ν	0	Р	Q	R	S	T	U	٧	W	Χ	Υ	Ζ
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$$\frac{D}{13}$$
 $\frac{S}{5}$ $\frac{S}{2}$ $\frac{S}{11}$ $\frac{S}{20}$ $\frac{S}{2}$ $\frac{S}{2}$ $\frac{S}{2}$

Renaissance Brain



Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

An Ancient View?

		Α	В	С	D	E 1	F G	Н	I	J	K	L	M	Ν	0	Р	Q	R	S	T	U	٧	W	Χ	Υ	Ζ		
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Successful Aging & Your Brain

The Senses: Vision and Hearing

Use the Dana Alliance's Brain Briefs on "The Senses" of vision and hearing available at www.dana.org/downloads/adults/ to find all the words and to reveal the hidden message formed by letters that are not part of the found words.

Words may appear in all directions, including diagonally and backwards.

X	M	U	S	1	M	0	Р	Т	1	С	W	С	Р	Α	M
E	Α	M	N	D	E	Α	R	F	Т	L	Е	С	R	M	E
Т	R	Н	Α	R	С	E	1	E	Α	N	R	Α	E	Р	M
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0	Т	Y	M	Р	Α	N	1	С	0	N	I	Α	В	1	R
С	I	Н	G	M	N	Р	Υ	R	Α	N	С	R	Υ	т	Α
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Y	Α	N	Α	С	С	E	В	L	N	E	E	С	Р	D	Ε
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S	L	0	С	0	L	L	1	С	U	L	U	s	Α	X	U
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*note: no apostrophes

Amplitude
Auditory
Cataract
Cochlea
Colliculus
Cornea
Cortex

Filaments
Frequency
Inferior
Mechanical
Membrane
Occipital
Optic

Ossicles
Perception
Presbyopia
Retina
Rhythm
Shape
Temporal

Thalamus Tympanic Volume Wernicke's

dana.or

Successful Aging & Your Brain

Words in a Word Puzzle

Neuroscience is the study of the brain and nervous system, including their structure, function, and disorders. How many common four- and five-letter English words (no proper names or abbreviations) can you find in the word NEUROSCIENCE? See how many you can find, and then check your words against ours in the answer key. **Good luck!** Visit www.dana.org for more information about neuroscience and the brain

NEUROSCIENCE

Four-letter words:			

How many did you find? _____ Hint: There are 83 possible words.

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NEUROSCIENCE

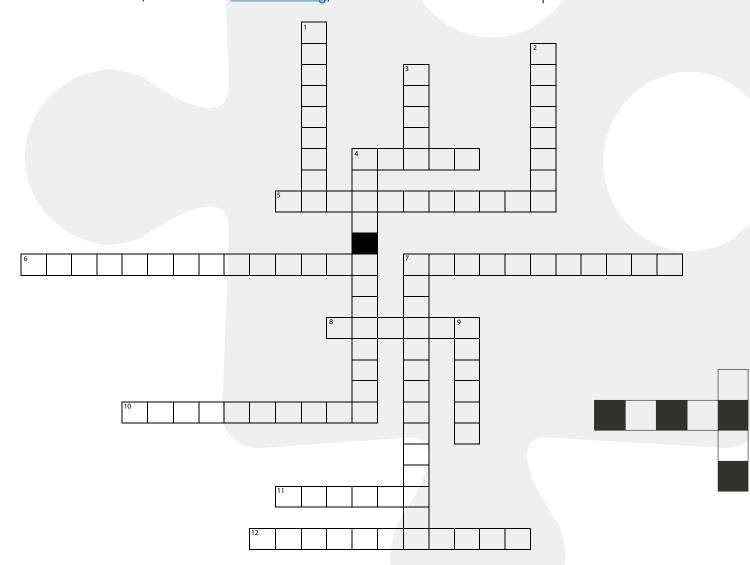
Five-letter words:			

How many did you find? _____ Hint: There are 106 possible words.

If you're ready for a bigger challenge, see how many six-letter words you can find!

Successful Aging & Your Brain Stay Sharp Crossword

Reference the Dana Foundation's "<u>Successful Aging & Your Brain</u>" booklet, available at <u>www.dana.org</u>, to solve this BRAIN-Y crossword puzzle!



ACROSS

- 4. During _____, certain types of memories become consolidated.
- 5. The type of memories that can be recalled consciously and described verbally, including facts, people, and places.
- 6. A type of memory that is used when learning motor skills and other actions.
- 7. Tiny blood vessels that provide oxygen to the brain, sense when active brain cells need more oxygen, and remove carbon dioxide.
- 8. Denotes the ability to use knowledge, experience, and understanding to make good decisions.
- 10. The brain's capacity to structurally change by learning.
- 11. The type of network involving relationships that may help to preserve mental sharpness and decrease the risk of developing depression and dementia.
- 12. The type of healthy fat found in olive, sunflower, and soybean oils.

- 1. The process of creating an image of what you want to remember that improves recall by giving your brain another way to access information.
- 2. Action that can improve mood, enlarges blood vessels so more blood and oxygen can flow to the brain, and boosts brain-derived neurotrophic factor (BDNF), that is associated with alleviating depression and anxiety.
- 3. Many studies have linked aging with a decrease in _____ matter, the bundles of axons that transmit nerve signals between brain regions.
- 4. Believing in our ability to succeed in a specific situation, giving us confidence.
- 7. A type of risk factor, such as high blood pressure, high cholesterol, smoking, obesity, and diabetes, that increases the risk of cognitive decline.
- 9. A series of interrelated processes involving, encoding, storing, and retrieving information.

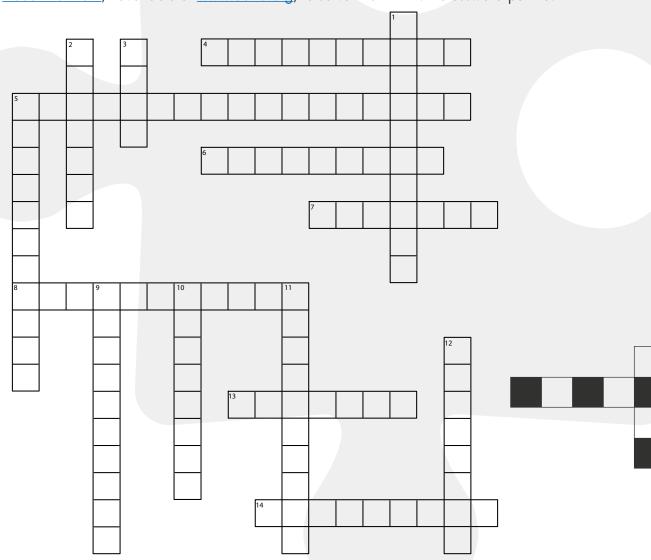
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Successful Aging & Your Brain

Brain-y Crossword

Reference the Dana Alliance's "Mindboggling" booklet series and "Q&A: Answering Your Questions

About the Brain," available at www.dana.org, to solve this BRAIN-Y crossword puzzle!



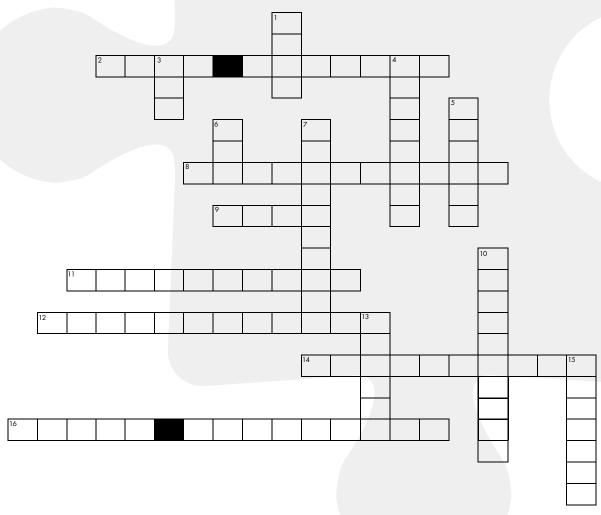
ACROSS

- 4. One of the most prevalent neurodegenerative disorders that greatly reduces a person's memory.
- 5. The general name for the chemicals that are released by one neuron and taken up by another.
- 6. The branches of a neuron that receive electrical signals from other neurons.
- 7. You have more than 100 ____ neurons. (spell out the number).
- 8. An area of the brain located deep inside the brain and involved in memory.
- 13. What does the "I" in MRI stand for?
- 14. The part of the brain that connects directly with the spinal cord and is responsible for some of the automatic functions of the body.

- 1. The tennis-ball-sized area at the back of the brain that regulates motor movements; it is responsible for balance and involved in motor learning.
- 2. The nerve cells in the brain.
- 3. The long, tail-like branch that extends from the neuron cell body and transmits electrical information to other target cells.
- 5. The exploration of ethical issues surrounding advances in neuroscience.
- 9. The brain's ability to change and rewire its synaptic connections.
- 10. The area of the brain involved with emotions, especially fear, anger, and happiness.
- 11. The pathway for nerve signals to travel to and from the brain (two words, no space).
- 12. The junctions where neurons form connections with one another.

Brain Injury and Neurodegenerative Diseases

Reference the Dana Alliance's Fact Sheets based on content from our "Q&A: Answering Your Questions about Brain Research" at www.dana.org to solve this BRAIN-Y crossword puzzle!



ACROSS

- 2. The type of protein that clumps together in Alzheimer's.
- 8. One of the first areas of the brain affected by Alzheimer's.
- 9. A type of cell that supports and regulates neurons studied by researchers.
- 11. Brain cells that support and regulate neurons and also help both limit and exacerbate brain damage.
- 12. When brain circuits reshape themselves to take over functions for damaged areas; also, new cell growth.
- 14. The disease where a loss of dopamine-producing neurons in the basal ganglia causes movement problems.
- 16. Protein that accumulates in Parkinson's disease.

- 1. ____ lost is brain lost.
- 3. Protein responsible for common neurodegenerative diseases and traumatic brain injury (TBI).
- 4. The most common type of stroke caused by a blood clot.
- 5. One of the types of cells that both limits and exacerbates brain damage.
- 6. A condition caused by repeated blows to the brain that occurs in professional athletes.
- 7. Compounds in the blood or spinal cord fluid, for example, that can reveal disease activity earlier than symptoms develop.
- 10. A condition that can be caused by TBI.
- 13. Interruption of the brain's blood supply.
- 15. This may happen in response to TBI.

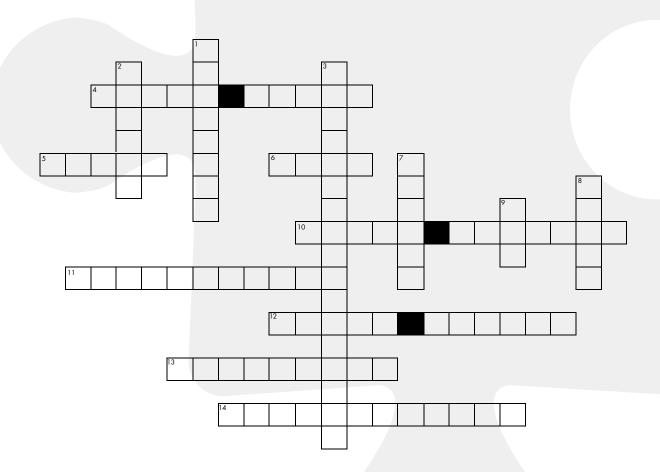
dana.org

Successful Aging & Your Brain

How Does the Brain Work and Develop?

Reference the Dana Alliance's Fact Sheets based on "Q&A: Answering Your Questions

About the Brain," available at www.dana.org, to solve this crossword puzzle!



ACROSS

- 4. The percent of the body's daily energy intake that is used by the developing brain until puberty.
- 5. The week during gestation when primitive forms of the cortex, cerebellum, and brainstem are apparent.
- 6. Nerve fiber that conducts electrical impulses.
- 10. The part of the brain that controls movement. (two words, no space).
- 11. The part of the brain that is a keystone of memory.
- 12. Bundles of axons that carry signals from region to region, like long-distance cables. (two words, no space).
- 13. The part of the brain that regulates balance, coordination, and life-sustaining processes such as breathing and heartbeat.
- 14. Throughout the brain, neurons communicate with one another through _____ circuits.

- 1. One of the primitive regions of the brain important in emotion that is not fully functional until age three.
- 2. The outermost layer of the brain that is divided up into specialized lobes to regulate sensory experience, language and memory, and our sense of space.
- 3. Chemicals that cross a synapse to stimulate neurons nearby.
- 7. The sheath that covers axons and speeds electrical messages along.
- 8. The week during gestation when genes switch on to turn some of the embryo's stem cells into neurons and glia.
- 9. Percent a baby's brain volume grows per day after birth before slowing down by the third month.



Stay Physically Active

We all know people who stay active into old age, or who seem to blossom creatively late in life. It turns out that these "successful agers" seem to share some common characteristics. Below are some key words related to ways to stay active as we age. To learn more, see the "Successful Aging & Your Brain" booklet from the Dana Foundation at www.dana.org/successful aging.

Words may appear in all directions, including diagonally and backwards.

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D	(E)	P	U	Z	Z	L	Е	(S)	Т	R	Е	S	S	С	L

Aerobic Engage Cards Exercise Chess Family Children Friends Community **Function** Dancing Games Diet Laughter Education Learning Lifestyle Network Novelty Plasticity Practice Puzzles Reading Sharp

Skills Sleep Stress Think Volunteer

Stay Socially Engaged

From the day we are born our brain is primed for learning, ready to capture the experiences of our lives and encode them into its web of nerve connections. Below are some key words related to how learning and memory happen within the brain and the role social engagement plays in both. To learn more, see the "Successful Aging & Your Brain" booklet from the Dana Foundation at www.dana.org/successfulaging.

Words may appear in all directions, including diagonally and backwards.

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С	G	$\langle z \rangle$	$\langle 0 \rangle$	E	$\langle A \rangle$		M	(L)	G	(L)	N	(N)	(E)	L	Е	Е
E	D	(5)	$\langle \hat{0} \rangle$	P	N	A	(K)	M			$\langle 1 \rangle$	(G)	(\$)	L	ı	N
Р	Α	L	S	(I)	$\langle c \rangle$	T	E	S	(T)	N	A	(T)	F	E	R	Е
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P	L	Α	S	Т	I	С	I	Т	Y	0	Р	I	Z	A	(M)	Z
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С	Œ	Α		С	0	S	W	I	S	D	0	M)	E	В	0	

Ability	Connection
Action	Education
Amygdala	Engage
Attention	Executive
Axons	Experience
Challenge	Focus
Cognition	Hippocampus
Conceptual	Information

Judgment	
Language	
Learning	
Lobe	
Memory	
Multitasking	
Myelination	
Neurogenesis	,

Vascular Health

Eating well and controlling vascular risk factors such as blood pressure, cholesterol, and stress may contribute to the maintenance of cognitive function throughout life. Below are some key words related to diet, exercise, and vascular health. To learn more, see the <u>"Successful Aging & Your Brain"</u> booklet from the Dana Foundation at <u>www.dana.org/successfulaging</u>.

Words may appear in all directions, including diagonally and backwards.

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T	Α	S	٧	X	Χ	D		Ε	Т	\bigcirc	Т	R	0	K	E	R	L	Ζ	0	0	F	C	S	I	C	W	G	$\langle c \rangle$	B
E	C	Т	$\langle Y \rangle$	J	ı	(D	Ν	Ī	Μ	Α	Τ		V	Μ	W	J	Α	М	0	0	\bigcirc	R	Y	G	R	Ę	N,	Ē	M
В	Т	R	Т	B	L	0	O	D	Р	R	Ε	S	S	U	R	E	L	Т	D	D	Н	0	Υ	D	y	A	Z	W	H
Α	0	E		Α	G	D	(S	Τ	Ν	Α	D	I	Χ	0	I	Т	N	A	Р	G	0	T	M	Z/	Ĺ	10	Z	I	0
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Y	U	T	В	W	Α	L	K		Ν	G	٧	M	D	Е	Е	٧	P	Р	Α	C	S	F	W	D	0	S	E	Н	G
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^{*}note: no spaces, no hyphens

Aerobic activity	Cholesterol	Low-fat	Stroke
Antioxidants	Diabetes	Neurogenesis	Vegetables
Balance	Diet	Nutrition	Vitamin D
Blood glucose	Energy	Obesity	Walking
Blood pressure	Exercise	Risk factor	Water
Body mass index	Flexibility	Sleep	Whole-grain
Calories	Food pyramid	Sports	
Cardiovascular	Heart disease	Strength	

See Your Doctor

Nearly one in five Americans is afflicted with a brain disorder – conditions that range from learning disabilities to depression to traumatic brain injury. Seeing your doctor can help keep your brain healthy and help prevent and treat various brain diseases and disorders. See how many key words related to brain diseases and disorders you can find. To learn more, see the <u>"Successful Aging & Your Brain"</u> booklet from the Dana Foundation at <u>www.dana.org/successfulaging</u>.

Words may appear in all directions, including diagonally and backwards.

N	U	J	D	C	S	E	Μ	0	R	D	N	Υ	S	Æ	Т	Т	Ε	R	U	0		Y)	Y	R	F	Μ	S	B	P
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^{*}note: no spaces, no hyphens, no apostrophes

Cerebral palsy

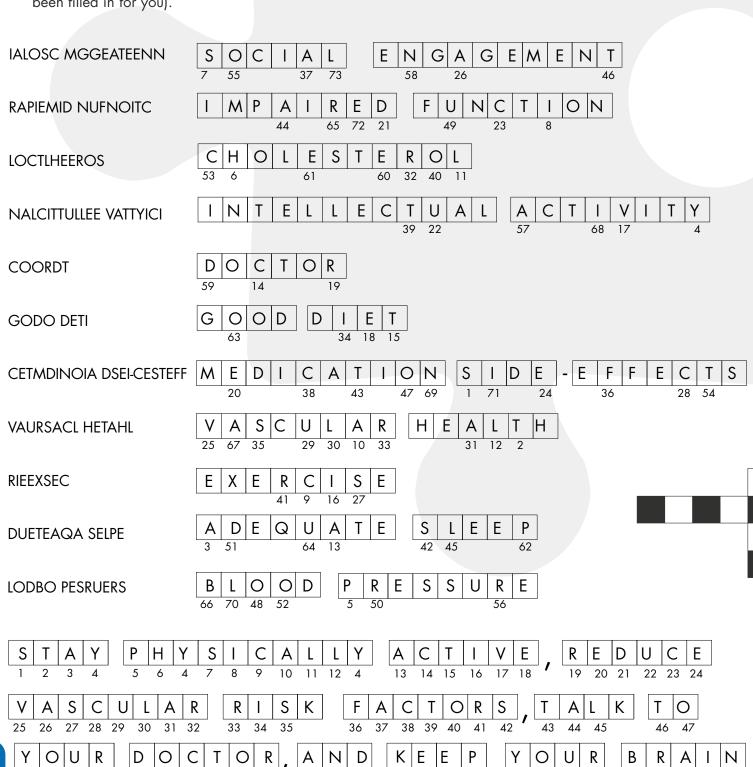
Addiction	Coma	Mental illness	Shingles
Alzheimer's	Deafness	Migraine	Sleep disorders
Anxiety	Depression	Muscular dystrophy	Spina bifida
Ataxia	Dyslexia	Pain	Spinal cord injury
Autism	Dystonia	Panic disorder	Stroke
Birth defects	Eating disorders	Paralysis	Tourette syndrome
Blindness	Epilepsy	Parkinson's	

Schizophrenia

Lou Gehrig's

Four Factors Jumble

Unscramble the words below to learn about the four factors of successful aging (hint: for help, see the "Successful Aging & Your Brain" bookmark at www.dana.org/successfulaging). Once you figure out the answers, unscramble the highlighted letters to fill in the healthy brain mystery phrase (three letters have been filled in for you).



60 61

57 58

52 53 54

Ε

Successful Aging & Your Brain Got Moving Lumble

Get Moving! Jumble

Unscramble the words below to see what regular exercise can do for your body (hint: for help, see the <u>"Successful Aging & Your Brain" bookmark</u> at <u>www.dana.org/successfulaging</u>. Once you figure out the answers, unscramble the highlighted letters to answer the riddle (two letters have been filled in for you).

Regular exercise can...

Prevent	BIOTYSE	O B E S I T Y
Promote	SOENIEGESNUR	N E U R O G E N E S I S
Boost	DOMO	MOOD
Slow	NEBO SOLS	B O N E L O S S
Decrease risk of some	SIAEDSES	D I S E A S E S
Increase	REGNYE	E N E R G Y
Combat high blood	PERURESS	P R E S S U R E
Improve overall	HHTELA	HEALTH

What happened to the mollusk that went to the gym?



Successful Aging & Your Brain Keep Your Memory Sharp Jumble

What may seem like a faltering memory may in fact be a decline in the rate at which we learn and store new information. Visit www.dana.org for more information on memory, and practice these memory skills to enhance learning and make remembering easier:

The following jumbled words are skills you can practice to help keep your memory sharp (hint: we've underlined the first letter of each word for you). Once you figure out the answers, unscramble the highlighted letters to answer the riddle (eight letters have been filled in for you, and letters can be used multiple times).

ASSOCIATE

XEARL

RELAX

RENNECATCTO

CONCENTRATE

COSEU

FOCUS

LSWO NOWD

SLOW DOWN

NAQZIGRE

WITRE

WRITE

PETREA

REPEAT

"Why do reptiles have such good memories?"

BECAUSE THEY HAVE

TURTLE RECALL



Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

We're Not in Kansas Anymore

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		U G H T S	W E R E B U S	
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1, 4 1 1, 1, 12 0	<u>T H E S</u>	C A R E C R	<u> </u>	12 0

The Sci-Fi Brain

A B C D E F		Q R S T U V W X Y Z 1 20 19
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O F M	A T T E R T H A 3 17 17 16 21 17 9 3	T W E K N O W
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Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

The Poetry of the Brain

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Beam Me Up!

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Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on neuroscience and the brain.

Oh, the Places You'll Go!

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Renaissance Brain

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Brain Quote Cryptograms

The following cryptograms are all quotes about the brain, with the names of their authors. Some of the letters have been filled in to give you a head start. See how many you can solve! Visit www.dana.org for more information on the brain and neuroscience.

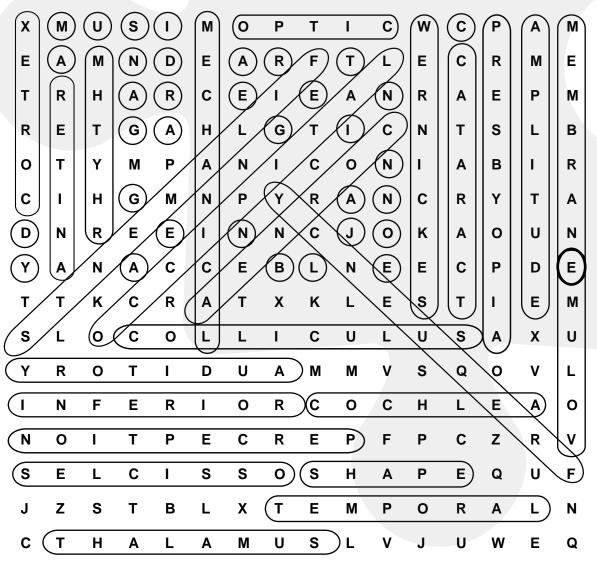
An Ancient View?

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The Senses: Vision and Hearing

Use the Dana Alliance's Brain Briefs on "The Senses" of vision and hearing available at www.dana.org/downloads/adults/ to find all the words and to reveal the hidden message formed by letters that are not part of the found words.

Words may appear in all directions, including diagonally and backwards.



note: no apostrophes

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Amplitude	Filaments	Ossicles	Thalamus
Auditory	Frequency	Perception	Tympanic
Cataract	Inferior	Presbyopia	Volume
Cochlea	Mechanical	Retina	Wernicke's
Colliculus	Membrane	Rhythm	
Cornea	Occipital	Shape	
Cortex	Optic	Temporal	

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Successful Aging & Your Brain

Words in a Word Puzzle

Neuroscience is the study of the brain and nervous system, including their structure, function, and disorders. How many common four- and five-letter English words (no proper names or abbreviations) can you find in the word NEUROSCIENCE? See how many you can find, and then check your words against ours in the answer key. **Good luck!** Visit www.dana.org for more information about neuroscience and the brain.

NEUROSCIENCE

Four-letter words:

cees	crus	inro	nous	rocs	sire
cere	cues	ions	nuns	roes	sone
cero	cure	ires	once	rose	sori
cine	curn	iron	ones	roue	sorn
cion	curs	nene	onus	ruin	sour
cire	ecru	neon	orcs	rune	suer
coin	ecus	nice	ores	runs	sunn
coir	eons	nine	ours	ruse	sure
cone	erne	noes	recs	seen	unci
coni	eros	noir	rees	seer	unco
conn	euro	none	rein	sene	uric
core	ices	nori	reis	sere	urns
corn	icon	nose	rice	sice	user
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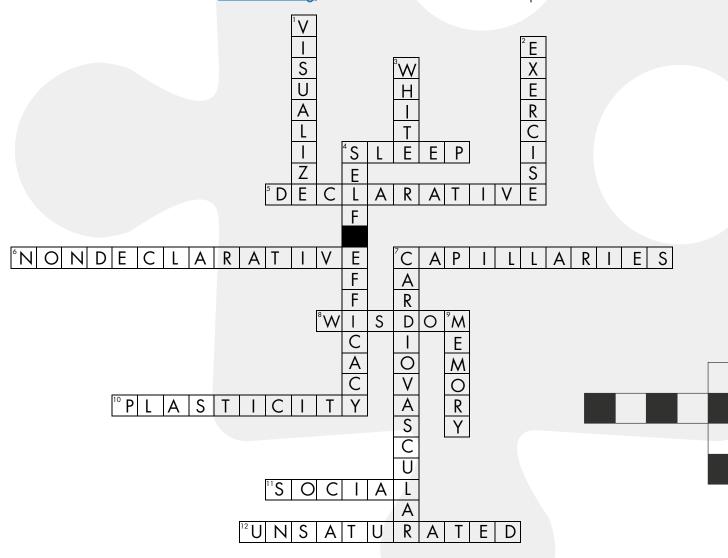
Five-letter words:

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cerci	corns	ecrus	irons	ounce	ruins
ceres	cornu	eerie	neons	ourie	runes
ceric	corse	ennui	nicer	recce	runic
ceros	cosec	ensue	niece	recon	scene
cines	cosie	enure	nines	reins	scion
cions	cries	eosin	noirs	renin	scone
cires	croci	ernes	noise	resee	score
cisco	crocs	erose	nonce	resin	scorn
coins	crone	euros	nones	reuse	scour
coirs	cruse	icons	noris	rices	scree
cones	cures	incur	nouns	rinse	secco
conic	curie	incus	nurse	risen	seine
conin	curio	inner	occur	rosin	senor
conns	curns	inure	orcin	rouen	serin
conus	curse	inurn	ornis	roues	since

siree siren

Successful Aging & Your Brain Stay Sharp Crossword

Reference the Dana Foundation's "<u>Successful Aging & Your Brain</u>" booklet available at www.dana.org, to solve this BRAIN-Y crossword puzzle!



ACROSS

- 4. During _____, certain types of memories become consolidated.
- 5. The type of memories that can be recalled consciously and described verbally, including facts, people, and places.
- A type of memory that is used when learning motor skills and other actions.
- 7. Tiny blood vessels that provide oxygen to the brain, sense when active brain cells need more oxygen, and remove carbon dioxide.
- 8. Denotes the ability to use knowledge, experience, and understanding to make good decisions.
- 10. The brain's capacity to structurally change by learning.
- 11. The type of network involving relationships that may help to preserve mental sharpness and decrease the risk of developing depression and dementia.
- 12. The type of healthy fat found in olive, sunflower, and soybean oils.

- 1. The process of creating an image of what you want to remember that improves recall by giving your brain another way to access information.
- 2. Action that can improve mood, enlarges blood vessels so more blood and oxygen can flow to the brain, and boosts brain-derived neurotrophic factor (BDNF), that is associated with alleviating depression and anxiety.
- 3. Many studies have linked aging with a decrease in _____ matter, the bundles of axons that transmit nerve signals between brain regions.
- 4. Believing in our ability to succeed in a specific situation, giving us confidence.
- 7. A type of risk factor, such as high blood pressure, high cholesterol, smoking, obesity, and diabetes, that increases the risk of cognitive decline.
- 9. A series of interrelated processes involving, encoding, storing, and retrieving information.

dana.org

Successful Aging & Your Brain Brain-y Crossword

Reference the Dana Alliance's "Mindboggling" booklet series and "Q&A: Answering Your Questions

About the Brain," available at www.dana.org, to solve this BRAIN-Y crossword puzzle!

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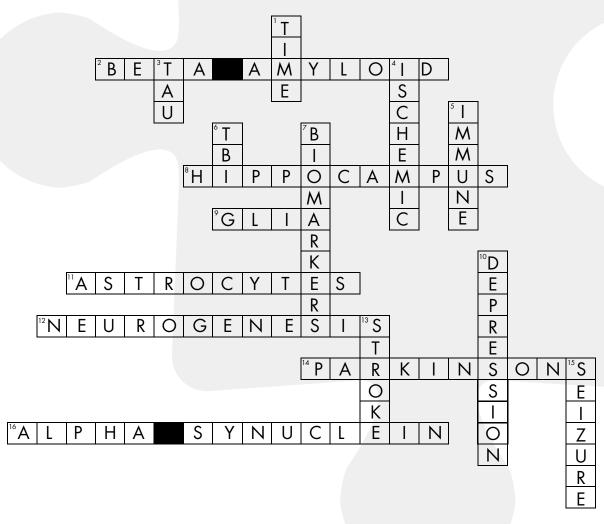
ACROSS

- 4. One of the most prevalent neurodegenerative disorders that greatly reduces a person's memory.
- 5. The general name for the chemicals that are released by one neuron and taken up by another.
- 6. The branches of a neuron that receive electrical signals from other neurons.
- 7. You have more than 100 ____ neurons. (spell out the number).
- 8. An area of the brain located deep inside the brain and involved in memory.
- 13. What does the "I" in MRI stand for?
- 14. The part of the brain that connects directly with the spinal cord and is responsible for some of the automatic functions of the body.

- 1. The tennis-ball-sized area at the back of the brain that regulates motor movements; it is responsible for balance and involved in motor learning.
- 2. The nerve cells in the brain.
- 3. The long, tail-like branch that extends from the neuron cell body and transmits electrical information to other target cells.
- 5. The exploration of ethical issues surrounding advances in neuroscience.
- 9. The brain's ability to change and rewire its synaptic connections.
- 10. The area of the brain involved with emotions, especially fear, anger, and happiness.
- 11. The pathway for nerve signals to travel to and from the brain (two words, no space).
- 12. The junctions where neurons form connections with one another.

Brain Injury and Neurodegenerative Diseases

Reference the Dana Alliance's Fact Sheets based on content from our "Q&A: Answering Your Questions about Brain Research" at www.dana.org to solve this BRAIN-Y crossword puzzle!



ACROSS

- 2. The type of protein that clumps together in Alzheimer's.
- 8. One of the first areas of the brain affected by Alzheimer's.
- 9. A type of cell that supports and regulates neurons studied by researchers.
- 11. Brain cells that support and regulate neurons and also help both limit and exacerbate brain damage.
- 12. When brain circuits reshape themselves to take over functions for damaged areas; also, new cell growth.
- 14. The disease where a loss of dopamine-producing neurons in the basal ganglia causes movement problems.
- 16. Protein that accumulates in Parkinson's disease.

- _____ lost is brain lost.
- 3. Protein responsible for common neurodegenerative diseases and traumatic brain injury (TBI).
- 4. The most common type of stroke caused by a blood clot.
- 5. One of the types of cells that both limits and exacerbates brain damage.
- 6. A condition caused by repeated blows to the brain that occurs in professional athletes.
- 7. Compounds in the blood or spinal cord fluid, for example, that can reveal disease activity earlier than symptoms develop.
- 10. A condition that can be caused by TBI.
- 13. Interruption of the brain's blood supply.
- 15. This may happen in response to TBI.

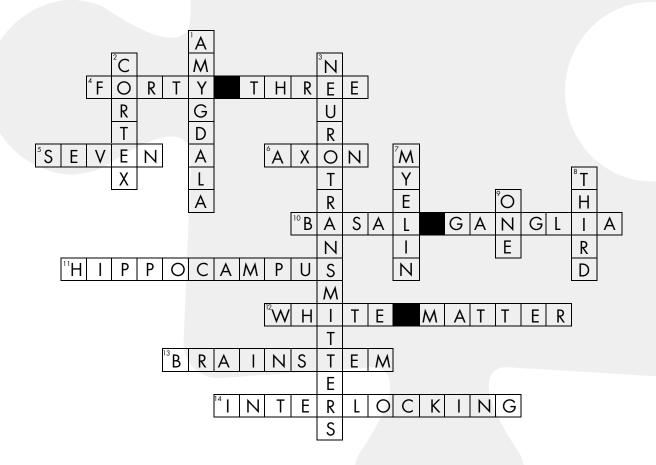
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Successful Aging & Your Brain

How Does the Brain Work and Develop?

Reference the Dana Alliance's Fact Sheets based on "Q&A: Answering Your Questions

About the Brain," available at www.dana.org, to solve this crossword puzzle!



ACROSS

- 4. The percent of the body's daily energy intake that is used by the developing brain until puberty.
- 5. The week during gestation when primitive forms of the cortex, cerebellum, and brainstem are apparent.
- 6. Nerve fiber that conducts electrical impulses.
- 10. The part of the brain that controls movement. (two words, no space).
- 11. The part of the brain that is a keystone of memory.
- 12. Bundles of axons that carry signals from region to region, like long-distance cables. (two words, no space).
- 13. The part of the brain that regulates balance, coordination, and life-sustaining processes such as breathing and heartbeat.
- 14. Throughout the brain, neurons communicate with one another through _____ circuits.

- 1. One of the primitive regions of the brain important in emotion that is not fully functional until age three.
- 2. The outermost layer of the brain that is divided up into specialized lobes to regulate sensory experience, language and memory, and our sense of space.
- 3. Chemicals that cross a synapse to stimulate neurons nearby.
- 7. The sheath that covers axons and speeds electrical messages along.
- 8. The week during gestation when genes switch on to turn some of the embryo's stem cells into neurons and glia.
- 9. Percent a baby's brain volume grows per day after birth before slowing down by the third month.