Think back to a really **vivid** memory.

Got it?

Okay, now try to remember what you had for lunch three weeks ago.

That second memory \_\_\_\_\_\_ isn't as strong,

but why not?

Why do we remember some things, and not others?

And why do memories \_\_\_\_\_\_\_ fade?

Let's look at how memories form in the first place.

When you experience something, like \_\_\_\_\_\_ a phone number,

the experience is **convert**ed into a \_\_\_\_\_\_ of electrical energy

that **zip**s along a network of neurons.

Information first lands in **short term** memory,

where it's \_\_\_\_\_\_\_ from anywhere from a few seconds

to a couple of minutes.

It's then **transfer**red to \_\_\_\_\_\_\_\_ memory through areas such as the hippocampus,

and finally to several storage regions across the brain.

Neurons throughout the brain communicate at **dedicate**d sites

called synapses

using specialized neuro **transmit**ters.

If two neurons \_\_\_\_\_\_\_\_ repeatedly, a **remarkable** thing happens:

the efficiency of communication between them increases.

This process, called **long term** potentiation,

is \_\_\_\_\_\_\_ to be a mechanism by which memories are stored long-term,

but how do some memories get lost?

Age is one **factor**.

As we get older, synapses begin to **falter** and \_\_\_\_\_\_,

affecting how easily we can **retrieve** memories.

Scientists have several theories about what's behind this **deterioration**,

from actual brain **shrink**age,

the hippocampus loses 5% of its neurons every decade

for a total loss of 20% by the time you're 80 years old

to the \_\_\_\_\_\_ in the production of neurotransmitters,

like acetylcholine, which is **vital** to learning and memory.

These changes seem to affect how people ­\_\_\_\_\_\_\_stored information.

Age also affects our memory-making abilities.

Memories are **encode**d most strongly when we're paying \_\_\_\_\_,

when we're deeply **engage**d, and when information is meaningful to us.

Mental and physical health problems, which **tend** to increase as we age,

**interfere** with our \_\_\_\_\_\_ to pay attention,

and **thus** act as memory **thieves**.

Another \_\_\_\_\_\_\_\_ cause of memory problems is **chronic** stress.

When we're **constant**ly **overload**ed with work and personal\_\_\_\_\_\_\_\_,

our bodies are on **hyperalert**.

This \_\_\_\_\_\_\_\_ has **evolved** from the physiological mechanism

designed to make sure we can survive in a crisis.

Stress chemicals help \_\_\_\_\_\_ energy and increase **alertness**.

However, with chronic stress our bodies become flooded with these chemicals,

resulting in a loss of brain cells and an inability to form new ones,

which \_\_\_\_\_\_\_ our ability to **retain** new information.

Depression is another **culprit**.

People who are depressed are 40% more likely to develop memory problems.

Low levels of serotonin,

a neurotransmitter connected to **arousal**,

may make depressed **individual**s less \_\_\_\_\_\_\_\_ to new information.

**Dwelling** on sad events in the past, another symptom of depression,

makes it difficult to pay attention to the present,

affecting the ability to store short-term memories.

**Isolation**, which is \_\_\_\_\_ to depression, is another memory thief.

A study by the Harvard School of Public Health

found that older people with high levels of social **integration**

had a slower rate of memory **decline** over a six-year period.

The exact reason \_\_\_\_\_\_ unclear,

but experts **suspect** that

social **interaction** gives our brain a \_\_\_\_\_\_ **workout**.

Just like muscle strength,

we have to use our brain or \_\_\_\_\_ losing it.

But don't **despair**.

There are several steps you can take

to aid your brain in **preserving** your memories.

Make sure you keep physically active.

Increased blood **flow** to the brain is helpful.

And eat well.

Your brain needs all the right **nutrient**s to keep functioning correctly.

And finally, give your brain a \_\_\_\_\_\_.

**Exposing** your brain to \_\_\_\_\_\_\_, like learning a new language,

is one of the best **defenses** for keeping your memories **intact**.