In mental terms, the more other facts a fact is associated with in the mind, the better possession of it our memory retains. Each of its associates becomes a hook to which it hangs, a means to fish it up by when sunk beneath the surface. Together, they form a network of attachments by which it is woven into the entire tissue of our thought. The "secret of a good memory" is thus the secret of forming diverse and multiple associations with every fact we care to retain. But this forming of associations with a fact, what is it but thinking about the fact as much as possible?

William James, *Principles of Psychology*, 1890, Volume I, Chapter XVI, p. 662.

Have you ever had the experience of getting to the end of a reading assignment and realizing that you don’t remember much of what you just read? The pointers in this handout can help you to create the “network of attachments” which William James refers to in the quotation above, the weaving of new learning into the associations that form the warp and weft of our memory.

**Experiment with strategies.** There are a number of strategies you can incorporate into your study routine to help improve your ability to remember what you read and learn.

1. **Practice restating what you read.** Effective encoding is essential for easily retrieving information from memory and requires actively interacting with the material and “making it your own.” Try writing out or reciting the material in your own words. You will be required to do this on exams so learning how to express important concepts in your own words from the start will be helpful to you. Also, expressing the main points in your own words will make it much easier for you to remember them later on. Be sure to paraphrase *in your own words* rather than just repeat the words of the author or source – this both avoids plagiarism and improves your comprehension and memory.

2. **Make what you read meaningful.** Material which is meaningful to you will be better remembered than material which you do not understand. Put the new ideas and concepts into your *own words*. Try to fit new ideas into the total framework for a subject and tie in new facts with those you already know. Try to organize your material by grouping facts and ideas meaningfully.

3. **Review immediately -- and actively.** Most forgetting takes place immediately after initial learning so it is important to actively register the new information. For example, you can repeat the information you just heard, make a mental image, or use other mnemonic devices you know. Note that reinforcing memory involves more than passively looking over lecture notes or underlining or highlighting in your textbooks. Effective reviewing requires actively discussing, actively reciting, or actively writing in your own words what you have just read or heard.

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1 Items # 1, 2 and #3 are taken or adapted from “Managing Your Time...” a handout previously developed by members of the Bureau of Study Counsel staff. Items # 4 and #5 are taken (with permission from the author) from “Twenty Tips for Senior Thesis Writers (and other writers, too),” by Sheila M. Reindl, Ed. D., Copyright © by Sheila M. Reindl 1989, 2004, 2011; that handout is available at the Bureau of Study Counsel, Harvard University.
4. **Overlearn material.** The higher level to which a skill is learned, the more slowly it is forgotten. Try reciting the material you want to remember beyond the time required for initial accurate recall – revisit it several minutes/hours later, until you feel you can recall it any time you like.

5. **Develop a memory system.** Try using key words and symbols to remind you of important details. When reading a textbook, try to find a key word or phrase which symbolizes for you the main point of a paragraph or section and write it in the margin.

6. **Use mnemonic devices.** Organize the information you want to remember by categories, rhymes, or location. For instance, put a disjointed list of words into a sentence or story as a means of organizing the information. Note that you should be careful about using mnemonics or other memory tricks since these aids have two major faults: 1) They might lead you to memorize superficial information, rather than master a deeper understanding the intrinsic meaning of the material being studied; and 2) A slight error in remembering the mnemonic device can throw you off.

7. **Use multiple sensory modalities.** Try using a combination of visual images, auditory tools such as verbal repetition, and tactile strategies such as writing to reinforce information you want to remember. For instance, if you are a visual learner, have fun with an image by adding color and imagining the object from different angles. You might find it easier to remember this picture that you have created rather than a wordy, description of the image.

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**Attend to fundamentals.** Specific strategies will take you only so far. You also need to attend to the basics of your brain’s health and our mind’s receptivity. Your ability to remember – to store, retain and subsequently retrieve information – depends on having good overall health; a vital, healthy brain; and an open, willing mind.

1. **Sleep is one of the best memory aids.** Your brain needs adequate sleep in order to consolidate the information learned previously. In addition, sleep prevents interference with previously learned information.

2. **Avoid marathon studying.** Your retention will be much better if you distribute your studying. Try studying frequently in shorter periods rather than aiming to learn everything all at once. This also means trying to avoid cramming! It is usually better to divide your studying of a subject into a number of shorter sessions of one or two hours, rather than studying in one long session.

3. **Exercise.** Exercise helps improve blood flow to the brain, which allows essential nutrients and a constant oxygen supply to improve the brain’s functioning.

4. **Attend to your learning attitude.** Your attitude toward learning can have a significant impact on both initial learning and subsequent remembering. Intense feelings about the content of what you are reading -- whether positive or negative (e.g., inspiration or outrage) -- might cause you to overlook some concepts and distort or exaggerate the importance of others. A lack of feeling about what you are reading can lead to boredom and disconnection. Be alert to your reactions and responses to what you read, and try to reengage with the text in a curious and open-minded way (e.g., “I wonder why I am reacting to strongly to what I am reading” or “I wonder why I’m finding it so hard to connect with what I am reading”). By simply paying attention to your attitude and being genuinely curious about your reactions, you can shift your response from one of dismissal and disengagement to one of interest and engagement.