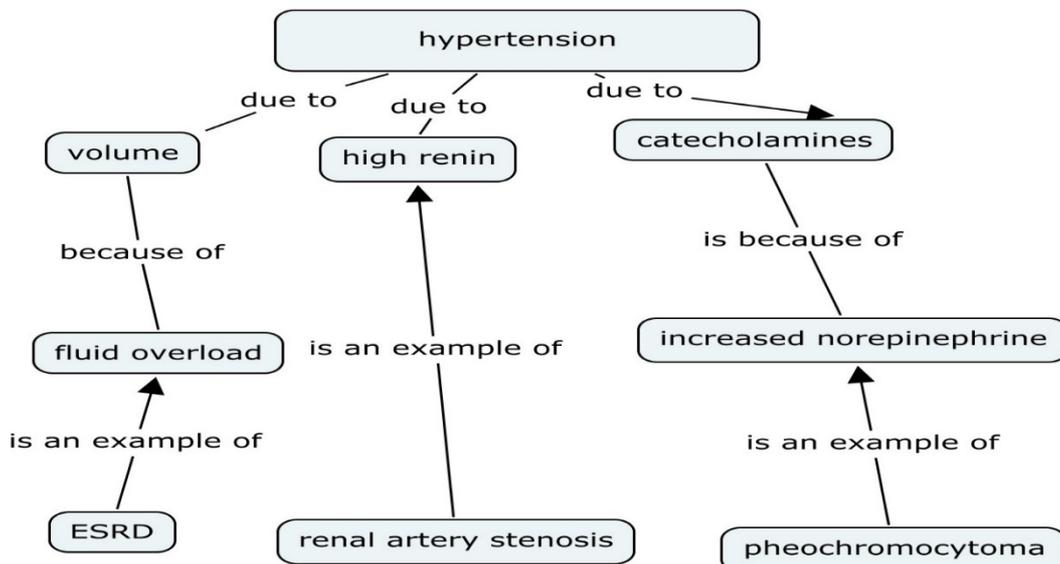


## Concept Maps

Concept maps can be very useful for a variety of purposes: consolidating understanding of concepts, planning ideas for an essay, committing concepts to memory for exams, and so on.

The key difference between concept maps and mind maps is that concept maps identify *relationships* between things, whereas mind maps only capture *associations* between things. You would use a mind map, for example, to remember to take things on a holiday (food, clothing, kitchen items, car-related things— each of these concepts would divide into additional separate items). You would use a concept map to diagram the causes and effects of the Asian currency crisis, or the sequence of events that lead to the 9/11 terrorist attack. Concept maps are more sophisticated than mind maps and require careful planning. Here is an example of a concept map.



### Principles of concept mapping

- First of all concept maps must be **concise** containing sufficient information for your purpose. They should not contain any extraneous information.
- Second, concept maps must be **clear**: they must convey a singular idea. It must not lose this idea in congested information or clutter.
- Third, concept maps must *explain* the idea conveyed, not merely *describe* it. If only a description is needed words will do well enough for this. Maps must show **explanatory** connections (these can be causal, cause-effect, directional, definitional, or other kinds of connections).
- Fourth, concept maps must be **balanced**. Maps with connections that are unequal probably reflect selective understanding of a topic.
- Fifth, concept maps must be **appropriate** for the intended audience. Terminology must be chosen so that the audience understands the message of the map within seconds. This helps retention in memory as well as understanding.

Here is a staged process for making a concept map:

1. Devise a **focus question**, e.g., *What are the causes and effects of hypertension?* These questions can be simplified to a word or phrase and this is placed in a box. This becomes the *topic concept* of the concept map, but, importantly, it stands for a *focus question*.
2. Make a list of **key concepts** related to the topic. This is a brainstorming stage. Not all the concepts will be used. Make a “parking lot” of concepts first, and then winnow them down later, using only the ones you really need. Like the key topic question/issue, put each concept in a separate box.
3. Put the concepts in **hierarchical order** of importance. This might take several attempts. Ask other students: a) whether you have missed any key concept; and b) whether your list is ordered correctly.
4. Draw **link lines** that establish some relational connection between the concepts from top to bottom (i.e., from the key concept at the top of the map to the lower-order concepts at the bottom). Arrows can be used to show the relational connections. Both uni-directional and multi-directional arrows can be used.
5. Add **cross-links** between concepts in the map (i.e., from left to right-hand sides of the map). Add verbs and prepositional phrases to show the relationships, e.g., “requires”, “to work with”, “will lead to”, “involves”, “due to”, “is an example of”, “during”, “such as”, “is assessed by”, and so on.
6. Complete your map by adding **terminal points** representing concepts, or concrete examples of something.
7. Assess your map carefully and make sure it captures all the ideas you need to understand or remember.

Concept maps can be easily drawn using the “Insert Shapes” feature of Word, or specialised software such as CMap can be used. Another example of a concept map is provided below.

