1. After starting the tutorial, open the library website in a separate tab.

2. Click the “Databases A-Z” link.
1. The library subscribes to 125+ online databases in all subject areas.

2. For this assignment, we are using Academic Search Complete, so click on the “A” button.
1. Academic Search Complete is one of our most important databases. Because it includes academic journals in all subject areas, it is an excellent choice for beginning your research.

2. Click on Academic Search Complete.
1. Type your first search term, either “ethanol” or “caffeine” in the first search box.

2. In the second box, put your heart rate or physiology terms. Let’s try “heart.”

3. Click “Search”
1. Academic Search Complete is a very large database, as you can see from the large search set that you retrieved.

2. You will want to refine most searches to get better results.

3. Many options for refining your search are available in the left hand column.

4. Scroll down and find “Subject: Thesaurus Term” as a choice.
1. These “Thesaurus Terms” are the subject words that Academic Search Complete uses to describe your topic.

2. Select the terms that are the closest match to your terms.

3. Typically, the higher in the list, the more often that those terms are used.

4. Write down the terms in your Pre-Lab Library assignment for use in modifying your search.
1. You can see that the database uses both ethanol and alcohol as search terms. Often you will find that one term is used for a particular aspect of a topic – this will be the case with caffeine – but other times you will need to use multiple terms.

2. Keeping track of which terms your database uses for your search topic is a key element in good database searching.

3. Our next step will be to replace our original search terms with the thesaurus search terms that we have just identified.

Identify Useful Subject Headings: (list at least six subject headings)

- ethanol
- alcohol
1. Type the two synonymous terms separated by the word “or.” This will retrieve articles that have either the subject heading “alcohol” or “ethanol.”

2. A search can be focused by requiring that the search terms be found as official “subject terms.” This means the article is really about that topic. Choose “SU Subject Terms” in the Select a Field drop down box next to the “ethanol or alcohol” search box.

3. Then click “Search.”
1. We now have a large, but more focused search result.

2. We could begin to look at some records, but it is often better to consider ways to refine our search even more.

3. Scroll down to look some more at the “Subject: Thesaurus Terms.”
1. A number of interesting new headings have appeared. “Alcohol – Physiological effect” is a very close match to our whole topic.

2. You will be tempted to “check” the terms “Alcohol – Physiological effect” and “update” your search.

3. The better approach is to replace your search terms with the new phrase or terms. Let’s see what I mean…
1. Click the “Clear” button to erase your previous search.

2. Then type the phrase “alcohol physiological effect” in the search box.

3. This way of refining the search will get all the records that use that search phrase – not just the ones that also had the terms from our previous search.

4. Click “Search.”
1. This search has found over 3000 results with search terms very closely matching our topic.

2. Incidentally, this is about 10 times the amount you would have gotten if you had just checked the box and updated the search.

3. This same technique works for “caffeine” – you will soon find the heading “Caffeine – Physiological effect.”

4. Now it is time to start exploring our search results!
1. One good way to start looking through a search result set is to limit by “Source Type.” Scroll down to find this option on the left.

2. Which type you choose depends on how much you already know about the topic.

3. For this assignment, you want to look at academic sources.

4. In our case, academic journals would be a good place to begin.

5. Check off “Academic Journals.”
1. There are quite a number of academic journal articles to choose from.

2. Browse through these and look for some that interest you or look helpful.

3. As an example, we will look at the article titled *The metabolic syndrome in patients with alcohol dependency*
1. This is what a detailed record looks like in Academic Search Complete. Here are some of the standard features.

1. Bibliographic citation details
2. Whether or not the full-text is available
3. Additional subject headings
4. Abstract
1. Use the “Citing in CSE Style” tab on the tutorial website to properly format your citations for the library assignment.

2. Careful reading of the abstract is an important way to identify articles that you will want to read.

3. Look for info on the effects of alcohol on physiology.

4. If you find something of interest, click the full-text link and read the article.
1. Once you have read an article or two, you often will have enough information to revise your search some more.

2. From this article, you found that alcohol consumption is related to liver disease.

3. Click “Refine Search” to add additional search terms.
1. Type in your additional search term or terms to refine the search, in this case “liver.”

2. Click “Search.”
1. Here is an example of a more focused study on our topic. Even though “alcohol physiological effect” is not in the title, we can see that it is in the Subject Terms list, so we know that the physiological effects of alcohol are going to be included.

2. Click PDF Full Text to view the article.
1. While many articles are available immediately within Academic Search Complete, through the Full Text links, at least 50% will not have a full-text icon displayed.

2. To see if we have other Full Text Sources for the article, click the “Full Text Finder” link.
1. Check Availability shows you if we have full text for your specific article.

2. If we have full text, usually a link to the article appears – just click it and read!

Note: when only a “Journal” link appears, as in this example, click it and browse or search the online journal to find your specific article.
were randomly grouped into normal control group, model group, ordinary (20 mg/kg), medium (40 mg/kg) and high dosage (80 mg/g) group of *Penthorum chinense* Pursh extract, TPN positive control group after they were fed for 3 days. Mouse in model group were fed with high fat diet and alcohol at the dose of (BW)/g/kg (i.e. 0.1 (BW) mL/10 g), mouse in the normal group was fed with basic diet and distilled water of the same volume. Mouse in *Penthorum chinense* Pursh and TPN group were administrated the corresponding drugs 6 h after treated with ethyl alcohol. Mouse in normal control group and model group were fed with distilled water of the same volume. Administered for 21 d, mouse appetite, behavior, status, fur and the death of the animals were observed during the experiment. The animals were fasted for 2 h after last administration. The liver coefficient was determined the end of the test. The blood was sampled from eyeballs and at serum was separated to determine TG, TC, ALT, AST and DA.

2.2 Test indexes.
1) The serum ALT, AST, TC and TG was determined by LYMPUS AU-600 fully automatic biochemical analyser.
2) The determination of serum MDA was operated according to the instructions of the kit.

3 Statistical test. The test data was represented by \( \bar{x} \pm s \), and the analysis of variance was performed by statistical software SPSS12.0, but if heterogeneity of variance was observed, rank test was used. Comparison of multi-groups was performed by one-way ANOVA, and comparison between two groups was permitted by \( t \)-test.

Results and analyses
1 General conditions and liver coefficient
1.1 General conditions. For mouse in the normal group, their fur had a fine gloss, they were active and their weight increased gradually; for mouse in each group, they lost their appetite and their growth speed decreased at different degree. Mouse in model group were very quiet and not active, and their fur was messy and lost its gloss; for mouse in *Penthorum chinense* Pursh group and TPN group, their fur was clean and their mental state was good.

3.1.2 Liver coefficient. The liver coefficient of mouse in model group was increased significantly compared with normal control group (\( P < 0.01 \)), the liver coefficient of mouse in each administration group was decreased significantly compared with model group (\( P < 0.05 \)) (Table 1).

<table>
<thead>
<tr>
<th>Group</th>
<th>( n )</th>
<th>Liver coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal control</td>
<td>10</td>
<td>4.33 ± 0.44</td>
</tr>
<tr>
<td>Model control</td>
<td>10</td>
<td>5.62 ± 0.43</td>
</tr>
<tr>
<td>Low-dosage group of <em>Penthorum chinense</em> Pursh</td>
<td>10</td>
<td>5.58 ± 0.50</td>
</tr>
<tr>
<td>Medium-dosage group of <em>Penthorum chinense</em> Pursh</td>
<td>10</td>
<td>5.51 ± 0.53</td>
</tr>
<tr>
<td>High-dosage group of <em>Penthorum chinense</em> Pursh</td>
<td>10</td>
<td>5.46 ± 0.67</td>
</tr>
<tr>
<td>TPN</td>
<td>10</td>
<td>5.58 ± 0.53</td>
</tr>
</tbody>
</table>

Note: Compared with model group, \( * P < 0.05 \).

3.2 Serum ALT, TC, TG of model group with normal control group, TG of each administration group compared with model group significantly when \( P < 0.01\). The serum ALT significantly when \( P < 0.01 \) (Table 3).

-alcohol “causes liver to use more oxygen… when breaking down the alcohol” depriving liver of the normal amount of oxygen

-alcohol may interfere with ATP production, liver cells “main source of energy”
1. In these examples, we started with alcohol and physiology, then looked specifically at the effects on the liver.

2. For your assignment, you will narrow your search to find articles about the effect on heart rate.

3. Start with what you know. Try replacing the “liver” search term with the keywords “heart rate,” even if you don’t yet know if those are the proper Subject Terms.

4. As you explore, you will find Subject Terms like “heart beat” – try modifying with new terms that you find that look useful. Record them as appropriate.

5. The trick is to keep revising until you find what you need.
1. In conclusion:

1. Remember to bring your completed library assignment with you to your lab

2. Complete the assignment for both “ethanol” and “caffeine”

3. Consult the links on the “Citing is CSE Style” tab.

Happy Searching!