To do this exercise, review Tips for Searching Article Databases.

In this example, I took the concepts I identified from our Search Topic Exploration, Part One, and organized the terms by related concepts.

Then, as in the Tips guide, I combined these terms using Boolean operators, truncation, and nesting to create my search statement(s).

**TERMS ORGANIZED BY CONCEPTS ...**

<table>
<thead>
<tr>
<th>CONCEPT 1</th>
<th>CONCEPT 2</th>
<th>CONCEPT 3</th>
<th>CONCEPT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>gut</td>
<td>brain</td>
<td>appetite</td>
<td>hijack (hormone system)</td>
</tr>
<tr>
<td>gut bacteria</td>
<td>amygdala</td>
<td>appetite regulation</td>
<td>influence host appetite</td>
</tr>
<tr>
<td>gut microbiota</td>
<td>host animal</td>
<td>host satiety</td>
<td>signal meal termination</td>
</tr>
<tr>
<td>gut microbes</td>
<td>neurologic behavior</td>
<td>satiety response</td>
<td>influence long-term meal pattern</td>
</tr>
<tr>
<td>gut flora</td>
<td></td>
<td>diet</td>
<td>influence diet and behavior (as well as anxiety, depression)</td>
</tr>
<tr>
<td>gastrointestinal tract</td>
<td></td>
<td>nutrients</td>
<td>influence our decisions</td>
</tr>
<tr>
<td>microbes</td>
<td></td>
<td>metabolome</td>
<td>modulators of food choice</td>
</tr>
<tr>
<td>microbiota</td>
<td></td>
<td></td>
<td>modulators of feeding decisions</td>
</tr>
<tr>
<td>enteric microbiota</td>
<td></td>
<td></td>
<td>symbiosis</td>
</tr>
<tr>
<td>microbiome</td>
<td></td>
<td></td>
<td>communication about diet</td>
</tr>
</tbody>
</table>

Notes:
Commensal: 1. Living in a relationship in which one organism derives food or other benefits from another organism without hurting or helping it. Commensal bacteria are part of the normal flora in the mouth. Medical definition from https://www.medicinenet.com/script/main/art.asp?articlekey=34012

Interesting new concepts: Microbial medicine; therapeutic bacteria

Metabolome, metabolomics, microbial metabolites → microbial transformation of dietary components ... have significant effects on neurologic behavior ... diet-dependent metabolites that may impact host physiology.

**COMBINED THESE TERMS AND CONCEPTS USING BOOLEAN OPERATORS, TRUNCATION, AND NESTING** ....

<table>
<thead>
<tr>
<th>CONCEPT 1</th>
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<th>CONCEPT 3</th>
<th>CONCEPT 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>(gut OR enteric OR intestinal OR gastrointestinal) AND (bacteria OR microbiota OR microbes OR flora OR microbiome)</td>
<td>(brain OR amygdala OR host OR neurologic*)</td>
<td>(appetite OR “appetite regulation” OR satiety OR diet OR nutrients OR metabolome)</td>
<td>(hijack OR influence OR (modulate OR modulator OR modulators) OR symbiosis OR communication)</td>
</tr>
</tbody>
</table>

**NOTE:** Could do: Modulat* to pick up all forms – modulate, modulator, modulators ↓ (hijack OR influence OR modulat* OR symbiosis OR communication)

**THESE ARE YOUR CONCEPTS NESTED ...**

((gut OR enteric OR intestinal OR gastrointestinal) AND (bacteria OR microbiota OR microbes OR flora OR microbiome))

AND

(brain OR amygdala OR host OR neurologic*)

AND

(appetite OR “appetite regulation” OR satiety OR diet OR nutrients OR metabolome)

AND
(hijack OR influence OR modulat* OR symbiosis OR communication)

PUT TOGETHER INTO YOUR SEARCH STATEMENT ....

(((gut OR enteric OR intestinal OR gastrointestinal) AND (bacteria OR microbiota OR microbes OR flora OR microbiome)) AND (brain OR amygdala OR host OR neurologic*) AND (appetite OR “appetite regulation” OR satiety OR diet OR nutrients OR metabolome) AND (hijack OR influence OR modulat* OR symbiosis OR communication))

SELECTED RESULTS ....


PLUS “TITLES WITH YOUR SEARCH TERMS” ....


Feeding the microbiota-gut-brain axis: diet, microbiome, and neuropsychiatry. Review.


LET’S TRY JUST ‘brain’ INSTEAD OF ‘(brain OR amygdala OR host OR neurologic*)

(((gut OR enteric OR intestinal OR gastrointestinal) AND (bacteria OR microbiota OR microbes OR flora OR microbiome)) AND brain AND (appetite OR “appetite regulation” OR satiety OR diet OR nutrients OR metabolome) AND (hijack OR influence OR modulat* OR symbiosis OR communication))

SELECTED RESULTS ...

