

Ideas and features for synthesis styles in review manuscripts
(Compiled and edited by HNM on 3/14/2016) with the aid of ChatGPT)

Common paragraph techniques used to demonstrate synthesis in review articles.

Thematic synthesis paragraph

Studies are grouped by a common theme or mechanism, not by author.

Weak (summary style)

- Smith et al. reported that exercise reduces blood pressure.
- Jones et al. found a similar effect in older adults.
- Lee et al. showed modest reductions after training.

Strong (synthesis)

Aerobic exercise consistently lowers systolic blood pressure across diverse populations. Studies in both younger and older adults demonstrate reductions of 4–10 mmHg, suggesting that the antihypertensive effect is robust across age groups.

This paragraph focuses on the pattern across studies rather than listing them individually.

Comparison–contrast synthesis

Explicitly compare findings across studies. Example:

While several randomized trials report significant reductions in blood pressure with moderate-intensity exercise, observational studies show greater variability in effect size. This discrepancy may reflect differences in adherence monitoring and exercise intensity. *This synthesis paragraph explains why results differ.*

Evidence-weighting synthesis

Stronger studies receive greater interpretive emphasis. Example:

Although small observational studies suggest a modest effect of dietary sodium reduction, larger randomized trials demonstrate substantially greater reductions in systolic blood pressure, indicating that controlled interventions provide stronger support.

This synthesis paragraph evaluates the strength of evidence, not merely reporting it.

Mechanistic synthesis

The review connects empirical results to underlying biological mechanisms. Example:

The observed improvements in vascular function following aerobic training likely reflect enhanced endothelial nitric oxide production. This interpretation is supported by studies showing increased endothelial nitric oxide synthase activity after sustained exercise.

This synthesis paragraph integrates physiology with experimental findings.

Integrative conclusion paragraph

At the end of each section, a short synthesis statement is useful. Example:

Taken together, current evidence indicates that aerobic exercise consistently reduces blood pressure, with the greatest effects observed in individuals with baseline hypertension. However, variability in intervention duration and intensity limits direct comparison across studies.

This synthesis paragraph signals field-level interpretation.

Examples of common phrases that signal synthesis

“Taken together...”

“Collectively, these findings suggest...”

“Across multiple studies...”

“In contrast to...”

“A consistent pattern emerges...”

“The evidence indicates...”