

| <b>Hormone</b>                     | <b>Stimulant for Release</b>                      | <b>Target Tissue</b>                         | <b>Response</b>  |
|------------------------------------|---|--|--|
| Epinephrine                        | Moderate to intense exercise, stress, hypotension | Skeletal muscle                              | ↑ Glycogenolysis (breakdown of glycogen), vasoconstriction                   |
| Norepinephrine                     | Moderate to intense exercise, hypoglycemia        | Adipose tissue, liver                        | ↑ lipolysis (breakdown of fat), ↑ heart rate, ↑ glycogenolysis               |
| Growth Hormone (GH)                | Exercise, hypoglycemia                            | Skeletal tissue, bone, adipose tissue, liver | Stimulation of growth, FFA mobilization, ↑ gluconeogenesis, ↓ glucose uptake |
| Testosterone                       | ↑ FSH, ↑ LH, exercise (?), stress                 | Skeletal muscle, bone                        | Protein synthesis, sperm production, sex drive                               |
| Estrogen                           | ↑ FSH, ↑ LH, light to moderate exercise           | Skeletal muscle, adipose tissue              | Inhibition of glucose uptake, fat deposition                                 |
| Cortisol                           | ↑ ACTH, intense prolonged exercise                | Skeletal muscle, adipose tissue, liver       | ↑ Gluconeogenesis, ↑ protein synthesis, ↓ glucose uptake                     |
| Insulin-like growth factor (IGF-1) | ↑ Growth hormone                                  | Almost all cells                             | Stimulation of growth  |