Regulated by peripheral clocks and interactions with other organs, many metabolic pathways in the body peak and ebb in specific circadian patterns. As a result, drugs targeting these pathways can work better when taken at particular times of day. Here are a few examples.

**LIVER**
- **Condition:** High cholesterol
- **Circadian pattern:** Cholesterol synthesis is higher at night.
- **Timing treatments:** The FDA recommends the short-acting statin simvastatin be taken in the evening.

**BREAST**
- **Condition:** Breast cancer
- **Circadian pattern:** In mice, glucocorticoid signaling, which suppresses levels of epidermal growth factor receptor (EGFR), peaks at night and tapers off in the morning, allowing EGFR signals to rise during the day.
- **Timing treatments:** In an animal study, daytime doses of the EGFR inhibitor lapatinib were better at reducing tumor size.

**OVARY**
- **Condition:** Ovarian cancer
- **Circadian pattern:** In dividing tumor cells, DNA replication peaks in the late morning, 12 hours out of sync with normal ovarian cells.
- **Timing treatments:** In clinical trials, the DNA-damaging chemotherapy agent cisplatin caused fewer side effects and improved effectiveness when taken in the evenings.

**CARDIOVASCULAR SYSTEM**
- **Condition:** High blood pressure
- **Circadian pattern:** Angiotensin-2 receptor levels are higher at night.
- **Timing treatments:** Studies have suggested that bedtime doses of hypertension drugs that target this receptor and help blood vessels relax are more effective than morning doses.