overexpression of LDL receptors can prevent diet-induced hypercholesterolemia, at least in mice.

**C. Cholesterol Utilization**

Cholesterol is the precursor of **steroid hormones** and bile acids. Steroid hormones are grouped into five categories:

1. **Progestins**, **glucocorticoids**, **mineralocorticoids**, **androgens**, and **estrogens**. These hormones, as described in Section 34-4A, mediate a wide variety of vital physiological functions. All contain the four-ring structure of the sterol nucleus and are remarkably similar in structure, considering the enormous differences in their physiological effects. A simplified biosynthetic scheme (Fig. 23-52) indicates their structural