postmenopausal estrogen therapy is initiated and during pregnancy. Use of low-dose preparations of estrogen or the estrogen patch can minimize the effect of exogenous estrogen on lipids. Isotretinoin therapy for acne can cause substantial elevations in TGs, and TG levels should be checked at baseline and after initiation of therapy. Bexarotene therapy for cutaneous T-cell lymphoma often causes substantial increases in TGs, and patients should be monitored accordingly.

Secondary Factors That Elevate LDL-C Levels • **DIET HIGH IN SATURATED AND TRANS FATS** Dietary saturated and trans fats act to downregulate LDL receptor expression in the liver, leading to elevation in LDL-C levels and increased ASCVD risk. A careful dietary history should be taken in individuals with elevated LDL-C with a focus on sources of saturated and trans fats. Reduction in consumption of saturated and trans fats can sometimes have a substantial effect in reducing LDL-C levels and is a cornerstone of the initial nonpharmacologic management of hypercholesterolemia.

HYPOTHYROIDISM (See also Chap. 382) Hypothyroidism is the most important secondary factor causing elevated LDL-C levels. It causes elevated plasma LDL-C levels due to downregulation of the hepatic LDL receptor, which is normally increased by the action of thyroid hormone. Because hypothyroidism is often subtle and therefore easily overlooked, all patients presenting with elevated plasma levels of LDL-C, especially if there has been an unexplained increase in LDL-C, should be screened for hypothyroidism by measuring thyroid-stimulating hormone (TSH). Thyroid replacement therapy usually reduces LDL-C levels; if not, the patient probably has a primary lipoprotein disorder and may require lipid-lowering drug therapy with a statin.

LIVER DISORDERS (See also Chap. 336) Cholestasis is almost invariably associated with hypercholesterolemia due to elevated LDL-C levels and sometimes particles called Lp-X. A major pathway by which cholesterol is excreted from the body is via secretion into bile, either directly or after conversion to bile acids, and cholestasis