In a prospective single-blind comparative trial, sixty newly diagnosed mild to moderate hypertensives were randomly assigned to either propranolol or hydroflumethiazide monotherapy. Baseline fasting serum glucose lipid profiles, serum uric acid and potassium levels, were determined at the beginning of the trial. Repeat levels were determined at completion of twelve weeks of treatment. Propranolol treatment significantly reduced HDL-cholesterol (p < 0.02) and increased both VLDL and total serum triglycerides (p < 0.01). Hydroflumethiazide significantly increased total and LDL-cholesterol, fasting serum glucose and uric acid levels (p < 0.01); potassium levels were significantly lowered (p < 0.01). Treatment with either propranolol or hydroflumethiazide is associated with significant metabolic side-effects which require regular monitoring and intervention as appropriate.