The mean plasma fibronectin (FN) concentrations in 30 patients with fulminant hepatic failure (FHF) and in 10 patients with subacute hepatic failure (SAHF) were 111.2 +/- 70 and 123.5 +/- 46.5 micrograms/ml, respectively, significantly lower than that of normal controls (362.0 +/- 69.0 micrograms/ml) and patients with uncomplicated viral hepatitis (320 +/- 58.5 micrograms/ml) (p less than 0.001). Plasma FN levels showed significant negative correlation with serum glutamic pyruvate transaminase values in the FHF group (p less than 0.02) and with prothrombin time in the SAHF group (p less than 0.02). Serial estimation of plasma FN showed that failure of FN levels to rise despite fresh plasma infusions indicates poor prognosis in these patients. The reduced availability of FN may be responsible for the impaired Kupffer cell function and consequent increased susceptibility to endotoxemia and the bacterial infections seen in these patients.