Criminal courts can require defendants to pay thousands of dollars after a conviction. If an individual fails to pay these fees in short order, they can be charged significant interest and collections fees over time. In some cases, failure to pay (or the associated failure to appear in court when payment is due) can result in a warrant for arrest and jail time. While many states offer provisions to modify fees and fines based on ability to pay, judges have often proven unwilling or unable to extend such accommodation. As a result, the poor, disproportionately exposed to criminal justice contact, bear a disproportionate burden of legal debt. In this study, misdemeanor defendants in Oklahoma County, OK were randomly selected to receive debt relief for present and prior criminal cases in the county. We use this experiment to quantify the causal effect of criminal justice debt on social, economic, and legal outcomes. Very few control respondents pay appreciable amounts of their outstanding fees. Debt relief reduces new charges and convictions three months later, but has no effect on jail bookings. The effects on charges and convictions dissipate by the twelfth month, but the effect of debt relief on debt-related justice system responses persist. Twelve months after debt relief, treatment respondents were 26% less likely to have been issued a warrant and 26% less likely to have accumulated new legal debt, although no less likely to have been booked into jail.