OBJECTIVES: The purpose of this case study is twofold. One, to illustrate a simple method of detoxification using heat chamber depuration (sauna). Second, to raise awareness in the practice of medicine of the importance of taking an environmentally oriented history. SUBJECT: A patient with a chronic, debilitating multisystem disorder of 20-years duration related to a chemical sensitivity resulting from low-level exposure to toxic chemicals (solvents) at work. INTERVENTIONS: Detoxification treatment consisted of heat chamber depuration (sauna) together with a specific protocol of oral and intravenous therapy. Appropriate advice was offered related to choosing a safe and suitable workplace. OUTCOME MEASURES: Observation of the dynamic interaction and elimination of chlorinated and aromatic hydrocarbons (solvents) from the patient’s bloodstream and related clinical improvement during the course of treatment. RESULTS: The patient was able to discontinue, without ill effect, all medications previously prescribed to treat her symptoms. Heat chamber depuration (sauna) detoxification treatment brought substantial release of symptoms and returned the individual to gainful employment. CONCLUSION: The connection between symptoms of chronic degenerative diseases and environmental and/or nutritional factors is missed in many cases due to lack of obtaining an environmentally oriented medical history. Taking such a history and dealing with the cause of illness using avoidance and/or appropriate therapy is preventive and cost-effective for both the patient and society.