Physical and Psychiatric Recovery from Burns

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KEYWORDS

• Rehabilitation • Resilience • Recovery • Body image • Posttraumatic stress disorder • Depression • Hypertrophic scar • Burn reconstruction

KEY POINTS

- Burn injuries pose complex biopsychosocial challenges to recovery. A focus of care on rehabilitation and recovery is becoming more important with improved survival rates in the United States.
- The physical and emotional sequelae of burns differ widely, depending on the individual's resilience and the time in the life cycle in which they occur.
- Most burn survivors are resilient and recover, whereas some are more vulnerable and have more complicated biopsychosocial outcomes.
- Physical rehabilitation is affected by pain, orthopedic, neurologic, and metabolic complications.
- Psychiatric recovery is affected by posttraumatic stress disorder, depression, learning disorders, substance abuse, stigma, and disability. Individual resilience, social support, and education or occupation affect outcomes.

INTRODUCTION

Burn injuries pose complex biopsychosocial challenges to recovery. The incidence of burns in the United States has decreased dramatically in the past 50 years as a result of public education and home and work safety devices and regulations. In addition, survival rates have improved significantly.[1] As a result, the need for an emphasis on rehabilitation and recovery is paramount, with special focus on lessening the biopsychosocial impact of burn disfigurement, functional disabilities, mental disorders, and problems at school or work. A key goal is to teach patients and families strategies for successful rehabilitation, how to enhance resilience,[2,3] how to reduce the stigma of

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burns, and help them cope effectively in society.[4] Burn survivors have complicated psychiatric and rehabilitation needs, which are greater for those who are economically disadvantaged or with preexisting psychosocial risks. Their needs include early preventive interventions to reduce the acute physical and psychological trauma of burns and to improve long-term outcomes,[5] such as management of acute pain, stress, and grief, and of longer-term issues such as skin, bone, metabolic, neurologic, pulmonary, and psychiatric disorders, including body image, depression, posttraumatic stress disorder (PTSD), and substance abuse. Although not long ago, little was known about which mental disorders in patients with burns require diagnosis and treatment to improve outcomes, more is known about how they delay or block recovery and how to treat them. Recovery lasts from months to years, often with lifelong sequelae. Optimal long-term care involves a multidisciplinary team, which includes the burn surgeon, plastic/reconstructive surgeon, psychiatrist, physiatrist, psychologist, physical and occupational therapists, nurse, nutritionist, and subspecialists in areas such as pulmonary medicine, orthopedics, infectious disease, ear, nose, and throat, endocrinology, dentistry, and cosmetology.

Developmental Considerations Across the Life Cycle

Burns affect people at any time in life, from earliest infancy to late life.

The physical and emotional sequelae of burns differ widely depending on the individual's resilience, including genetic and genomic risk, and the time of life in which the burns occur. The younger the person, the longer the psychosocial impact of the stigma of burn disfigurement, because there are more remaining life years of potential physical and emotional disability. Nevertheless, the young tend to heal more rapidly overall than the elderly, and have fewer comorbid conditions, so their prognosis for physical and emotional recovery is better for equivalent injuries. Physically, children are growing rapidly, and this may benefit but also complicate healing. Benefits include more rapid healing and usually, greater metabolic resiliency and resistance to infection, whereas complications long-term include scars growing with the child and contractures forming as the child grows in weight and height. Psychologically, children are more likely to have family supports and less apt to have preexisting psychopathology than adults and may therefore adjust more readily; on the other hand, the pain and trauma of burns and burn treatment may affect personality, cognitive, and emotional development for their entire lives, leaving lifelong physical and emotional scars.[6] Infant-parent and child-parent relationships are significantly affected by the stress and stigma of a child's burn on the mother or father, including the inevitable guilt that they carry. Adolescents, who are also growing, are vulnerable to interference in body image development, and in developing self-esteem, mood regulation, cognitive mastery, intellectual development in school, and love relationships. Adults, including the elderly, may heal more slowly and may have to grieve losses of appearance, function, and social/occupational relationships, which have defined them for a lifetime, including the capacity to work. The elderly patient with a severe burn may live alone with few supports and may require extensive rehabilitation and social services to recover as much function as possible with or without continued independent living. As discussed later, some patients do not recover and die. End-of-life care, an essential part of clinical care, is more common in caring for severely burned adults with higher mortality, but is a key clinical skill of staff in both pediatric and adult burn centers.

Psychiatric risks, complications, and treatment

Among the psychosocial risk factors for burns are poverty, abuse and neglect, alcohol and substance abuse, serious mental illness, suicide, and assault. Psychiatric risk