

*ABC of burns***Psychosocial aspects of burn injuries**

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This is the 10th in a series of 12 articles

With the increased survival of patients with large burns comes a new focus on the psychological challenges and recovery that such patients must face. Most burn centres employ social workers, vocational counsellors, and psychologists as part of the multidisciplinary burn team. Physiological recovery of burn patients is seen as a continual process divided into three stages—resuscitative or critical, acute, and long term rehabilitation. The psychological needs of burn patients differ at each stage.

**Resuscitative or critical stage**

The psychological characteristics of this stage include stressors of the intensive care environment, uncertainty about outcome, and a struggle for survival. The intensive care environment can be both overstimulating and understimulating with the monotony of lying in a hospital bed for weeks.

Cognitive changes such as extreme drowsiness, confusion, and disorientation are common during this phase. More severe cognitive changes such as delirium and brief psychotic reactions also occur, usually as a result of infections, alcohol withdrawal, metabolic complications, or high doses of drugs. Patients may also be intubated, which greatly limits direct communication.

**Treatment**

In depth psychological intervention is of minimal value at this phase, since physical survival is the primary goal. Patients should be encouraged to cope with the frighteningly unusual circumstances of the intensive care unit through whatever defences are available to them, even primitive strategies such as denial and repression. Supportive psychological interventions should focus on immediate concerns, such as sleep, pain control, and protecting patients' coping strategies. Non-pharmacological approaches to pain control, such as hypnosis and relaxation, can be effective.

Medical staff can also effectively intervene during this early stage of recovery by working with a patient's family members. Family members may be anxious and distressed while observing the patient undergo treatment, which fosters the same response in the patient. It is important to help family members understand this effect and help them to convey a sense of hope and calmness to the patient.

**Acute stage**

The acute phase of recovery focuses on restorative care, but patients continue to undergo painful treatments. As patients become more alert during this phase, they face these procedures with less sedation. Also, patients are more aware of the physical and psychological impact of their injuries.

*Depression and anxiety*—Symptoms of depression and anxiety are common and start to appear in the acute phase of recovery. Acute stress disorder (occurs in the first month) and post-traumatic stress disorder (occurs after one month) are more common after burns than other forms of injury. Patients with these disorders typically have larger burns and more severe pain and express more guilt about the precipitating event. The severity of depression is correlated with a patient's level of resting pain and level of social support.



With the increased survival of patients with large burns, there is increased focus on the psychological challenges and recovery that such patients must face

**The psychological needs of patients with burn injuries are unique at each stage of physical recovery**

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**Psychological characteristics of critical stage of recovery from a burn**

**Challenges**

- Overstimulation
- Understimulation
- Delirium, confusion, and disorientation
- Impaired communication
- Sleep disturbance
- Pain

**Treatments**

- Protect patient's natural defences and coping strategies
  - Drug management for pain control and to help with sleep
  - Non-pharmacological techniques for pain management
  - Educate and provide support to family members
  - Educate and provide support to staff
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**Prevalence of depression and anxiety in inpatients with burns**

Condition	Prevalence
Depression	23-61%
Generalised anxiety	13-47%
Post-traumatic stress disorder	30%

*Sleep disturbance*—Central to both anxiety and depression is sleep disturbance. The hospital environment can be loud, and patients are awakened periodically during the night for analgesia or for checking vital signs. Patients' mood, agitation, and nightmares can all affect sleep.

*Premorbid psychopathology*—Compared with the general population, burn patients have a high rate of premorbid psychopathology. Patients with pre-existing psychopathology typically cope with hospitalisation through previously established dysfunctional and disruptive strategies. The most common premorbid psychiatric diagnoses are depression, personality disorders, and substance misuse. Prior psychopathology can have an adverse impact on outcomes, including longer hospitalisations and the development of more serious psychopathologies after injury.

*Grief*—Patients may now begin the grieving process as they become more aware of the impact of the burn injuries on their lives. Family members, friends, or pets may have died in the incident, and patients may have lost their homes or personal property. In addition to these external losses, patients may also grieve for their former life (such as job, mobility, physical ability, appearance). Mental health professionals and other staff should help patients to grieve in their own way and at their own pace.

**Treatment**

Brief psychological counselling can help both depression and anxiety, but drugs may also be necessary. When offering counselling, it is often helpful to provide reassurance that symptoms often diminish on their own, particularly if the patient has no premorbid history of depression or anxiety.

Drugs and relaxation techniques may also be necessary to help patients sleep. Informing patients that nightmares are common and typically subside in about a month can help allay concerns. Occasionally patients will benefit from being able to talk through the events of the incident repeatedly, allowing them to confront rather than avoid reminders of the trauma. Staff often make the mistake of trying to treat premorbid psychopathology during patients' hospitalisation. Referrals to community treatment programmes should be made once patients are ready for discharge.

*Pain control*

Both procedural and background pain can be challenging for patients and staff. Some patients report that procedural pain is easier to cope with because of its transient nature, whereas with background pain there is no clear end in sight. It is important to conduct a thorough pain assessment in order to determine which type of pain is the greatest problem.

A pain treatment plan that provides pharmacological and non-pharmacological approaches should be established. Opioid agonists are the most commonly used analgesics. Long acting opiates are used for background pain, and short acting opiates are used for painful procedures such as wound care. It is crucial that drugs for background pain are provided on a fixed dose schedule to maintain control of the pain. Opioid analgesics may be supplemented with other drugs, including inhaled nitrous oxide and anxiolytics. Lorazepam has recently been found to lessen burn pain, largely by treating acute anxiety.

Non-pharmacological pain control techniques include cognitive-behaviour therapy and hypnosis. These have been shown to be effective in treating procedural pain. One exciting new distraction technique is virtual reality. Since attentional focus is limited and a person cannot attend to more than one stimulus at a time, virtual reality creates a realistic environment for patients to absorb themselves in during painful procedures, thus taking focus away from the discomfort.

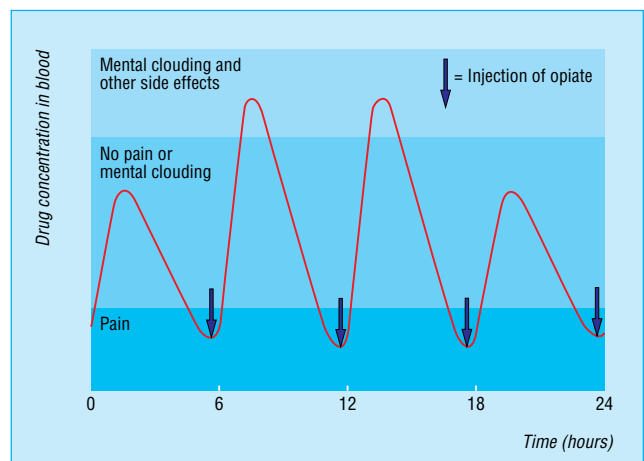
**Psychological characteristics of acute stage of recovery from a burn**

**Challenges**

- Pain—both background and procedural
- Anxiety—both acute stress disorder and post-traumatic stress disorder
- Depression
- Sleep disturbance
- Premorbid psychopathology becomes more apparent
- Grief

**Treatments**

- Drug management of anxiety, pain, sleeplessness, and depression
- Brief counselling
- Teach non-drug approaches to pain management (relaxation, imagery, hypnosis, virtual reality)



Effects of fixed dose schedule of analgesic drugs for pain control



A patient's attention is taken up with "SnowWorld" via a water-friendly virtual reality helmet during wound care in the hydrotub

## Long term rehabilitation

The long term stage of recovery typically begins after discharge from hospital, when patients begin to reintegrate into society. For patients with severe burns, this stage may involve continued outpatient physical rehabilitation, possibly with continuation of procedures such as dressing changes and surgery. This is a period when patients slowly regain a sense of competence while simultaneously adjusting to the practical limitations of their injury. The first year after hospitalisation is a psychologically unique period of high distress.

*Physical problems*—Patients face a variety of daily hassles during this phase, such as compensating for an inability to use hands, limited endurance, and severe itching. Severe burn injuries that result in amputations, neuropathies, heterotopic ossification, and scarring can have an emotional and physical effect on patients.

*Psychosocial problems*—In addition to the high demands of rehabilitation, patients must deal with social stressors including family strains, return to work, sexual dysfunction, change in body image, and disruption in daily life. Many people continue to have vivid memories of the incident, causing distress. Patients may also develop symptoms of depression. There is evidence that adjustment to burn injuries improves over time independent of the injury size. Social support is an important buffer against the development of psychological difficulty.

### Treatment

It can be helpful to make follow up telephone calls to patients after discharge or to continue to see patients in an outpatient clinic to screen for symptoms of distress and to provide psychotherapy.

Adjustment difficulties that persist more than a year after discharge usually involve perceptions of a diminished quality of life and lowered self esteem. Some studies suggest that burn disfigurement in general leads to decreased self esteem in women and social withdrawal in men. "Changing Faces" is a successful programme for enhancing self esteem. This includes a hospital based programme for image enhancement and social skills plus a series of publications for patients dealing with aspects of facial disfigurement.

Many patients face a lengthy period of outpatient recovery before being able to return to work. Some patients go through vocational challenges. In a recent study of patients hospitalised for burn injury 66% returned to work within six months of their injury, and 81% had returned by one year. As expected, patients who sustained larger burns took longer to return to work. About half of the patients required some change in job status.

Ancillary resources such as support groups and peer counselling by burn survivors can also be important services to burn survivors. Major burn centres ideally have a network of burn survivors who are willing to talk with patients in the hospital.

## Summary

A burn injury and its subsequent treatment are among the most painful experiences a person can encounter. The emotional needs of patients with burns have long been overshadowed by the emphasis on survival. Patients undergo various stages of adjustment and face emotional challenges that parallel the stage of physical recovery. Adjustment to a burn injury seems to involve a complex interplay between the patient's characteristics before the injury, moderating environmental factors, and the nature of the injury and ensuing medical care.

The picture of a patient with burnt head and shoulders is reproduced with permission of Science Photo Library.

### Psychological characteristics during rehabilitation stage of recovery from a burn

#### Challenges

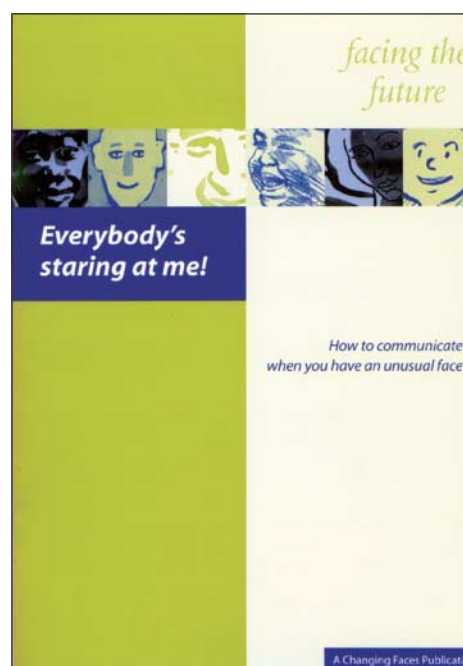
*Physical*—Itching, limited endurance, decrease in function

*Social*—Changing roles, return to work, body image, sexual issues

*Psychological*—Anxiety, depression

#### Treatments

- Outpatient counselling
- Social skills training
- Support groups
- Peer counselling
- Vocational counselling



Changing Faces (United Kingdom) and the Phoenix Society (United States) are excellent sources of information and support for burn survivors

### Further reading

- Patterson DR, Everett JJ, Bombardier CH, Questad KA, Lee VK, Marvin JA. Psychological effects of severe burn injuries. *Psychol Bull* 1993;113:362-78
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Competing interests: See first article for series editors' details.

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