First Aid

Immediate first aid must be administered to injured firefighters or wounded civilians. Knowledge of, and training in, first aid is essential. In large fires there should be several trained people or a specialist crew.

Each fire crew needs a first aid kit containing at least;

- first aid manual that explains how to handle common problems,
- · assorted adhesive bandages and straping tapes,
- · aspirin and antiseptic creams and liquids,
- scissors and safety pins.



Plate 7. First aid kits supplied to the Regency Fire Centres by FFPCP and IFFM.

At least one member of each fire crew should be well trained in how to deal with;

- stoppage of breath (give artificial respiration, then lay in recovery position),
- serious bleeding (apply pressure to stop the bleeding and bandage the injury),
- · burns (see paragraph below),
- · broken bones (immobilize the injury with splints),
- shock (lay the victim in the recovery position),
- heatstroke (cool the body with water, then lay in recovery position).

The *recovery position* extends the head and neck so that a casualty maintains an open, widened airway, the tongue cannot fall to the back of the throat, and any vomit or fluid will drain freely. The casualty is lying on his side (Figure 12) supported by one leg and one arm. In the case of head or ear injury, keep the injured side down.

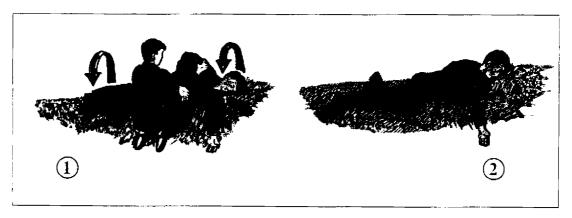


Figure 15. The two steps to place a person in the recovery position.

FFPCP and IFFM have prepared four pocket books in Bahasa Indonesia that are distributed after each training course; they cover first aid, treatment of burns, safety at forest fires and radio communication rules (Nicolas and Puri Indonesian Language Plus, 1998)

Treatment of burns

Burns need urgent treatment;

- Immediately reduce the wound temperature by irrigating with cold water for a minimum of ten minutes. The method is used in units that specialize in the treatment of severe burn injuries as it reduces tissue damage, speeds healing and helps a fuller recovery.
- Every firefighter must know the simple technique to cool the burn and be taught to take prompt action.
- Never apply greasy ointments as they seal heat into the wound and may also cause infection

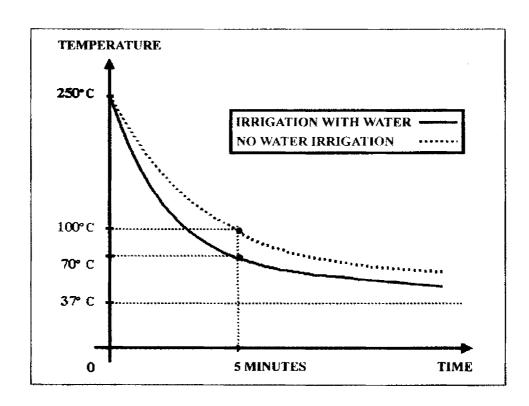


Table 4. Irrigating the burn with cold water for ten minutes minimizes the after-effects.

REFERENCES

Anderson, I.P., Imanda, I.D. and Muhnandar (1999). Vegetation fires in Indonesia: the interpretation of NOAA-derived hot-spot data. Forest Fire Prevention and Control Project, Palembang. European Union and the Ministry of Forestry and Estate Crops, Jakarta, Indonesia.

Beebe, G.S. and Ismunandar, S. (1998). Pelatihan penanggulangan kebakaran hutan dan lahan. Integrated Forest Fire Management Project, Samarinda. German Agency for Technical Cooperation and the Ministry of Forestry, Jakarta, Indonesia.

Chandler, C., Cheney, P., Thomas, P., Trabaud, L. and Williams, D. (1991). Fire in forestry; forest fire management and organization. Krieger. Florida, USA.

FAO (1986). Wildland fire management terminology; terminologie de la lutte contre les incendies de foret; terminologia del control de incendios en tierras incultas. Food and Agriculture Organization of the United Nations. Roma, Italy.

Heikkila, T.V., Gronqvist, R. and Jurvelius, M. (1993). Handbook on forest fire control. National Board of Education, Government of Finland. Helsinki, Finland.

McPherson, G.R., Wade, D.D. and Phillips, C.B. (1990). Glossary of wildland fire management terms used in the United States. Society of American Foresters, USA.

Nicolas, M.V.J. (1982). Prevention et lutte contre les feux de forets. France Selection, Paris.

Nicolas, M.V.J. (1998). The practicalities of fighting forest fires; a view from the Province of South Sumatra. Paper, 'International Cross Sectoral Forum on Forest Fire Management in South East Asia', National Planning Development Agency of Indonesia, Japan International Cooperation Agency and International Tropical Timber Organisation. 7-8 December 1998. Jakarta, Indonesia.

Nicolas, M.V.J. and Puri Indonesian Language Plus (1998). Kebakaran hutan dan keselamatan kerja, Pertolongan pertama pada kecelakaan, Perawatan pada korban luka bakar and Prosedur radio komunikasi. Forest Fire Prevention and Control Project, Palembang. European Union and the Ministry of Forestry and Estate Crops, Jakarta, Indonesia.

Nicolas, M.V.J. (1999). Slip-on tanks for South Sumatra province: use and maintenance. Forest Fire Prevention and Control Project, Palembang. European Union and the Ministry of Forestry and Estate Crops, Jakarta, Indonesia.

Nicolas, M.V.J. (1999a). Firefighting in the field; the South Sumatra experience. Paper, 'Second International Workshop on Forest Fire Control and Suppression Aspects', Faculty of Forestry, Bogor Agriculture University. 16-21 February 1999. Bogor. Indonesia.

Nicolas, M.V.J. and Beebe, G.S. (1999). Fire management in the logging concessions and plantation forests of Indonesia. Forest Fire Prevention and Control Project, Palembang, and Integrated Forest Fire Management Project, Samarinda. European

Union, German Agency for Technical Cooperation and the Ministry of Forestry and Estate Crops, Jakarta, Indonesia.

NSW Government (1989). Fire suppression; officer training module. New South Wales Bush Fire Council, Australia.

NWCG (1992). Fireline handbook. National Wildfire Coordinating Group. Washington, D.C., U.S.A.

Perry, D.G. (1990). Wildland firefighting; fire behavior, tactics and command. Fire Publications, Inc. U.S.A.

Schindler, L. (1998). Fire management in Indonesia - quo vadis? Paper, 'International Cross Sectoral Forum on Forest Fire Management in South East Asia', National Planning Development Agency of Indonesia, Japan International Cooperation Agency and International Tropical Timber Organisation. 7-8 December 1998. Jakarta, Indonesia.

ABBREVIATIONS AND ACRONYMS

ABRI Angkatan Bersenjata Republik Indonesia (Armed Forces of Indonesia)

ASEAN Association of South East Asia Nations

EU European Union

FAO Food and Agriculture Organization of the United Nations

FFPCP Forest Fire Prevention and Control Project (EU)

GTZ Deutsche Gesellschaft für Technische Zusammenarbeit (German Agency

for Technical Cooperation)

HPH Hak Pengusahaan Hutan (Forest Concession)

HPHTI Hak Pengusahaan Hutan Tanaman Industri (Industrial Plantation)

ICAO International Civil Aviation Organization

IFFM Integrated Forest Fire Management Project (GTZ)

MoFEC Ministry of Forestry and Estate Crops

NGO Non-Governmental Organization

NOAA National Oceanic and Atmospheric Administration

NSW New South Wales (Australia)

NWCG National Wildfire Coordinating Group (Washington D.C., USA)

PT. Perseroan Terbatas (Limited Liability Company)

USA United States of America

UTM Universal Transverse Mercator