

Los Angeles City Fire Department

TRAINING BULLETIN

DONALD O. MANNING, Chief Engineer and General Manager/Bulletin No. 91 Date of Issue 7/93 Revision Date

HYPERVENTILATION SYNDROME

Hyperventilation Syndrome

The “hyperventilation syndrome” occurs when people breathe faster or deeper than normal, resulting in an increase in the pH of the blood. The symptoms that can result include numbness and tingling in the hands and about the mouth, a sensation of air hunger, light-headedness, near syncope (fainting), and chest pain. Fortunately, the most common cause of this syndrome in young people is simple anxiety.

Although it occurs with much less frequency, these same symptoms can be present in patients of any age with life threatening medical problems. Pulmonary embolus can lead to hyperventilation due to a lowered blood oxygen content. Myocardial infarction (heart attack) could be misdiagnosed as “hyperventilation syndrome” due to the presence of chest pain, “numbness” in the arms and shortness of breath. Other serious medical problems presenting with hyperventilation and anxiety include the early phases of aspirin overdoses and the early stages of sepsis.

In the pre-hospital setting, it is hardly ever possible to exclude these less frequent but serious medical problems from the innocent form of the “hyperventilation syndrome.” Even temporary reversal of symptoms by calming or using a paper bag are not 100% reliable. One recent incident of this type resulted in the City settling a wrongful death suit out of court for \$250,000. The fact that normal pulse rate and blood pressure exists cannot be used to exclude the uncommon event of a myocardial infarction in a younger individual presenting with hyperventilation and “numbness” in the hands.

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All cases of hyperventilation shall be viewed as problems with respiration and treated as such. Dispatchers should categorize this as “difficult breathing” and dispatch an appropriate level of response. Paramedic units shall also treat cases of “hyperventilation syndrome” as a case of shortness of breath and make base station contact as delineated under the Department of Health Services Reference Number 808, Item E. All BLS Companies encountering such cases shall access ALS care as noted in Departmental Bulletin No. 92—16.