

Neonatal intensive care unit study

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One hundred and twenty-seven children (84 per cent) have had a full neurological assessment at 10 months or older, but only 82 (54 per cent) have had both a full neurological and a standardised psychometric assessment. Twenty-one (16.5 per cent of 127) of the children examined had one or more major disabilities, 9 (7 per cent) having cerebral palsy, 3 (2 per cent) being blind and 2 (1.6 per cent) deaf. Seven (8.5 per cent of 82) children had an isolated mental development delay on psychometric assessment while two children had cerebral palsy and mental developmental delay.

2. MECHANICALLY VENTILATED INFANTS WEIGHING 1000-5000 GRAMS AT BIRTH

Reasons for mechanical ventilation in this group of infants included respiratory failure, congenital anomalies, post surgery, perinatal asphyxia and sepsis. Of the 1293 infants, 318 (25 per cent) had congenital anomalies and they were analysed separately in relation to survival.

Overall, 89 per cent of the 975 infants without congenital anomalies survived to one year of age, with neonatal and postneonatal mortality rates of 10 and 1 per cent respectively.

The most important finding of the study was that a curvilinear relationship existed between birthweight and survival to one year of age with a peak in survival to one year of age (96 per cent) in infants with birthweights in the 2000-2499 gram range. Infants weighing 3000-3499 grams, 1750-1999 grams and 2000-2499 grams were respectively three, four and six times more likely to survive to one year than those weighing 3500-3999 grams. A similar relationship existed between gestational age and survival, with a peak (97 per cent) in survival for infants born at 33-34 weeks gestation. Infants of 35-36 weeks gestation were three times, and those of 33-34 weeks six times, more likely to survive to one year than those of 37-41 weeks gestation. Sixty-three per cent (202 of 318) of infants with congenital anomalies survived.

The aims of the Neonatal Intensive Care Unit Study data collection are being redefined: the study will audit patterns of usage of NICUs, patterns of diseases and mortality rates in NICUs, morbidity of infants at one, three, five and seven years of age, and the relationship of all these to maternal, perinatal and neonatal factors. The audit will serve as a quality assurance of neonatal resuscitation and transport, management of the infants in the NICUs and the follow-up assessment of these babies. It will also provide a comparison with the population-based data collected on all births in NSW.

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Professor James S. Lawson, Head of the School of Health Services Management at the University of NSW, has prepared the following public health items from the literature.

PROSTATE PROBLEM NUMBERS HIGH

Benign hypertrophy of the prostate is a common reason for surgery in elderly men, but the incidence of this condition has not been known. A British-based study is of general interest as it has used modern techniques (rectal ultrasound) to assess the volume of prostates in more than 700 men between the ages of 40 and 79 years. The study found significant hypertrophy of the prostate in 138/1000 men aged 40 to 79 years rising to 430/1000 men aged 60 to 69 years. This shows the condition much more common than was previously thought to be the case.

Garraway WM, Collins GN and Lee RJ. High prevalence of benign prostatic hypertrophy in the community. *Lancet* 1991; 338:469-471.

GOOD NEWS ON ALCOHOL AND HEART DISEASE

The association between alcohol consumption and reduced risk of coronary heart disease has been well documented. However, despite these studies, some have argued that the association may be due, in part, to the use in studies of non-drinkers who may include heavy drinkers who have stopped drinking because of illness. A very large American study involving more than 50,000 male health professionals has been conducted to determine whether the relationship between alcohol and heart disease is confirmed.

After adjustment for the standard coronary heart disease risk factors, the study has shown it is probable that alcohol consumption does reduce heart disease. It should be noted that the alcohol consumption by the study group was relatively light and it should not be assumed that heavy drinking will reduce heart disease risk further.

Rimm EB, Giovannucci EL, Willett WC, Colditz GA et al. Prospective study of alcohol consumption and risk of coronary disease in men. *Lancet* 1991; 338:464-468.

THE VALUE OF METHADONE

In the quarter-century since methadone was introduced as a treatment for heroin addiction, its effectiveness has been demonstrated throughout the world. Methadone has been found to be an attraction to a significant proportion of the addict population on a voluntary basis, with high retention rates and high cessation of heroin use.

Opposition to methadone programs almost universally attracts controversy and difficulty. Robert Newman, one of the key founders of methadone projects, has written about this rejection phenomenon. He has concluded that, in part, the problem is due to the widely-held perception that heroin addicts are incorrigible hedonists and therefore raise a good deal of intolerance in the community.

Newman RG. What's so special about methadone maintenance? *Drug Alcohol Rev* 1991; 10:225-232.

DEATH AND EROTIC ASPHYXIA

A new study has shown that the practice of erotic asphyxia is dangerous, particularly among men. More than 100 deaths have been recorded in two Canadian provinces since 1974. Autoerotic asphyxia is the practice of inducing cerebral anoxia, usually by means of self-applied ligatures or suffocating devices, while the individual seeks orgasm. This activity, which is found almost exclusively in men, sometimes results in death when the individual's self-rescue mechanism fails or he loses consciousness before he can employ it.

A general understanding of the practice, which might be helpful in treatment, is hampered by almost total lack of data and extraordinary variability in the circumstances of fatal cases. However, despite these variations, there are some patterns of behaviour. Some victims adopt transvestite behaviour, particularly in front of mirrors. The use of bondage, ropes, cords or chains is very common. In addition, a range of erotic objects and interests are commonly used, including pornographic magazines and vibrators.

Blanchard R and Hucker SJ. Age, transvestism, bondage and concurrent paraphilic activities in 117 fatal cases of autoerotic asphyxia. *Br J of Psychiatry* 1991; 159:371-377.

INPATIENT CARE ALWAYS NEEDED FOR SELECTED PATIENTS

It is now accepted that outpatient alternatives to inpatient psychiatric care can be valuable. A quasi-experimental study in Britain has shown that, however well developed community-based resources are for the care of patients with mental disorders, there appears to be a proportion of patients who are always best cared for in a psychiatric hospital.

Lawrence RE, Copas JB and Cooper PW. Community care: does it reduce the need for psychiatric beds? *Br J of Psychiatry* 1991; 159:334-340.

LOW HIV LEVELS IN AUSTRALIAN BLOOD DONORS

Since 1985 tests have been available to determine the presence of HIV antibodies in the serum of Australian blood donors. Up to the end of December 1990, more than five million donations had been tested for HIV antibodies and 46 were found to have the antibody. This is a very low level by international comparisons with, for example, the American levels being 10 to 20 times greater in the general population.

It would be anticipated that the levels would be low because blood donors are legally required to indicate whether they are among risk groups for HIV. Of the 46 donors with HIV antibodies, 11 reported male homosexual contact or injecting drug use. 10 could identify a heterosexual contact who was in a recognised HIV exposure category and two had received HIV infected blood transfusions. Four donors could not be followed up. The remaining 19 donors did not report any potential exposure to HIV other than heterosexual contact. The number of female donors with HIV infections whose only reported source of exposure was heterosexual contact has increased from nil in 1985-86 to four in 1989-90.

Kaldor J, Whyte B, Archer G, Hay J et al. Human Immunodeficiency Virus Antibodies in Sera of Australia Blood Donors: 1985-1990. *Med J Aust* 1991; 155:297-300.

HEPATITIS C AND TRANSPLANTED ORGANS

The Hepatitis C virus has now been shown to be transferable via the transplantation of organs. Hepatitis C virus is added to a growing list of viruses and other agents that can be transmitted by transplanted organs. These include the cytomegalovirus and herpes simplex virus as well as the human immunodeficiency virus, hepatitis A, hepatitis B and toxoplasmosis. HIV, cytomegalovirus and hepatitis C can be pretested and the organs not used for transplantation.

Periera BJG, Milford EL, Kirkman RL, Levey AS. Transmission of Hepatitis C Virus by Organ Transplantation. *New Eng J Med* 1991; 325:454-460.

EXERCISE BIKE INJURY RISK

A new source of injuries to children has been recognised — the exercise bike. At the Royal Children's Hospital in Victoria, 17 children have been treated for severe injuries to their fingers. These injuries occurred mainly when children put their fingers in unguarded spokes of the wheel or the exposed chain and sprocket wheel. Some of these injuries are major, resulting in amputation of fingers. Design modification and education of parents about the risks are warranted.

AGB Perks, Penny M, Mutimer KL. Finger Injuries to Children Involving Exercise Bicycles. *Med J Aust* 1991; 155:368-370.

EFFICIENCY OF NEO-NATAL INTENSIVE CARE UNITS

A new study at Westmead Hospital has shown that services with fewer than six ventilator cots were less cost-efficient than those with more cots, while those with 12 ventilator cots were the most efficient. It should be noted that the study did not include units that had more than 16 ventilator cots.

John E, Hind N, Roberts V and Roberts S. Cost-efficiency of neo-natal nurseries: the significance of unit size. *Aust J Public Health* 1991; 15:242-244.

BACK PAIN AND EXERCISE — NO CONCLUSIONS

Studies indicate that about 80 per cent of the population will suffer from back pain during their active lives. The complaints are usually self-limiting and in about 90 per cent of patients the complaints disappear within a few months, often with the help of some rest, analgesics and home exercises.

For patients with chronic back pain, many interventions are available but none seems to be clearly better than the others. Physiotherapy is probably most widely used for back complaints. The treatments they give include massage, heat, traction, ultrasound, or shortwave diathermy. But despite their widespread use the efficacy of these treatments remains questionable.

A review has been made of 23 randomised controlled trials. The outcome of these trials is mixed, although those studies reporting positive results of exercise therapy tended to have better methodology than others. However, no firm conclusions can be drawn about whether exercise therapy is better than other conservative treatments.

Koes BW, Bouter LM, Beckerman H et al. Physiotherapy Exercises and Back Pain: a blinded review. *Br Med J* 1991; 302:1572-1576.