coffee, decaffeinated or plain, contains a potent naloxone like opiate.⁵⁴

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Privatising water: implications for health

It was the realisation by John Snow and others that a safe water supply depended on removing waste products that prompted public authorities throughout Britain to take over private water and sewerage companies.¹ Now there are proposals to reverse the process. The white paper on privatising water supplies published in February 1986 proposed trials on metering water supplies to private dwellings.² (The water supplies of industrial consumers are already metered.) If the trials are successful then water metering might be introduced for all private dwellings over several years. What might be the implications for health?

Half of the world's hospital beds are occupied by patients with waterborne diseases, and about 30 000 children die every day from these diseases. An estimated three fifths of the world's population have inadequate supplies of drinking water, and one of the aims of the international drinking water

supply and sanitation decade is to provide good drinking water for all by 1989.

Yet in Britain we take safe drinking water and an adequate sewerage system for granted, although Britain has no defined standards for drinking water. Water authorities are responsible among other things for water supply and conservation, sewage disposal (which is often carried out by district authorities on an agency basis), control of river pollution, land drainage, and the use of water for recreation. The Water Authorities Association enables authorities to work together and to talk with one voice to the government and other relevant organisations.

People in developed countries use about 180 to 440 litres of water each a day, and in Britain lakes, streams, and underground aquifers are the main sources of water. The amount of treatment needed by the water depends on the quality of the source. Chlorination is used to ensure bacteriological safety, but filtration is needed to remove other pathogens; a failure in this system caused an outbreak of giardiasis in Bristol.³ Water supplies cannot be examined for all possible organisms that might cause disease, and so they are tested simply for concentrations of the normal gut flora of man and animals—that is, faecal coliform bacteria. The lack of defined standards for water supplies and the difficulties of testing for all potentially pathogenic organisms will make for difficulties in monitoring the quality of privatised supplies.

The British water and sewerage systems do have problems. The sewers are aging fast, particularly because of the weight of traffic, and many of the Victorian sewers simply empty sewerage into the sea. Large capital expenditure is needed to renew sewers and either to extend outfalls further from the shore or to build adequate treatment plants.⁴ In 1986 at least a fifth of sewerage treatment works in Britain failed to comply with the Control of Pollution Act 1974. Almost two thirds of waste water comes from industry and is more costly to treat than the water coming from private dwellings. Responding to these problems may be very expensive, and shareholders in a private company may be unwilling to pay or may want corners to be cut. They might also be reluctant to comply with strict new European Community directives on the quality of water because of the expense.⁵

Another potential difficulty is that most water authorities own the land surrounding the water catchment areas—so that they control what happens on that land. Private companies might be tempted to sell the land or rent it to the highest bidder and so lose control over its management. Other worries raised about privatisation centre on the lack of accountability of non-elected members of water authorities and on restrictions on the media being able to attend authority meetings.

All of these factors must be considered when a bill is drafted to privatise water supplies. But the record on privatisation makes me worry that they will not all be considered.

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Lichen sclerosus et atrophicus

Lichen sclerosus et atrophicus is a skin condition that affects both sexes, of all ages, and all areas of the body. Although it is not common, general practitioners will see it from time to time; and urologists, paediatricians, gynaecologists, specialists in genitourinary medicine, and pathologists as well as dermatologists may have to help in its management.

Lichen sclerosus et atrophicus has a typical clinical appearance (see figures), with ivory papules that coalesce into crinkly atrophic plaques, commonly showing speckled purpura. Histological examination shows that the epidermis

is thinned and that there is a subepidermal zone of featureless hyalinisation in which vessels are unsupported (hence extravasated red cells are often seen) above a deeper band of inflammatory cells. If the condition is severe and inflamed the epidermis may be hyperkeratotic and acanthotic. The aetiology of lichen sclerosus et atrophicus is obscure, but a link with autoimmune disease has been shown.¹⁻⁴ Many examples of familial incidence have been reported, and lichen sclerosus et atrophicus has been reported in identical twins,⁵ but HLA studies have been inconclusive.

In boys lichen sclerosus et atrophicus may cause phimosis. Material from circumcisions done for medical reasons is usually discarded, but in one study lichen sclerosus et atrophicus was shown to be the cause of phimosis in 14 of 100 boys aged 1 to 15 years; 13 of the cases were in the 59 boys

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2 Department of the Environment, Ministry of Agriculture, Fisheries, and Food. *Privatisation of the water authorities in England and Wales*. White Paper. London: HMSO, 1986. (Cmnd 9734.)

3 Jephcott AE, Begg NT, Baker IA. Outbreak of giardiasis associated with mains water in the United Kingdom. *Lancet* 1986;i:730-2.

4 National Economic Development Office. *Investment in the public built infrastructure*. London: NEDO Books, 1985.

5 World Health Organisation. *Guidelines for drinking water quality. Vol 1. Recommendations*. Geneva: WHO, 1984.