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"On the whole, Egyptians took a more active role in their destinies, starting with a healthy living regime. Besides the several baths everyone took during the day, men and women alike shaved all the hair from their heads and bodies to minimize the dangers of bacteria and germs. Then came certain dietary restrictions, such as not eating raw fish, and strict guidelines for analyzing dreams to discover any misfortunes on the horizon. To alleviate aches and pains, certain preparations were made. The Papyrus Edwin Smith relates what to do in the case of wounds—those received in battle as well in the course of everyday life. The Papyrus Eber is much longer and broader and includes everything from hair-replacement compounds (the Egyptians' practice of shaving their heads not withstanding) and wrinkle creams to what is billed as "delightful remedy against death" (half an onion mixed in froth of beer). This is the source of the famous prescription to treat a black eye with a slab of raw beef and a very sensible direction to eat figs and wash them down with beer for constipation." (Willard, Pat. *Saffron. The Vagabond Life of the World's Most Seductive Spice*. Boston: Beacon Press, 2001:33)

Although the SARS epidemic seems to be on the wane several valuable lessons may be learned from its effects. Firstly, new viruses can be hard to contain but reining in damaging misinformation appears to be even harder. SARS has probably resulted in tens of billions of dollars of economic damage through slowdown, loss of tourism, and cancelled trade. Secondly, molecular understanding of a virus can be frustratingly impotent. Although researchers deciphered the genetic code of SARS corona virus in days, developing a vaccine may take at least a year or more. Finally, global public health is obviously everybody's business. International trade and travel can deliver disease anywhere, anytime. (Go to editors@sciam.com)

Significant concerns about the cost structure of new drug development have been raised by many critics. This is especially true in light of the evidence that the average drug company now spends more on advertising than it does on research and development. Nevertheless, a recent analysis by Joseph A Di Nasi of Tufts University Center for the Study of Drug Development suggests that the cost of developing a single new drug may approach \$900 million if post marketing studies (additional clinical research that the US Food and Drug

Administration sometimes requires as a condition for approving a new drug) are taken into account. (Frank RG. New estimates of drug development cost. *J Health Econ* 2003;**22**:325–30)

Several studies have suggested that pregnant women who consume large amounts of fish contaminated with mercury may have an increased risk of giving birth to a child with developmental problems. However, a study from the University of Rochester that looked at women from the Seychelles, who ate an average of 12 fish meals a week and had six times the mercury levels of a typical American, call this notion into question. In this study the children born to these women showed no meaningful cognitive problems (the primary concern regarding mercury contamination). Previous studies may have found a link because the women involved ate whale meat, which has five times the mercury concentration of more common ocean fish consumed in the Seychelles. (*Lancet* 2003;**347**:1382–6)

Despite the claims of cloning enthusiasts many scientists think that today's cloning methods cannot produce a viable human baby. New research suggests that cloning of primates may well be impossible. Scientists have attempted to clone rhesus macaques but none of the resulting embryos survived implantation. Researchers found that although cell division appeared superficially normal, chromosomes were separated unevenly; some cells end up with too many and others too few. Usually spindles of protein tubes helped to pull opposite ends of a dividing cell apart and insure that the chromosomes split up equally. In normal rhesus egg cells, vital spindle proteins are concentrated near the egg's chromosomes which appear to be inadvertently removed during the first steps of the four different nuclear transfer techniques that investigators attempted. (*Science* 2003;**300**:1126–9)

The association between onset and development of myopia and sustained near work has figured in research literature for many years. Of particular interest has been the finding that immediately after a period of sustained near work, myopes are less able to accommodate accurately for distance than emmetropes or hyperopes, a phenomenon described as near work induced transient myopia. In a study from Hong Kong of 45 Chinese children, 35 of whom were myopes and 10 of whom were emmetropes, a significant post-task blur driven accom-

modative near work transient myopia was documented. This was sustained for longer periods than had previously been found in white adults. The authors suggest therefore that the propensity to substantial and sustained blur driven near work induced transient myopia is a feature of young Hong Kong Chinese myopes and that this may exacerbate a genetic predisposition of these eyes to progression of myopia. (*Invest Ophthalmol Vis Sci* 2003:2284–9)

Although attempts to reduce accidental trauma may be effective, childhood injuries remain a major public health problem in most countries. In a study from California the annual injury rate in children 3 years of age and less was found to be 371 per 100 000. Falls, poisoning, transportation, foreign bodies, and burns were the most frequent cause of injury. Clearly additional attention to preventing injuries in young children is necessary. (*Pediatrics* 2003;**111**:683–92)

An abnormal prion protein has been suggested to be the cause of Creutzfeldt-Jakob disease in humans. A recent study finds that antibodies directed against a specific sequence of amino acids in the prion protein can selectively recognise the variant associated with disease and could lead to a new way to diagnose and possibly treat spongiform encephalopathies. The Tyr-Tyr-Arg sequence is exposed in the misfolded prion, but not in the cellular normal prion protein. The next step is to use this antibody probe to explore the distribution and structure of pathologically folded proteins. (*Nature Medicine* 2003, advanced online publication, DOI 10.1038/nm883)

A fundamental aspect of visuomotor behaviour is deciding where next to look to move. Under certain conditions, the brain constructs an internal representation of stimulus location on the basis of previous knowledge. It uses this to move the eyes or to make other movements. Neuronal responses in primary visual cortex are modulated when such an internal representation occurs. V1 responses are modulated by non-visual influences and top-down pathways. They convey signals for an internal model of stimulus location. The influence on V1 responses of internal model of stimulus location demonstrates that such representation arises in distributed cortical networks, yet leads to specific changes in response selectivity and dynamics at the earliest stages of cortical visual processing. (*Science* 2003;**300**:1758–61)



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Br J Ophthalmol 2003 87: 1197
doi: 10.1136/bjo.87.9.1197

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