

transports compare well with the cross equatorial southward transport of  $83 \times 10^{13}$  W during summer half year and  $14 \times 10^{13}$  W during winter half year obtained on the basis of annual range of SST, under the assumption that temperature variation decreases linearly with depth to zero at 150 m<sup>5</sup>. About 75% of heat export from the north Indian Ocean is found to take place during summer monsoon. This is in conformity with the findings of Shetye<sup>11</sup> that advection during southwest monsoon removes from Arabian sea a major part of heat gained at surface during the year.

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## NEWS

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### CURB YOUR APPETITE

As far as we know, humans are the only animals who eat not only because we are hungry, but sometimes just for the sake of it. The results, although variable, are readily apparent, and attempted remedies can be seen in the form of the different 'diets' offered in scores.

Another route to losing weight is to use appetite suppressants—traditionally amphetamines were prescribed by many doctors in the 1960s and 1970s to help 'fight the flab'. But these were banned when they were found to be addictive. Now a research team headed by Dr Michael DiVovi at Monell Chemical Senses Center in Philadelphia has synthesized a fructose analogue derived from crab and lobster shells, which could prove to be a 'perfect' appetite suppressant.

The compound is 2,5-anhydro-D-mannitol and can be synthesized from glucosamine. (Glucosamine is derived from a polymer found in shellfish shells.) Unlike the traditional appetite suppressants, which act on the central nervous system, the fructose acts

predominantly in the liver. The group at Monell has good indirect evidence that the compound is readily utilized by the liver and is not taken up appreciably by the brain.

DiVovi's group did an experiment in which they fed a solution of the fructose analogue to some nocturnal rats in the mornings; they consistently ate more during the night than they normally would. Then they fed the chemical at night and the rats ate far less than they normally would. Thus the compound did not stop the rats from getting hungry, it just made them satisfied with less food.

Ultimately Dr DiVovi's aim is to be able to describe a mechanism for appetite control. His group is currently making derivatives of 2,5-anhydro-D-mannitol so that they can isolate the part of the molecule which is responsible for regulating appetite. (*Chemistry in Britain*, Vol. 24, No. 1, p. 12; Published by The Royal Society of Chemistry, Burlington House, London W1V 0BN).