Paed Medical guidelines
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Assessment of Dehydration:

Dehydration has traditionally been assessed by physical signs which are associated with differing degrees of dehydration. How to use these physical signs has always been a problem e.g. if there is one abnormal sign in the 5% dehydration category but all the rest are normal does that mean 5% dehydration or not ? Is a child with all the physical signs in the 5% category in the same sort of physiological state as the child with one sign only ?

To assess dehydration the following techniques can be used:

1) Comparison of current weight with present weight (provided similar conditions e.g. undressed

2) Comparison of expected weight with actual weight, proved an expected weight is likely to be reliable e.g. a child growing along a constant centile can reasonably be expected to have continued.

3) An alternative scheme of assessment combines the physical signs, either into a set of four or a set of 10 [1].

Set of 4 physical signs:

Capillary refill > 2 secs
Dry mucous membranes
Absent tears
General appearance.

If two of these are abnormal there is 5% dehydration and if 3 are abnormal there is 10% dehydration.

The implication is that there can be 1 of these physical signs with <5% dehydration.

Set of 10 physical signs:

Decreased skin elasticity
Capillary refill > 2 secs
General appearance
Absent tears
Abnormal respirations
Dry mucous membranes
Sunken eyes
Abnormal radial pulse
Tachycardia
Decreased urine output.

If 3 are abnormal there is 5% dehydration and if there are 7 there is 10% dehydration.

[1] Corelick MH, Shaw KN, and Murphy KkkkO Validity and Reliability of Clinical Signs in the Diagnosis of Dehydration in Children. Pediatrics 1997; 99: