

MPD and MED testing

Anatomical site

Use uninvolved skin on the upper-back because this site usually has a lower MED (and by inference MPD) than other sites sometimes used for MED/MPD testing (Gordon 1998, Leslie 2004, Rhodes 1992, Waterston 2004) so may therefore prevent burning. It also has the advantages of being a large area of relatively constant sensitivity, and tending to be less hairy than the abdomen. The suggested location is at the level of the axilla, midway between the posterior axillary line and the spine.

If skin on the upper-back is not suitable for testing because it is involved by disease, then use (in decreasing order of preference) the abdomen (just above the level of the umbilicus avoiding the midline), lower back or buttocks. If the patient has an obvious tan at all sites except the buttocks, consider using the buttocks, or treating the patient with the buttocks covered. Clearly document the location of the test sites and the range of doses used.

Timing of readings

The readings should be made 4 days (96 hours) later for the MPD (Cox 1989, Ibbotson 1999, Man 2003a, Man 2003b, Man 2004), and 24 hours later for the MED, and documented.

Reading a MPD/MED

The MPD/MED is the dose that provokes a just perceptible erythema (Quinn 1994). MPD/MED reactions can be graded as follows:

- 0 no reaction
- 0.5 just perceptible = MPD/MED
- 1 definite borders
- 2 intense erythema, not palpable
- 3 intense erythema, palpable
- 4 intense erythema with blisters



Maximum initial doses for PUVA

In the case of oral PUVA, if all MPD doses tested are negative, first consider increasing the dose of oral psoralen by 10mg (NB. the maximum dose is 60mg) and repeating the MPD test.

The boxes below on the right side of this page give maximum initial doses. We suggest that the stated doses are not exceeded, regardless of the results of the MPD. Therefore, the only reason to test the higher doses in the MPD series is for audit/research, and they can be omitted if this will not be done.

Dose series for MPD testing

If skin type VI, use a skin-type based regime.

Oral 8-MOP and 5-MOP

Use a Waldmann skin tester; this gives 20% more UVA than it claims, so for example when it says it is giving 0.5 J/cm² it is actually giving 0.6 J/cm². The doses given below are the true doses. All doses are in J/cm².

Skin type						
I, II	0.6	1.2	2.4	3.6	4.8	6.0
III, IV	1.8	2.4	3.6	6.0	8.4	10.8
V	1.8	2.4	3.6	6.0	8.4	10.8

Max initial dose
3.0
4.2
5.4

Bath 8-MOP Use templates. Doses are in J/cm².

Skin type						
I, II	0.14	0.20	0.28	0.39	0.55	0.77
III, IV	0.2	0.28	0.39	0.55	0.77	1.08
V	0.28	0.39	0.55	0.77	1.08	1.51

Max initial dose
0.7
1.0
1.3



Dose series for MED testing

If skin type VI, use a skin-type based regime

TL-01 Use templates. Doses are in mJ/cm².

Skin type						
I, II	100	140	200	280	390	550
III, IV	140	200	280	390	550	770
V	200	280	390	550	770	1080

Suggested initial dose if all readings negative
540
750
1060

UV6 Use templates. Doses are in mJ/cm².

Skin type						
I, II	70	100	140	200	280	390
III, IV	100	140	200	280	390	550
V	140	200	280	390	550	770

Suggested initial dose if all readings negative
380
540
750



Test doses

Cases of unrecognised pathological photosensitivity due to, for example, solar urticaria, chronic actinic dermatitis or drug-induced photosensitivity, are very rare. However, in such cases the consequences of whole-body exposure to UV are potentially serious. Therefore prior to commencing a course of phototherapy, in cases where an MED or MPD is not performed, it is desirable to expose a small area of skin (for example, a square area on the upper back measuring 5cm x 5cm) to a dose of UV equalling the dose that will be given for the first whole-body treatment. The area should be inspected immediately after irradiation, and 24 hours later (in the case of UVB) or 96 hours later (in the case of PUVA). If erythema is present, either an MED/MPD must be performed or a dermatologist should be consulted, as appropriate. If erythema is not present, then at the time of the 24 or 96 hour inspection the whole body can be exposed to the starting dose.

Test doses are usually not required if treatment will only be given to a localised area, such as the palms and soles. They may also not be required if a patient has had phototherapy within the previous year without problems, and is not taking any systemic medication.

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