Clinically Validated Equipment for Domiciliary Visits

This Fact Sheet is aimed at those freelance dietitians whose business requires client measurements such as weight/height and perhaps blood pressure or body fat composition. It is recommended that you invest in professional equipment. A suggested list of items that you may need is provided within this factsheet.

Your equipment must be clinically validated. Items that are available from the high street are not designed for medical use and their accuracy is not validated. Many scales and body fat analysers state clearly in the instruction booklet (not on the box) – ‘not for use by healthcare professionals’. Remember that your clients should expect professional equipment that meets the regulatory standards.

Professional equipment can be purchased at a reasonable price if you are prepared to shop around. A guide price, and the names of a selection of manufacturers, are provided to help you get started.

Weighing Scales – ensuring you make the right choice

Scales used for diagnostic purposes are subject to regulations as laid down by the LACORS 2009 final report of the LACORS National Medical Weighing Project1 and the 2010 DH Estates and Facilities Alert2, and need to be Class III or higher3,6 (i.e. Classes I to III); regulations state that Class IV scales should only be used for weighing substances such as sand, ballast and other bulk aggregates1.

All manufacturers must have their weighing scales approved under the EC Directive 2009/23/EC before sale, and the following is a guide to the markings that should be present4:

The first three should be present on receipt from the manufacturers and at all times on the scale – do not remove

The red star means the equipment is not fit for use

The final marking means a repair has been made – the scale is fit for use

Scales should have a data plate which gives a serial number and an approval number similar to the label shown below:

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The scales should also be clearly labelled to show the maximum weight the scale can handle and the scale accuracy. Digital scales give readings in steps, for example:

- if the scale division is 100g, then the true weight is within +/- 50g for the reading.
- if the scale division is 50g, then the true weight is within +/- 25g for the reading.

**Weighing Scales – Maintenance and Calibration**

It is recommended that all medical scales are checked for calibration annually as a minimum by a suitably qualified organisation. The UK Weighing Federation provides a nationally recognised Certificate of Competence for persons engaged in the industry, who must uphold the UKWF Code of Practice to maintain their membership; compliance with this code has been compulsory since 1st January 1998. A calibration certificate should be provided which shows scale make and model, serial number and location, linearity and hysteresis, corner testing (where applicable) and repeatability test.

**Consent form**

It is strongly recommended that you obtain the written consent of the client before any measurements are made. Remember that it is dangerous to use devices in certain medical conditions, and this is especially so for the measurement of percentage body fat by bioelectrical impedance. The accuracy of measurements is also limited by some situations, as indicated in the manufacturers’ instructions. A sample consent form is attached for your information (Appendix 1).

Overleaf you will find a table summarizing currently available equipment to assist you in making an informed choice; please treat this as a guide rather than a definitive equipment list, as there are new devices, manufacturers and suppliers entering the market all the time. The information on standards and legislative guidance provided in this fact sheet should ultimately guide you in ensuring that your equipment is fit for purpose, whichever brand and model you choose to purchase.
<table>
<thead>
<tr>
<th>Equipment</th>
<th>Standards</th>
<th>Additional points</th>
<th>Manufacturers/retailers</th>
<th>Guide price (Excl. VAT – April 2013)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scales</td>
<td>EC Directive 2009/23/EC</td>
<td>If you advise morbidly obese clients, ensure your scales have the capacity to weigh these individuals. Most recommended scales now have a capacity up to 200kg.</td>
<td>SECA 875 – price quoted is from Medisave</td>
<td>£129 (case £23.35)</td>
</tr>
<tr>
<td></td>
<td>DH Gateway Alert EFA/2010/001</td>
<td>It is worth shopping around online when ready to purchase; some suppliers also offer start-up package deals.</td>
<td>SECA 889 with remote display – price quoted is from Medisave</td>
<td>£223.09 (case £23.35)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Marsden MS-4102L / MS-4102DD (with remote display) – price quoted is from Marsden direct</td>
<td>£205/£225 (case £30)</td>
</tr>
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<td></td>
<td></td>
<td></td>
<td>UWE ABW-150 – price quoted is from <a href="http://www.countyscales.co.uk">www.countyscales.co.uk</a></td>
<td>£225 plus £55 stamping fee</td>
</tr>
<tr>
<td>Height Measure</td>
<td>Ensure that devices are clinically validated for health professional use.</td>
<td>Ensure these are portable as many height measures require fixing to a wall; graduations should be displayed to 0.1cm.</td>
<td>SECA Leicester Height Measure – from Medisave online</td>
<td>£49.50</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Usually comes with a box but fabric cases can be purchased as an optional extra.</td>
<td>Marsden HM-250P Leicester Height Measure – from Marsden direct</td>
<td>£53</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>ASSIST Height Meter - from Fitness Assist online</td>
<td>£60</td>
</tr>
<tr>
<td>Skin-fold callipers</td>
<td>Ensure that devices are clinically validated for health professional use.</td>
<td>Plastic callipers are not suitable for professional use.</td>
<td>Harpenden skinfold callipers - from Fitness Assist online</td>
<td>£140</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>JAMAR medical skinfold callipers - from Physio-med online</td>
<td>£99</td>
</tr>
<tr>
<td>Blood Pressure Monitor</td>
<td>Ensure that devices are clinically validated by the British Hypertension Society.</td>
<td>Be aware that cuffs come in different sizes; ensure that you have a big enough cuff for the morbidly obese, e.g. 42cm. Omron devices are supplied with a cuff that measures up to 32cm arm circumference.</td>
<td>A&amp;D UA-787 Plus</td>
<td>£58.79</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Omron MIT Elite</td>
<td>£85.06</td>
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<td></td>
<td></td>
<td></td>
<td>Omron MIT Elite large cuff 32-42cm</td>
<td>£9.36</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Omron 907 Professional</td>
<td>£195.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Omron 907 large cuff 32-42cm</td>
<td>£46.77</td>
</tr>
<tr>
<td>Body Fat Monitors (Bio-electrical impedance analysis)</td>
<td>Ensure that the product description states that it is a clinically validated medical device.</td>
<td>Requires hands to be moist enough to conduct electrical impulse. Carry some wet wipes with you.</td>
<td>OMRON BF306 Body Fat Monitor – from Medisave online</td>
<td>£31.91</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Bioelectrical impedance analysers cannot be used in</td>
<td>Tanita BC545N Segmental Body Composition Monitor - from Fitness Assist online</td>
<td>£166.66</td>
</tr>
</tbody>
</table>

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certain medical conditions and in those with pacemakers or neuro-implants.

Ensure devices are for professional use and the scales are the appropriate grade.

Bodystat measurement requires the subject to be lying flat and this may not always be suitable for domiciliary visits or within some clinics.

| Tanita Professional SC330S Body Fat Monitor - from Fitness Assist online | £1,304 |
| BodyStat 1500 Impedance Monitor – from Williams Medical online | £669 |
| Bodystat 1500 MDD (also suitable for children >6 yrs) – from Williams Medical online | £1,849 |
| Bodystat Quadscan (suitable from birth) also measures hydration in detail; can assess muscle wasting – from Cranlea online | £2,995 |

Other useful clinical items

A good tape measure (non-stretch) is necessary for measuring waist circumference and other anthropometry. Tape measures which contract at the press of a button are worth considering. Use a disinfectant wipe to clean the tape measure if it comes into contact with skin.

Personal protection items

Keep within easy reach a personal alarm or UV marker spray such as Stoppa-Red, manufactured by MACE. These are available to buy on the internet for about £19.99.

Navigation items

For the directionally challenged, satellite navigation is extremely useful, though you need to be aware of its limitations and take other directions too. This is particularly relevant to rural areas where a post code covers a wide area, where a house may only have a name rather than a number, and where GPS and mobile reception can be patchy.

Manufacturer’s details

For further information, up to date prices and availability, below is a list of additional websites that you may wish to consult to obtain the best deal:

- Blood pressure monitor – www.omron-healthcare.com

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References

2. DH (2010) Estates and Facilities Alert Gateway Ref 13924
4. LACORS (2009) Weighing Patients for diagnostic purposes: Staff Toolkit

Fact Sheets are available on request from the Membership Officer of the Freelance Dietitians Group.
To obtain further information about the Freelance Dietitians Group visit the BDA website at www.bda.uk.com.

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Appendix 1: Informed Consent

I give my consent for a dietetic consultation with _______________ RD.

I will declare all relevant medical details as listed below and understand that failure to do so will exempt _______________ from any liability.

Medical History:
_________________________________________________________________________________
___________________________________________________________________

Medication being taken:
_________________________________________________________________________________
___________________________________________________________________

I give my consent for _______________ RD to contact my GP about the above where appropriate and understand that he/she will inform my GP of the dietary treatment given.

I consent as shown to the following measurements being taken as is deemed necessary:

- Height: Yes/No
- Weight: Yes/No
- Waist circumference: Yes/No
- Hip circumference: Yes/No
- Blood Pressure: Yes/No
- **Percentage body fat**: Yes/No

*By circling ‘yes’ I declare that I have none of the following:
  - Medical implants, e.g. pacemaker, neuro-implant
  - Heart disease
  - Acute contagious disease
  - Pregnancy

Percentage body fat measurement is not recommended with the above conditions.

I understand that percentage body fat measurement is not valid in the following circumstances. I do not fall into any of the circumstances listed below:

- I have had a substantial meal or drunk a large amount of water within the last 4 hours
- I have done vigorous exercise within the last 4 hours
- I have just had a bath or sauna
- I have swelling/oedema
- I am a child/elderly/pregnant/post-menopausal
- I have been drinking alcohol in the last 4 hours
- I am on dialysis
- I have osteoporosis
- I have a fever

I will inform the dietitian of any changes to the above during the course of treatment.

Signed_____________________     Date_____________     Print Name ___________________

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