PRESCRIPTION

- Assessment → interpretation → prescription (individually prescribed programme)

**MODE**
- Type of exercise
  - E.g. Aerobic exercise using a static bike

**FREQUENCY**
- How often
  - Times per day, per week

**DURATION**
- Length of time
  - Per set, per session

**INTENSITY**
- How hard should they be working?

**PRECAUTIONS**
- Different pathologies may have different responses
- Disease specific precautions e.g. tone or sensory

**PROGRESSION**
- As gains are made the prescription will need reviewed

### Recommendations for Aerobic Exercise

150 minutes (2.5 hours) per week

Moderate intensity exercise in bouts of 10 minutes or more

i.e. 30 minutes 5 times per week

- Optimal frequency & duration (duration) of aerobic exercise still not known
  - something is better than nothing
  - Even relatively small ↑s in physical activity are associated with some protection against chronic disease and an ↑ QOL

- Progress & building-up activity levels gradually particularly for most sedentary patients

- Differential response not known with aerobic training across pathologies – may have to modify for different groups

<table>
<thead>
<tr>
<th>Activity</th>
<th>Intensity (METs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ironing</td>
<td>2.3</td>
</tr>
<tr>
<td>Cleaning and dusting</td>
<td>2.5</td>
</tr>
<tr>
<td>Strolling (2mph)</td>
<td>2.5</td>
</tr>
<tr>
<td>Painting/decorating</td>
<td>3.0</td>
</tr>
<tr>
<td>Walking (3mph)</td>
<td>3.3</td>
</tr>
<tr>
<td>Hoeing</td>
<td>3.5</td>
</tr>
<tr>
<td>Golf</td>
<td>4.3</td>
</tr>
<tr>
<td>Badminton (social)</td>
<td>4.5</td>
</tr>
<tr>
<td>Tennis (doubles)</td>
<td>5.0</td>
</tr>
<tr>
<td>Birk walking (4mph)</td>
<td>5.0</td>
</tr>
<tr>
<td>Mowing lawn (walking with power mower)</td>
<td>5.0</td>
</tr>
<tr>
<td>Cycling (10-12mph)</td>
<td>6.0</td>
</tr>
<tr>
<td>Aerobic dancing</td>
<td>6.5</td>
</tr>
<tr>
<td>Cycling (12-14 mph)</td>
<td>8.0</td>
</tr>
<tr>
<td>Swimming (glow crawl)</td>
<td>8.0</td>
</tr>
<tr>
<td>Tennis (singles)</td>
<td>8.0</td>
</tr>
<tr>
<td>Running (10mins/mile)</td>
<td>10.0</td>
</tr>
<tr>
<td>Running (8.5mins/mile)</td>
<td>11.5</td>
</tr>
<tr>
<td>Running (7.5 mins/mile)</td>
<td>13.5</td>
</tr>
</tbody>
</table>

Activities that would be light (white), moderate (light red) and vigorous intensity (dark red), along with the associated metabolic equivalent of task (MET).

Data from Department of Health (2004)
Recommendations for Strengthening Exercises

Progressive muscle strengthening activities
Involve major muscle groups of the body
2 or more days per week

- Low - moderate resistance in grade 3 or above
- Consider which muscles to strengthen & in which position
- Increase repetitions rather than weight
- Muscle soreness no more than 48 hours

GENERAL ADVICE FOR PATIENTS

- Individually prescribed aerobic and strengthening exercises are safe (following assessment & risk screening)
- Feel comfortably out of breath, but still be able to talk, and the exercise should make them perspire
- Do not exercise to exhaustion
- Recognise when it is time to stop
- Next day tiredness and fatigue
- May not have enough energy left for essential functional tasks
- Do it in short bouts & build up gradually
- Avoid excessive eccentric activity
- Be aware of ‘over-work weakness’
- Muscle soreness should not last longer than 48 hours
- The gym isn’t the only place to exercise
- If they experience unusual symptoms or experience pain then advised to stop exercising & to seek physiotherapist or GP advice
- To achieve regular physical activity, people need to integrate physical activity into their everyday lives
- Make it fun & sociable!

TAKE HOME MESSAGES

- Physical activity is important for improving long term health and well being
- Physical inactivity is highly prevalent in pw disabilities
- The optimal dosage & content of exercise interventions for people with a range of long-term neurological conditions has not been clearly established
REFERENCES

- Sallis R (2009) Exercise is medicine and physicians need to prescribe it! Br J Sports Med; 43:3–4