Future Projects

- Active head support – for people with weak neck muscles
- Active Chair – for back pain prevention and relief
- Sip-aid – for people who cannot create suction with their mouth
Active head support – the need

- Requested by members of Motor Neurone Disease Association (MNDA)
- For people with weak neck muscles
- People currently propped in a reclined position or in a rigid support collar
- Difficulties eating, drinking and having conversations
Active head support

- New technology available
- Support collar, or forehead support
- Posture support
- Supports the head in a neutral position
- Moves head in a range of useful movements
- Uses either eye control or hand control
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Active Chair – the basis

- Based on Brunel Active Balance Saddle (BABS) for children with cerebral palsy
- Moves with movement of a walking horse
- Theory, movement prevents and relieves back pain
- Which movements are most effective?
Active Chair

- Two types of chair
  - Therapeutic chair
  - Chair for workers with sedentary occupations
- Chairs with universal movements
- Analysis phase, different motion programmes
- Reduce to about 6 motion programmes
- Clinical testing
Test objective measures of back pain assessment such as electromyography and thermography
Research other objective test measures
Could a stress indicator to be used as a measure of outcome in this work?
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Thermography

Infra red picture of a volunteer’s back and again after 10 minutes
Sip-aid – the need

- Requested by members of Motor Neurone Disease Association (MNDA)
- For people who can no longer create suction with their mouths
- A drinking aid to enable people to be able to feed themselves drinks
Sip-aid

- Pumped drinking aid
- Portable, battery operated
- All parts disposable or cleanable
- Useful for most types of drink
Active head support
   - Clinical rehabilitation specialists

Active Chair
   - Clinical back pain specialists
   - Office chair manufacturers

Sip-aid
   - Industrial partner