

# DUAL DENSITY posture support



## Dual Density Posture Support

### Ergonomic to the core

Ergonomics is about 'fitting the environment to the human form'. Ergonomic seating has become so important today because the average office worker spends up to 80% of their time in a chair.

The work Ergonomic derived from the Greek ergon (work) and nomos (laws) to denote the science to work, ergonomics is the study of adjusting the environment to suit people; especially the science that seeks to adapt work or working conditions to suit the worker.

To be at our most productive and creative, the environment needs to be matched to the human form.

Good posture is maintained throughout the day; oxygen intake is improved; blood flow to the legs is increased' productivity and concentration is enhanced; and general health and well being are improved.

### The Challenge

People are not designed to sit for long periods of time. Just as a pyramid cannot rest on its apex without succumbing to the forces of gravity, nor can the pelvis carry the weight of the body without slipping forward and creating unnatural pressure to bear on the spine. This forward movement of the pelvis causes the spine to form a 'C' curve creating significantly more pressure on the vertebrae and back muscles.

Office chair design provided partial solutions through enhanced lumbar support, however this does not prevent the pelvis from tending to slide forward.

A unique solution was required which prevented the forward movement, maintained the natural 'S' curve of the spine whilst also maximising blood circulation throughout the lower back and legs.

### It's worth a Gregory

Our story began in the mid 1980's when physiotherapist and company founder, Peter Gregory, was commissioned by Colgate-Palmolive to investigate injuries in the office workplace.

The culmination of his research was the unique and patented Dual Density Posture Support System, which has been recognised by ergonomists and occupational health and medical professionals as providing a superior seating solution for improved office efficiency.

### The Design

Peter Gregory's findings led to a patenting the award winning Gregory seat design Dual Density Posture Support. Dual Density features firmer foam in the front half of the seat and softer foam in the back half.

The separation of the two foam densities is indicated by the split. The pelvis gently 'sinks' and is supported in the softer section in the correct seating position at the back of the chair.

Firmer foam at the front discourages the pelvis from sliding forward into the slouching "C" curve of poor posture.

The moulded foam also encourages and improves blood circulation behind the thighs. With the added height adjustable lumbar support the spine is maintained in the

healthy, upright "S" curve of good posture which also creates less stress on the arms, shoulders and neck throughout the day.

### How we can help

Most of Australia's top 100 companies have used Gregory as their task chair or as an aid for staff with back or work related injuries.

Manufactured in Australia, Gregory chairs are recognised by ergonomists and OH&S professionals as providing the best possible seating solution for the modern office and an extremely high level of comfort.

Based on results of ergonomic evaluation the Dual Density range of chairs have proven to be superior in reducing OH&S risks, looking after employee well-being while providing exceptional comfort.

A complete family of chairs that suit a whole range of people with small, standard and large seat options. Large seat chairs can be fitted with a heavy-duty kit to support up to 160kg and heavy-duty use.

### Benefits of the Gregory Posture Support System

#### Decreases:

- pressure and stress on the spine
- injuries due to this pressure
- fatigue caused by poor posture
- insurance claims, therefore improving company profitability
- absenteeism

#### Increases:

- lifestyle- if your back is healthy, so is your life
- productivity-people work better when they are comfortable.
- company morale-if staff feel management are looking after them, they will be happier and more loyal.
- More oxygen in the blood increases concentration. Lungs are able to expand better with good posture.
- concentration

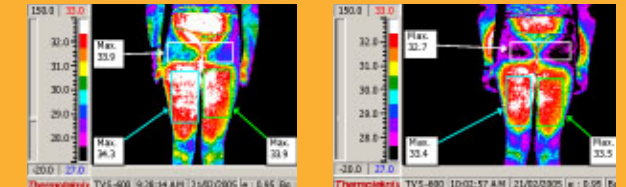


## Research



Gregory has used scientific evaluation in the testing of its Healthy 'S' curve this shows the head is properly balanced to indicate how the spine sits over a period of time.

Thermographs show surface temperatures to indicate the difference in blood flow in the body over a period of time in a Gregory chair compared to an ordinary chair.



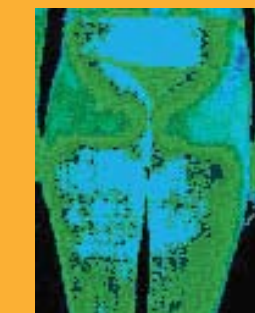
Gregory Dual Density  
Posture Support

Ordinary chair

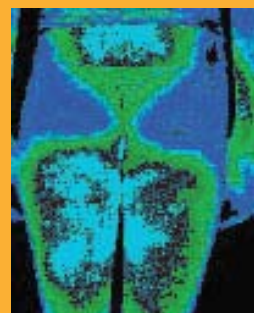
Surface temperature is a function of the heat imparted by the body's circulation system. This means that warmer temperatures on the body's surface shows greater blood flow in the measured area.

The Ordinary chair shows lower surface temperature which means less blood flow and less comfort.

Small changes in surface temperature indicate larger changes in the deeper tissues. White areas show increased blood flow.



Gregory chair  
Temp 34.3°



Ordinary chair  
Temp 33.4

Thermographic images produced by Thermal Imaging Services Pty Limited February 2005

