

Introduction: Managing Fatigue 2012

Fatigue Management Education

Your company is providing training courses and educational materials about fatigue, the effects of shiftwork, how off duty activities contribute to fatigue, and how to recognize the signs of fatigue.

A worthwhile new year goal for individuals is to read the materials, discuss with families and co-workers, and apply the lessons learned on the job and off the job.

What other fatigue management goals would be worthwhile for you to set in 2012?

Homeostatic Conditions and Pipeliners!

A Control Center Manager recently e-mailed me and asked if the FAID® software we use for fatigue modeling of shift schedules and hours of service accounted for homeostatic conditions of pipeline employees. My first thought was what in the world has happened when pipeliners even know homeostasis exists.

My second thought is that my health and well-being might be better today if anyone, myself included, had known about homeostasis when I worked shiftwork.

Homeostasis is the tendency of the physiological system to maintain internal stability, as the parts of the system respond to situations that disturb its normal conditions.



Rotating shift work disturbs normal conditions and functions of biological systems. FAID® is a "biomathematical model" that considers homeostatic effects on a group of human beings who were the people involved in the original research and applied studies. The FAID® algorithm is based on these four items:

- 1) The time of day of work and breaks;
- 2) The duration of work and breaks;
- 3) The work history over the last seven days (this is weighted so that the most recent days provide the most input);
- 4) The biological limits on recovery sleep (basically, this acknowledges that you can't bank up sleep. That is, there is only a certain amount of sleep that can be obtained in a break of certain duration at a certain time of day.)

Homeostatic issues are embedded in the FAID® algorithm, due to the recurring changes in time of day of work and breaks, the duration of work and breaks changing from time to time, the work history, and the biological limits on recovery sleep. A human being working rotating shifts attempts (futile though it may be) to maintain stability even as normal conditions are regularly disturbed.

We manage these changes through sleep whenever we can, resting whenever we can, adapting over time, and developing personal strategies for fatigue management.