

because shivering can be discerned by the EMG burst activity due to shivering. However, these measurements are hampered by their intrusiveness. Whether the shivering activity is predictive of a person's thermoregulatory status/body temperature is unknown, but is currently an area under investigation through specifically designed actigraphs. Off-the-shelf wrist-mounted actigraphs are usually not designed for water immersion. Biovibration characteristics as captured through water-proofed wrist-mounted DSP actigraphy may enable investigators to quantify these shivering responses.

The invention can take the form of an entirely hardware embodiment, an entirely software embodiment or an embodiment containing both hardware and software elements. In at least one exemplary embodiment, the invention is implemented in software, which includes but is not limited to firmware, resident software, microcode, etc.

Furthermore, the invention can take the form of a computer program product accessible from a computer-usable or computer-readable medium providing program code for use by or in connection with a computer or any instruction execution system. For the purposes of this description, a computer-usable or computer readable medium can be any apparatus that can contain, store, communicate, propagate, or transport the program for use by or in connection with the instruction execution system, apparatus, or device.

The medium can be an electronic, magnetic, optical, electromagnetic, infrared, or semiconductor system (or apparatus or device) or a propagation medium such as carrier signal. Examples of a computer-readable medium include a semiconductor or solid state memory, magnetic tape, a removable computer diskette, a random access memory (RAM), a read-only memory (ROM), a rigid magnetic disk, and an optical disk. Current examples of optical disks include compact disk-read only memory (CD-ROM), compact disk-read/write (CD-R/W) and DVD.

A data processing system suitable for storing and/or executing program code will include at least one processor coupled directly or indirectly to memory elements through a system bus. The memory elements can include local memory employed during actual execution of the program code, bulk storage, and cache memories which provide temporary storage of at least some program code in order to reduce the number of times code must be retrieved from bulk storage during execution.

Network adapters may also be coupled to the system to enable the data processing system to become coupled to other data processing systems or remote printers or storage devices through intervening private or public networks. Modems, cable modem and Ethernet cards are just a few of the currently available types of network adapters.

Computer program code for carrying out operations of the present invention may be written in a variety of computer programming languages. The program code may be executed entirely on at least one computing device, as a stand-alone software package, or it may be executed partly on one computing device and partly on a remote computer. In the latter scenario, the remote computer may be connected directly to the one computing device via a LAN or a WAN (for example, Intranet), or the connection may be made indirectly through an external computer (for example, through the Internet, a secure network, a sneaker net, or some combination of these).

It will be understood that each block of the flowchart illustrations and block diagrams and combinations of those blocks can be implemented by computer program instructions and/or means. These computer program instructions may be provided to a processor of a general purpose computer, special purpose computer, or other programmable data processing

apparatus to produce a machine, such that the instructions, which execute via the processor of the computer or other programmable data processing apparatus, create means for implementing the functions specified in the flowcharts or block diagrams.

The exemplary and alternative embodiments described above may be combined in a variety of ways with each other. Furthermore, the steps and number of the various steps illustrated in the figures may be adjusted from that shown.

It should be noted that the present invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein; rather, the embodiments set forth herein are provided so that the disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. The accompanying drawings illustrate exemplary embodiments of the invention.

Although the present invention has been described in terms of particular exemplary and alternative embodiments, it is not limited to those embodiments. Alternative embodiments, examples, and modifications which would still be encompassed by the invention may be made by those skilled in the art, particularly in light of the foregoing teachings.

As used above "substantially," "generally," and other words of degree are relative modifiers intended to indicate permissible variation from the characteristic so modified. It is not intended to be limited to the absolute value or characteristic which it modifies but rather possessing more of the physical or functional characteristic than its opposite, and preferably, approaching or approximating such a physical or functional characteristic.

Those skilled in the art will appreciate that various adaptations and modifications of the exemplary and alternative embodiments described above can be configured without departing from the scope and spirit of the invention. Therefore, it is to be understood that, within the scope of the appended claims, the invention may be practiced other than as specifically described herein.

We claim:

1. A method comprising:
 - monitoring activity counts for zero crossing mode, above threshold mode, and proportional integrative mode of an individual with an actigraph, providing a notification when the activity counts for zero crossing mode, above threshold mode, and proportional integrative mode are within a respective predetermined range for a period of time.
2. The method according to claim 1, further comprising: providing medication to an individual being monitored in response to the notification.
3. The method according to claim 1, wherein the period of time is at least 15 minutes.
4. The method according to claim 1, wherein the predetermined range has a maximum of 90% of an average activity count over a preceding hour.
5. The method according to claim 4, wherein the predetermined range has a minimum greater than 10% of the average activity count of the preceding hour.
6. The method according to claim 1, wherein the predetermined range is above activity counts representative of sleep.
7. The method according to claim 6, wherein when the predetermined range is reached, a patient being monitored is suffering pain.
8. The method according claim 6, wherein when a duration and frequency of the activity counts are decreased in a period of time as compared to a preceding period of time, the notification includes an indication of a migraine.