**NORMAL WAKING CONSCIOUSNESS AND ALTERED STATES OF CONSCIOUSNESS SUMMARIES**

* Consciousness is a hypothetical construct because it is believed to exist but cannot be directly observed or measured. Descriptions are ‘constructed’ to explain it.
* Normal waking consciousness can loosely be defined as the state of consciousness we experience when we are awake and aware of our thoughts, feelings and perceptions from internal events and the surrounding environment. During normal waking consciousness, we experience a real sense of time and place. Our experience during normal waking consciousness creates our reality and gives us a baseline from which to judge all other states of consciousness.
* Consciousness can be thought of as operating on a continuum, from a high level of consciousness (awareness) through to a low level and even on to the point of being unconscious (totally unaware). The more aware we are of our thoughts, feelings, perceptions and surroundings, the greater the level of consciousness.
* The continuum: Focussed (NWC) attention, Ordinary (NWC) wakefulness, Daydreaming (ASC), Meditation (ASC), Hypnosis (ASC), Sleep (ASC), Anaesthetised (ASC), Coma (ASC)
* If we deviate from this normal baseline of waking consciousness, we experience an altered state of consciousness. Altered states of consciousness tend to differ from normal waking consciousness in terms of:
  + level of awareness: more or less aware of internal and external events
  + content limitations: usually less (though sometimes more) control to limit what you want to attend to
  + controlled and automatic processes: ability to effectively perform two or more tasks at once, depending on their level of complexity, is more likely to decline and it is more difficult to perform automatic processes
  + perceptual and cognitive distortions: the degree of awareness and efficiency of your perceptions and cognitions (thoughts and memories) is often more distorted
  + emotional awareness: the experience of emotions (feelings) is more or less in an altered state
  + self-control: the ability to maintain self-control, usually in terms of monitoring behaviours, is affected
  + time orientation: the ability to correctly perceive the speed at which time passes declines.
* We daydream when we shift attention to our private thoughts, feelings and imagined scenarios and ignore the external world. Since the level of awareness of external stimuli is reduced, daydreams are considered an altered state of consciousness.
* Alcohol is a psychoactive drug of dependence. It is a depressant, slowing or depressing the nervous system and, as a result, alters our state of consciousness.

**METHODS OF STUDYING CONSCIOUSNESS SUMMARIES**

* Sleep is a *dynamic* process. Like normal waking consciousness, we experience a number of different states (known as stages) during our sleeping time.

* There are several characteristic physiological changes throughout sleep. These measurable changes are the most objective and reliable means of indicating different states of consciousness.
* The electroencephalograph (EEG) is a device that detects, amplifies and records electrical activity in the brain in the form of brainwaves. Brainwave patterns may vary in *frequency* (fast or slow) and *amplitude* (large or small).
* There are basic patterns of brainwave activity that are associated with certain states of consciousness, especially during normal waking consciousness and sleep; the most common are beta, alpha, theta and delta waves.
* The electrooculargraph (EOG) is a device that detects, amplifies and records electrical activity in the muscles that allow the eye to move. The EOG is particularly useful to determine whether a person is in one of the two phases of sleep (REM and NREM sleep).
* The electromyograph (EMG) is a device that detects, amplifies and records electrical activity of muscles. Tiny electrodes are usually placed under the chin when used to study stages of sleep, with less activity recorded in REM sleep rather than NREM sleep.
* Data is collected simultaneously from EEG, EOG, EMG and any other devices and displayed on a continuously moving chart, known as a polysomnogram. This allows a researcher to compare corresponding data at once and make more informed decisions about the state of consciousness and any underlying problems.
* When awake, heart rate can vary considerably depending on the type of activity you are engaged in. It can be slow and regular or vary considerably during sleep.
* Body temperature follows a circadian rhythm; it varies in a regular way over a 24-hour period. Our body temperature tends to peak in the mid-afternoon and reach its lowest temperature in the early hours of the morning.
* The physiological response that indicates the electrical conductivity of the skin is known as the galvanic skin response (GSR). As the skin becomes more moist (usually through perspiration), its conductivity increases.
* In sleep laboratories, video monitoring and self-reports are often used in conjunction with physiological measurements. A sleep laboratory usually resembles a bedroom and the participant often stays one or more nights. In a sleep laboratory, the participant is usually ‘wired up’ to record the physiological measurements. The researcher monitors the participant from another room, usually through a window that looks into the bedroom. The researcher can control aspects like room temperature and make this constant for all participants. There are some limitations with recording data in an artificial environment.
* Video monitoring is now a common method used in sleep laboratories and in the person’s own home. This method uses infrared lights and operates silently to allow footage to be seen and recorded in the dark without disturbing the sleeping participant. Often the data is recorded alongside the physiological measurements at the time, often in the form of a photograph that is taken every few seconds.
* Self-reports are statements and answers made by the participants concerning their psychological experience (thoughts, feelings and behaviours). They can be carried out in a number of different ways. For example, they can be in the form of questionnaires (with open and/or closed questions), diary entries and interviews.