

COLLECTION AND PRIMARY PROCESSING OF MEDICAL AND BIOLOGICAL DATA

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The collection of data is the accumulation of them sufficiently in order to make an adequate decision or to obtain a statistically significant result. The amount of data is usually set in advance or determined by the analysis of intermediate results.

A very important component of collecting information is the processing of primary data. This is especially true when dealing with the measurement of biomedical signals. All these measurements, no matter how accurate they are, necessarily have some degree of error [1-4]. The error can also be due to the variability of the measured object itself, for example, fluctuations in human biological parameters during the study (daily biorhythms), lack of sufficient fixation of the human body at the time of anthropometric measurements, guidance on power grids during the removal of biopotentials (ECG, electromyography, electroencephalography). These errors are random. Their influence on measurement accuracy can be reduced, if you increase the number of measurements of the object of study or increase the duration of each measurement.

Another type of error occurs when the equipment does not work properly, when laboratory equipment is calibrated, and when errors are made in calculations. The end results of such measurements turn out to be either overestimated in all cases, or underestimated, that is always unambiguously distorted. The only way to avoid them it is to carefully monitor the health of medical equipment, monitor the correctness of the diagnostic, perform these calculations correctly.

References

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