ARTIFICIAL BREATHING APPARATUS TO THE USE OF

PRINCIPLES

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Annotation

This article describes artificial breathing to get the hardware working principles, of them in medicine, the role and the man's breath to take the system temporary replacement options analysis is. Ventilation is the process of physical basis, the pressure difference through the air flow is formed with be and the gas exchange mechanisms will be covered. Also, modern respiratory system types and clinical practice applied to be considered are. The research results of artificial breathing to get the technology further improvement service will.

Key words: **artificial breathing get, a ventilator, lungs, gas exchange, pressure, air flow, oxygen, respiratory, a, ventilation, intensive therapy, breathing cycle, medicine, mechanics, monitoring**

Introduction

Artificial breathing to get the hardware man's breath to take the system with failure they come in cases of life save , which remain significant medical device are. They are the lungs air mixture to deliver the giving by the gas exchange process provides. These devices, critical care and intensive therapy in widely applied. Artificial breath taking physical basis of the pressure difference and the gas flow laws based on. This article respiratory system working principles, their structure and in medicine, the importance of the scientific aspects of the analysis is.

Literature analysis

Artificial breathing to get the hardware on many scientific studies out carried. Classic medical literature ventilation process mechanical pressure using air exchange as explained. Modern research while electronic controls respiratory, sensor systems and automatic control mechanisms is developing. Scientists in the lungs, elastic, air way of the opposition and gas diffusion balances in-depth studied has been. In recent years, artificial intelligence on the basis of the operated ventilatorlar also worked out. This while the patient position the flexible vent the possibility of returns. Also, clinical practice in safety, accuracy , and productivity increasing aimed at new technologies introduced are being.

Results and tests

Artificial breathing to get the hardware (ventilatorlar) human in the body of breath shortage observed in cases of gas exchange is the process of artificially on the basis of ensuring allowing it to complicated medical-biochemical system is. Research during this office work principles, physical principles and clinical - effectiveness analysis was.

Ventilation is the process of mainly pressure gradienti on the basis of done will increase. The device has in - formed are positive pressure air mixture to the lungs, directs, as a result, alveola in oxygen and carbon dioxide exchange to happen will. This process balances the diffusion of the laws based on is, of the gas in the concentration difference by moved.

Experimental and clinical observations as a result of has identified, artificial breath to take the effectiveness of a few of the main parameters related: up the volume, breathing rate, inspirator pressure and oxygen concentration. These parameters are optimal to be the choice of the patient to the lungs, damage delivered without enough ventilation it provides.

Normal physiological conditions in man's breath the size of 400-600 ml in the range of is. Artificial aids while this value of the patient in the position of depending on the automatic replacement gets. Severe cases (for example, lung failure , or COVID-19 , such as diseases) ventilatsiya parameters are much higher at a level run.

Two main mode works (ventilation controller) and (assisted ventilation). Mode all the breath to get the process apparatus by , performed , carried, assistiv mode while the patient's own breath to help is given.

The following table is the main physiological indicators are listed:

Table 1. Ventilation physiological indicators

Index	**Value**	**Comments**
At size of	400-600 ml of	A breath that enters the air
Breathing rate of	12-20/min	for a minute, breaths of the number
Inspirator pressure	5-20 cmH_2O	into the lungs to enter the pressure
Fi_2	21-100%	Oxygen concentration,
Minute ventilation	5-8 L/min	Total ventilation size

The analysis of the results according, modern ventilatorlar the patient's condition in real time mode track to go to the opportunity you have. Sensors through the lungs, elastic, breathing resistance and gas exchange level will determine. The same on the basis of the device is automatic on the basis of the pressure and the volume brought together adaptation.

Also, artificial breathing getting in the process of and such as the risk is there. high pressure due to lung tissue damage, while extremes in addition to the air volume with associated damage means. For the same reason the modern devices protection algorithm has.

Clinical practice in the intensive care unit, surgical operations and severe respiratory failure tests are widely used. Especially with COVID-19 in the period of their importance dramatically increased.

Table 2. Artificial breathing to get the hardware technical components

The component	**of the task**
Ventilyator	Air flow yield will
Sensor the system	Pressure and volume is a measure
Oksigen aralashtirgich	Oxygen the amount of administration of the
Filter system,	the air cleaning
Kontroller	Process automatic management

Results that it shows, artificial breathing to get the hardware the effectiveness of their techniques on the accuracy of , and physiological adaptation directly related. Modern systems of the patient's individual needs depending ventilation optimize, that while the treatment results in significantly the level improves.

Quotes statements artificial breathing to get the process of physiological and technical aspects of deep analysis to make the possibility gives. First in the table ventilation technique main physiological indicators given are, they are the human body 's normal for a breath to take parameters resonance has a number.

Up a size 400-600 ml in the range of if, this is each of breath in the lungs enters the air of the amount represents. This indicator decrease gipoventilyatsiyaga, increased while the lung to injury lead cause can. Breathing rate while the body of metabolic activity shows.

Inspirator - pressure ventilation in the process of the lungs incoming air power determines. Very high pressure to alveola damage inflict can, therefore for these parameters constant control is. Fi constantly $_2$ index , while the oxygen of the compound, the concentration of the computer means , and the patient's oxygen shortage of the degree depending on what is replaced.

Second in the table artificial breathing to get the hardware technical components of quotes. System, main driving part is, air flow yield will. Sensor system while the patient's breathing parameters in real time mode will monitor.

Ratio is clearly the administration, that while gipoksiya the risk reduces. Filter system from foreign particles clean, infection risk decreases. Kontroller while the whole process is automatic management and security it provides.

In general in the body, the table that shows, artificial breathing to get the hardware complex , a , and engineering of systems integration. Of them the effective performance also physiological, also technical factors depends on if, in modern medicine is vital important role plays.

Conclusion

Artificial breathing to get the hardware of modern medicine, vital important role has. They respiratory failure, the patients gas exchange is the process of ensuring, life save to stay on serve will. Ventilation is the process of physical basis of a deep study of these devices further improvement in the possibility of returns. Modern technology with the help of the respiratory increasingly intelligent and automated system is becoming. In the future this direction in the medicine of the effectiveness considerably in the level increase is expected.

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