

CROSSROADS

*RISING
STARS IN
MEDICINE:
Dr. Betsy
Grunch*



DEAR MEDICAL NEWSLETTER READERS,

Wishing all of you the happiest June! Today, we bring to you the most recent news in medical research! Ilana Saidov is your next Rising Stars in Medicine writer this month, talking about Dr. Betsy Grunch and their work in neurosurgery. Then, Ilana focuses on how artificial intelligence can be applied in the field of obstetrics and gynecology. Next, Mahima Bhat spreads greater awareness regarding U.S. healthcare costs. Siri Nikku talks about the benefits of meditation.

Please enjoy reading The Premed Scene's June 2023 Medical Newsletter! Till next month.

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Rising Stars in Medicine: Dr. Betsy Grunch

BY ILANA SAIDOV

Inspired by her mother's life-altering spinal injury, Dr. Betsy Grunch dedicated her life to becoming the most compassionate and skillful neurosurgeon. In addition to making advancements in the field of neurotrauma, Dr. Grunch uses social media in order to educate and encourage the next generation of physicians.

Dr. Grunch's calling into the medical field began after her mother was involved in a car accident that dramatically changed her life. After witnessing her mother's surgery and rehabilitation, she was inspired to learn more about spinal cord injuries. Thus, after completing her bachelor's degree at the University of Georgia, she advanced her medical education at the Medical College of Georgia and finished her fellowship in neurosurgery at Duke University. Shortly after completing her training, Dr. Grunch began working at the same hospital her mother had surgery.

During the pandemic, Dr. Grunch used various social media platforms to spread awareness and educate individuals about her role as a neurosurgeon in the medical field. Her love of sharing information led to her videos gaining popularity over a short time. Presently, Dr. Grunch dedicates her time to performing life-changing brain and spine surgeries, specializing in minimally invasive surgery and artificial disc replacement.

Source:

<https://www.atlantamagazine.com/women-making-a-mark-2023/dr-betsy-grunch/>

The Use of AI in Obstetrics

BY ILANA SAIDOV

In the past year, Artificial Intelligence (AI) has been used across many sectors in clinical medicine. Along with its ability to pass medical board exams and draft insurance referral letters, it has been determined that AI will continue to play an integral role in healthcare.

AI has tremendously expanded into obstetrics as it is currently utilized for obstetric ultrasound, fetal heart rate interpretation, and the prediction of adverse clinical outcomes.

The first significant way AI has been used is in ultrasound. Specifically, it has proven to detect the presence or absence of anatomic malformations, conduct fetal echocardiograms, and identify biometric planes. With these advancements, physicians can identify potential complications and provide the necessary treatments before the condition progresses.

AI can also be utilized for fetal heart rate (FHR) interpretation. Implementing AI into FHR can help identify patterns of abnormalities that can predict fetal distress. Although AI-based implementations are still being tested, they have shown promise in detecting patterns or findings that are not always visible to the physician.

Over the past few years, AI has generated predictive models to identify the risks for perinatal outcomes. Although obstetricians can develop these models, AI provides clinicians with a new prediction method.



These models can predict preeclampsia, shoulder dystocia, and postpartum hemorrhage. With this technology, obstetricians can take the necessary actions to improve outcomes for both the mother and child.

Using AI technology in obstetrics is revolutionizing how healthcare professionals care for mothers and newborns. With AI algorithms, healthcare professionals can detect potential complications early on, prevent complications from progressing, and ultimately improve health outcomes for both the mother and her child. While there may still be hesitancy around the use of AI in healthcare, it's clear that the benefits are significant, and advancements in the field continue to provide promising solutions for obstetrics.

Source:

<https://www.contemporaryobgyn.net/view/artificial-intelligence-steps-into-obstetrics>

The Rising Cost of Healthcare in the US

BY MAHIMA BHAT

The rising cost of healthcare in the US has become a pressing concern in today's society. As medical advancements and technological innovations continue to drive improvements in patient care, the financial burden on individuals and families has escalated significantly. One major factor is the advancement of medical technology and the introduction of expensive treatments and procedures. While these innovations have undoubtedly improved patient care and outcomes, they often come with hefty price tags that contribute to the overall cost of healthcare. Moreover, the aging population and the prevalence of chronic diseases have increased the demand for healthcare services. As the demand rises, so does the cost of providing care, including the costs of medications, hospital stays, and long-term care. Lastly, the high cost of prescription drugs has been a significant contributor to the rising healthcare costs in the US. Pharmaceutical companies often set high prices for medications, driven by factors such as research and development costs, marketing expenses, and patent protection. Addressing these challenges requires comprehensive and innovative approaches to ensure affordable and accessible healthcare for all.



Lowering these high healthcare costs in the US requires a multifaceted approach. Some potential strategies include: implementing cost-effective practices, focusing on disease prevention and public health, implementing payment/delivery reforms, and addressing prescription drug costs (such as allowing Medicare to negotiate drug prices). By implementing a blend of these approaches and fostering continuous dialogue and collaboration, significant strides can be made in reducing exorbitant healthcare expenses in the United States, all while guaranteeing the provision of high-quality and affordable care to every individual.

Sources:

<https://www.acko.com/health-insurance/health-care-costs-are-rising-how-health-insurance-can-help-you/>

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<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6900806/>

The Positive Effects of Meditation

BY SIRI NIKKU

What we think about impacts our daily life and mental and physical state. For instance, a constant reinforcement of positive thoughts can improve mental and physical health. Even more, effective meditation can impact telomerase shortening, slowing the aging process as well as increasing the viability of our cells.

Inflammatory proteins were lowered as a result of doing meditation. Telomeres were also impacted from meditation in a positive way. Telomeres are present to protect cells from damage and once shortening can lead to cell death and damage. Consistent and properly done meditation can actually lead to these telomeres not shortening as quickly. Meditation can also reduce the chance of genes related to psycho-social stress in women. Another major issue that meditation has been able to solve is hypertension, which is majorly caused by stress. There has been reviews of how meditation has impacted blood pressure, which has been a positive change. Even conditions like asthma and rheumatoid arthritis had people feeling better after doing consistent meditation.

Mental health conditions has also been readily improved with meditation. Meditation generally increases the level of happiness through releasing the happy hormone like dopamine. A study seeing how people felt before and after meditation revealed that there was a proportional increase in happiness after meditation was done. It was also noted that there was a good change in amount of sleep, focus, and mood in the experimental group compared to the control group. Other studies have shown how meditation has led to social interactions increasing and decreasing loneliness. For people with PTSD, meditation has shown to reduce the symptoms. There is a general improvement in how meditation impacts health but having more research into how much meditation can really impact certain conditions would be the next steps in future research.

Source:

https://assets.cureus.com/uploads/review_article/pdf/156473/20230619-992-l47oen.pdf

