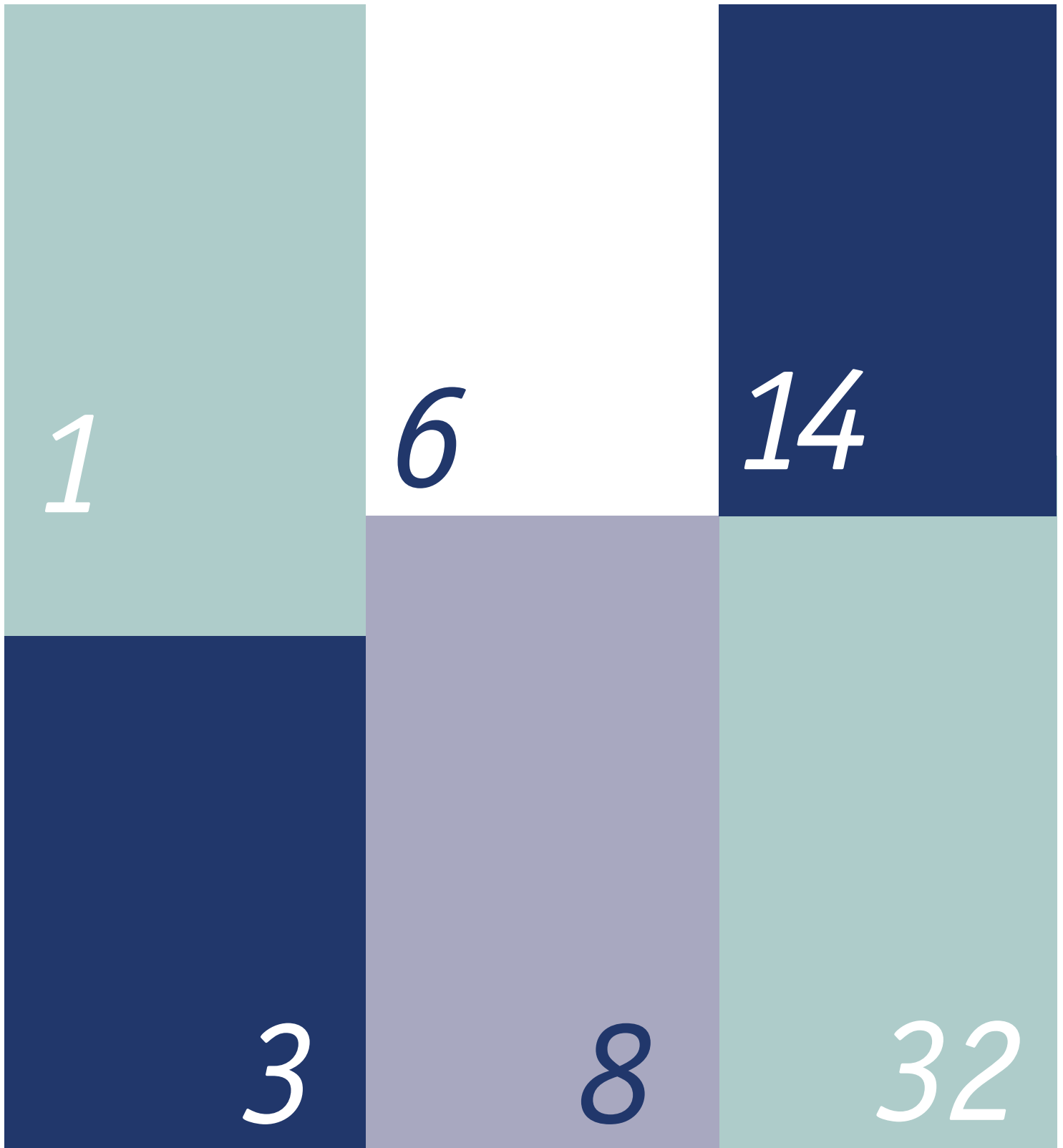


WellBEING

January 2023



INSIDE THIS ISSUE



Legal Disclaimer: All health and health-related information contained in this Johns Hopkins Aramco Healthcare Company material is intended to be general in nature and should not be used as a substitute for a visit with a healthcare professional. The advice is intended to offer only a general basis for individuals to discuss their health and medical conditions with their healthcare provider. Your healthcare provider should be consulted regarding matters concerning the medical condition, treatment and needs of you and your family.

Restoring Life Balance

A Tawazon Success Story from JHAH's Diabetes Prevention Program

Attending Tawazon, JHAH's lifestyle modification program, and self-care encouragement turned Khalid Jabr's life around.

In April, Saudi Aramco employee Khalid Jabr completed a 12-month Tawazon program, and with support from the JHAH Population Health Team, he ended the program with noticeable positive changes in his overall health and lifestyle.

"The program helped me focus on coaching to adopt a proper lifestyle, empowering me to make healthy, nutritious food choices and adopt activities that promote wellness and help me avoid disease," said Khalid.

Tawazon is a diabetes prevention program that helps participants modify their lifestyles to prevent or delay type 2 diabetes and other health-related conditions. Tawazon provides a structured awareness platform for patients who have a high probability to develop diabetes. Using a support group method, the Tawazon team focuses on improving the lives of patients by helping them maintain 150 minutes of moderate physical activities per week and losing 5-7% of their initial weight by the end of the program. These ambitious goals are only achievable with dedication from the participants to their long-term well-being and disease prevention. A program is tailored specifically to the needs and motivations of each patient. "Everyone is motivated differently, and realizing this helps us achieve our shared goals," said Fatimah AlKhabbaz, Tawazon Lifestyle Coach.



Before joining Tawazon, Khalid was overweight and had a BMI above 25 as well as high blood sugar. This qualified him for the program, and he took full advantage of it. "Tawazon allowed each of us to participate and ask questions without judgment," said Khalid. "Although we faced different kinds of challenges during the program, the facilitator helped us overcome them. Tawazon helped us maintain our lab results to near ideal so as to prevent disease and promote wellness."

Demonstrating Operational Excellence

Care On Demand

Dhahran Primary Care now offers 'Care On Demand' Video Visits for individuals registered with JHAH. 'Care On Demand' Video Visits don't require a prior booking – it serves as virtual Walk-in Care. Using MyChart, individuals seeking medical attention or advice can join an online queue for a virtual visit with a JHAH Primary Care clinician. The feature will queue patients and, when a clinician becomes available, will contact them to receive the necessary care.

Primary Care Minor Procedure Clinic

The Primary Care Minor Procedure Clinic now offers specialized services to patients in Dhahran with convenient care access. Patients can request access to this service by speaking to their Primary Care physician.

This service was initially established in March 2022 to perform Minor Procedures in Primary Care with a technical list of criteria. Evidence suggests that carrying out minor procedures in a Primary Care setup is safe, cost-effective, and convenient for patients. This service is available twice a week in Dhahran's Primary Care clinic and allows 60 patients to be seen monthly.

The Primary Care Minor Procedure Clinic is operated by Dr. Mahmoud Arsalan, Dr. Amal AlGarni, Aqilah Al Sadah, RN, and Lubna Al Khayat, RN.

Research, Learning, and Development

JHAH Family medicine residents (R2 and R3 Residents) have passed the promotion exam with a 100% pass rate. Such performance reiterates how refined the resident's recruitment, selection, and level of training environment are. Residency programs are considered a significant workforce contribution element at JHAH, and training family medicine practitioners is the cornerstone of the 2030 Saudi healthcare reform. In the healthcare sector, residency training programs improve hospitals' productivity and quality of care. JHAH is a center of learning and committed to supporting knowledge transfer.

What is 'Care On Demand'?

'Care On Demand' Video Visits don't require a prior booking – it serves as virtual Walk-in Care. Using MyChart, individuals seeking medical attention or advice can join an online queue for a virtual visit with a JHAH Primary Care clinician.



'Care On Demand' Video Visits are a great fit for:

- Patients with an active MyChart account
- Patients aged 14 and above (patients under 18 years of age must be accompanied by a guardian)
- Patients who are not pregnant
- Patients who do not have a chronic medical problem
- Patients with a strong and secure Wi-Fi/network connection

Not on MyChart? Sign up today to benefit from this and many other useful services.

Are you feeling unwell?

Access 'Care On Demand'

Read our how-to guide.

Join the online queue and wait for a Video Visit with a clinician.

Do you require medical advice? Please see the options available to you:

- If you have a medical question related to COVID-19, or a question about your health, our caring and expert physicians and nurses can help. Please call 800-305-4444 and follow the prompts to speak to a clinician.
- Remember that you can communicate with your healthcare team; use MyChart to message them.

Successful Speech Therapy Outcomes at JHAH

In 2021, Nora, a ten-year-old girl, was referred to the Speech Therapy clinic at JHAH for speech assessment. Her parents shared that Nora finds difficulty speaking, takes a long time to produce one word, and prefers to be silent most of the time. Before being referred to the Speech Therapy clinic at JHAH, Nora had seen a clinician at another hospital for almost two years with no improvement. She refused to go to her weekly speech therapy sessions. She was diagnosed with selective mutism by a physician who did not specialize in Speech and Language disorders.

On her first visit to the JHAH Speech Therapy clinic, she was assessed by Nasser Alqahtani, a JHAH Speech Therapist. After a deep case history analysis and a comprehensive assessment, he identified that Nora does not have selective mutism but profound silent blocks. Nasser began treatment by first educating Nora and her parents about stuttering.

After her first session, Nora felt a noticeable difference in her speech and expressed interest in continuing her therapy. After just 12 weekly sessions, Nora spoke with three words per sentence without noticeable stuttering.

How many cases of stuttering has JHAH treated?

In 2022, the Speech-Language Pathology clinic at JHAH received up to 59 new cases diagnosed with fluency disorders and referred for speech therapy and management. Since 2021, JHAH has treated more than 67 patients with fluency disorders and provided up to six-month-long stuttering therapeutic programs.

What is the treatment for stuttering?

Fluency treatment at JHAH follows state-of-the-art guidelines and highly effective treatment approaches that can be provided in two primary modalities: individual and/or group therapy sessions. Our treatment takes into consideration the preferences of the patient and family. At JHAH, our speech therapists follow internationally recognized programs such as Lidcombe, Fluency Plus program, etc.

Tips for parents- How to help right away?

Visit a Speech Pathologist to evaluate your child's stuttering; early intervention will help your child more. Studies suggest that early intervention significantly reduces disfluencies in children who stutter in short-term and long-term outcomes.



If your child is six years old or below, keep your child unaware of their stuttering by:

- Speaking with your child in an unhurried way, pausing frequently
- Reducing the number of questions, you ask your child and increase the comments
- Using your facial expressions and body language to convey to your child that you are listening to what they are saying and not how they are talking
- Setting aside a few minutes at a regular time each day when you can give your undivided attention to your child. This quiet, calm time can be a confidence-builder for younger children
- Helping all members of the family learn to take turns talking and listening. Children, especially those who stutter, find talking much easier when there are few interruptions
- Not forcing your child to talk in front of people
- Making sure no one makes fun of your child's speech
- Not asking your child to take a breath or stop and repeat words
- Not completing your child's sentence when they stop; give them time and attention

Be a good example for your child with your slow, relaxed speech, which will be far more effective than any criticism or advice such as "slow down" or "try it again slowly."

Enhancement of Medication Home Delivery Service



Our pharmacy services are pleased to announce the enhancement of Home Delivery service for medication refills. Patients can now request home delivery service using MyChart. This enhancement is part of JHAH's continuous efforts to personalize patient and family experience.

To begin utilizing this new service

- Update your home (national) address on MyChart. For quick and easy access to your national address, message 'National address' to +966112898888 via WhatsApp®. You will receive your street name, district name, house number, city name, and postal code. All of these details should be included under your personal information on MyChart.
- Once your home address is updated on MyChart, request your medication refill and under delivery method select 'ship to my home address.' For step-by-step instructions, please click [here](#).

Pharmacy Home Delivery Service will deliver medication refills within three working days of the request. For more information and eligibility criteria, visit our [Pharmacy webpage](#).

Do you require virtual counseling with a pharmacist?

- Have your medication questions answered, get your refills extended, and receive virtual advice from your pharmacist, all from the comfort of your home. Call one of the numbers listed above based on your area.
- If you would like to communicate with your healthcare team, you can use [MyChart](#) to message them.

Improving Patient Outcomes Using Artificial Intelligence (AI): A Proactive vs Reactive Approach

How JHAH is Using AI Cognitive Computing Models to Identify Deteriorating Patients Sooner

With the implementation of JHAH's state-of-the-art Electronic Health Record (EHR) back in 2018, the ability to leverage Artificial Intelligence (AI) through the introduction of Cognitive Computing Models that monitor patient populations and calculate a patient's risk for a particular outcome has been applied. These AI capabilities provide JHAH with advanced technical abilities to proactively identify hospitalized patients at risk from sepsis, deterioration, emergency services, and other factors, and introduce interventions sooner to improve patient safety and outcomes.

Epic's Deterioration Index is just one important model introduced at JHAH which has improved the identification of patients at risk of deteriorating while admitted as inpatients. Prior to the introduction of the Deterioration Index, hospitals including JHAH relied on manual assessments such as Modified Early Warning Scores (MEWS) which required clinicians to document information, often available elsewhere in the patient chart. This required duplicate documentation to determine a patient's acuity and risk of deterioration. Overall, Epic's Deterioration Index has been shown to flag 14 percent more patients at risk of deterioration with 12 percent fewer false positives than MEWS. Given that assessments such as MEWS were completed at prescribed time intervals, by the time a patient was deemed to be at risk, the interventions tended to be reactive since the patient was already deteriorating.

With the introduction of Epic's Deterioration Index AI Cognitive Computing Model, our clinicians are able to take a proactive approach to identify deteriorating patients. This cognitive computing model uses multiple additional data points and an algorithm, that is much more accurate than the simple arithmetic used by other early warning systems, and turns it into actionable information. Essentially, the Deterioration Index updates dynamically based on the latest variables available in a patient's chart providing clinicians with the most up-to-date risk assessment allowing for earlier interventions and better outcomes.



"The Deterioration Index is exciting because it moves the electronic record from a simple replacement of paper towards fulfilling its potential of enabling real improvements in the quality and safety of patient care," shared Dr. Michael Walsh, Chief Executive at JHAH.

JHAH will continue to explore and introduce additional Cognitive Computing Models and AI capabilities in other areas to improve patient outcomes.

About Epic at JHAH

JHAH was the first hospital in the Kingdom to launch Epic, which is widely regarded as the global leader in electronic health records (EHRs). Epic connects all caregivers to a single record for each patient so that an informed decision, based on the most up-to-date information, can be made on the care of the patient. It organizes patient information, provides suggested actions and guides for caregivers, and coordinates care across multiple specialty settings. Epic is used by more than 250 health care organizations worldwide including Johns Hopkins Medicine and many other leading health care institutions.

Safe Storage and Disposal of Medications

By: Haneen AlAbbasi, Sameer AlHarbi, Ahmed AlHarbi, Omar AlKherish, Zakariya Dobayan



When it comes to medication safety, the way you store your medications can make a huge difference. According to the Centers for Disease Control and Prevention (CDC), around 60,000 children are brought to the emergency room because they got into within-reach medications, and two million people end up in the hospital due to drug-related injuries every year. Improper storage and disposal of medications at home result in medication errors, accidental poisonings, inappropriate use, and diversion.

Safe Medication Storage

The ideal medication storage location provides easy accessibility for the intended user while preventing or discouraging inappropriate access and accidental ingestion by anyone else, especially children. Here are some tips on the safe and secure storage of medications:

1. **Keep** your medications in a safe and designated place:

Choose one designated place to store your medications to ensure easy access and safety, especially during an emergency. Make sure it is out of sight and reach of children. It is advisable to have a cabinet with a child latch or lock, and to keep the medicines in a child resistant cap (twist the cap until you hear the click or cannot twist anymore). This can prevent children from opening the bottle and accidentally consuming the medicine.

2. **Organize** your medications:

- Regularly check the expiry of your medications: Appropriately discard expired ones to avoid harms, ineffective or unsafe outcomes.
- Take frequent inventory of your medications.
- Discard leftover prescription medication from previous illnesses, to avoid being misused by other family members.

3. **Separate** your oral medications from external use medications.

Oral medications should be stored separately from medications for external use. Keeping oral (table, syrup, etc.) and external (cream, eye drops, suppositories, etc.) medications in a separate shelf/cabinet can reduce the risk of taking wrong medication.

4. **Store** your medications according to the recommended temperature (refer to the product insert).

- 2-8 ° C: Store it in the middle of the refrigerator (example: insulin and reconstituted antibiotic suspension).
- Room temperature: Store it in a cool, dry place in the house and away from direct sunlight & humidity.

By pharmaceutical convention, a room temperature is defined as between 15-30°C and “controlled room temperature” is defined as between 20-25°C, which is more recommended for storage of medications. Therefore, it is advisable to install a thermometer in the house at rooms where medications are stored to ensure appropriate maintenance of temperature levels.

Extreme temperatures (both hot and cold) and humid places can physically change your medications and affect their potency (how well they work), which can be harmful to your health. Therefore, never leave your medications in the car, bathrooms and never store them in the freezer; just follow storage condition as provided by product manufacturer.

5. **Keep** your medications in their original containers/packaging.
 - Some of medications need to be stored away from sun light or light in general like some antibiotics and Levothyroxine; these medications are packed and stored in amber color containers.
 - You will also have the label information right there about what the medicine is, its dosage, and how often to take it. Even if you are using a weekly pillbox that helps your remember taking your medication, keep the original bottle/package to be able to quickly access all the information on the label. The phone number of the pharmacy is also written on the label, so you can call when it is time for a refill or for any other inquiries (800-305-4444).
 - Keep each medication in its own labeled container and DO NOT mix different medications in the same container.
6. **Do not use damaged medications, this includes:**
 - Medication that has changed color, texture, or smell, even if it has not expired
 - Pills that are sticking together, harder or softer than normal, or cracked or chipped

Safe Medication Disposal

Leftover, unused and/or expired prescription and nonprescription medications must be disposed-off properly to avoid risk of accidental ingestion or misuse of medications. The ideal method of medication disposal should be easy to perform, minimize risk for diversion, and should be environmentally safe.

The most secure and environmentally-friendly patient medication return disposal is achieved through a drug take-back program called “Enviro-Green Meds Program” offered by JHAH Pharmacy Services Department which

are available at all pharmacy locations where patient medication returns/disposals are deposited securely in special collection bins (med return bins) that will be sent later for incineration, as an alternative to tossing them in the garbage or down the drain.

How do you return unused or expired medication?

1. Check your medication cabinet for unused or expired medications.
2. Put the medication in a plastic bag. Ensure that liquid preparations are sealed tightly to avoid spillage.
3. Deposit the bag in the special collection green bins located in Dhahran Health Center (Primary Care pharmacy – building 50, Specialty Clinics Pharmacy – building 61, Cancer Care Pharmacy – building 62), Saudi Aramco Tower Building and Al-Midra tower, and JHAH districts.

If there are no disposal sites in your area, there are ways to safely dispose of your medication at home. First, read the packaging label on your medication. Most prescription and nonprescription medications can be thrown away in the household trash. Controlled substances and other medicines can be harmful if ingested by others, so the label might have special disposal instructions that you should follow.

If there are no special disposal instructions, disposing of medications in the home garbage containers is not acceptable as they are often vulnerable to access by children. However, you can safely dispose of your medication in your household trash by following these four steps:

1. Mix your medicine with an inedible substance like dirt, cat litter, or used coffee grounds.
2. Put the mixture in a container, such as a sealed plastic or zip-lock bag.
3. Throw the container in your household trash.
4. Scratch out all the personal information on the prescription label of your empty medication bottle to make it unreadable. Then dispose or recycle the empty medication bottle.

The role of our pharmacists is to provide storage instructions to patient upon counseling as well as how to dispose unused or expired medications. As a patient, you can also get all information relevant to your medication from medication Product information leaflet. Pharmacists are ready to provide all needed support and answer your inquiries relevant to medication usage, handling, storage and disposal you can contact pharmacy call-center on 800-305-4444.

JHAH Nursing Celebrates a New Group of DAISY Award Recipients!

JHAH Nursing celebrated a new group of nurses who received the Daisy Award for extraordinary nursing care. The Daisy Award is based on patient nominations of nurses through multiple methods (patient letters, the electronic nomination form that is available on the JHAH website and emails received through the Daisy Award mailbox). If you have a patient care story that recognizes one of our JHAH nurses, please share it with us on daisy.award@jhah.com

Daisy Award winners' profiles

May 2022



Sisy Joseph, BSN, RN Pediatric Intensive Care Unit

Professional Qualification

- Diploma in General Nursing, 1992, Bombay, India
- Diploma in Midwifery, 1994, Bombay, India

Work Experience

- 1994-1997 Pediatric Intensive Care Unit, Bombay, India
- 1997-2022 Pediatric Intensive Care unit, Saudi Aramco/Johns Hopkins Aramco Healthcare

A mother praised Sisy's dedication and outstanding effort in taking care of her baby. The mother listed five examples of Sisy's commitment in her nomination letter: 1) Prompt response and immediate action for all her baby's demands especially when the oxygen meter sounded. This is when Sisy showed how eager

she was to promote patient comfort. 2) Completes patient care in the best way and in a timely manner. 3) A patient advocate, listening attentively and being open to all questions. She answered questions she knew, and if she did not know got the answer from a physician or another team member. 4) Always had a smile and was kind and patient. 5) The mother sent a special thanks for Sisy calling her baby by name, stimulated her with play and turning her diligently every two hours to ensure comfort and to prevent pressure injuries.

Shirley Rafael, BSN, RN Medical Nursing Unit



Professional Qualification

- Bachelor of Science in Nursing, Manuel V. Gallego Foundation Colleges, Philippines, 1994

Work Experience

- 1996-2000 Female Medical/Surgical/OB-Gyn Ward, King Khalid Military City Hospital, Saudi Arabia
- 2001-2008 Ward 12 Medical Unit, Luton and Dunstable Hospital, United Kingdom
- 2008-Present 4A Medical Isolation Unit, Johns Hopkins Aramco Healthcare, Saudi Arabia

Shirley has been recognized based on appreciation letters received from her patients as a result of the excellent care she provided that demonstrates her commitment and dedication to customer-focused healthcare. One of her patients stated,

“The outstanding care rendered by Shirley has helped me to enjoy my stay in the hospital, especially since she spent time talking to me when I felt stressed out. She was kind and caring and often offered me snacks at night and always went above and beyond for me.”

June 2022



Jiby Mathew, BSN, RN, Ras Tanura Emergency Department

Professional Qualifications

- Nursing Diploma in General Nursing and Midwifery, Mount Tabor College of Nursing, India
- BSc Nursing, Bangalore Florence College of Nursing

Work Experience

- Narider Mohan Cardiac Center, Delhi, India 2005-2007
- Fakhri Hospital, Khobar, KSA 2007-2019
- JHAH RT Emergency Department, KSA 2019 - Present

Jiby received many appreciation letters for her excellent care and dedication toward patient-centered care and was recognized many times by patients' families in the patient satisfaction survey. One of her pregnant patients described her as very caring and supportive. She answered questions and concerns and provided comfort in a respectful manner. The patient would like to meet her every time she is going to the Ras Tanura Emergency Department. Another patient's husband appreciates her for her great attitude and human touch as well as the outstanding care she provided to his wife during his wife's stay in the ED. It is clear that Jiby plays an important role in delivering the best possible patient-centered care.



Ibtihaj Sihati, BSN, RN Labor & Delivery

Professional Qualifications

- Bachelor's Degree in Nursing, King Faisal University, Saudi Arabia
- Post-Graduate Diploma in Midwifery

Work Experience

- 18 years of experience
- 12 years in Labor and Delivery Unit, 2J, Saudi Aramco/Johns Hopkins Aramco Healthcare
- 4 years in Mother and Baby Unit 3H, Johns Hopkins Aramco Healthcare

Ibtihaj is one of those nurses who regularly receives thank you letters from patients. She received two thank you letters and received a new one on the day of the celebration.

Letter 1: She showed how much she cared for her patient who was giving birth. The husband wrote a letter to thank her on behalf of his wife. This letter shows how Ibtihaj showed kindness and promoted comfort and excellent compassion to her patient. Another letter showed how much Ibtihaj was a patient advocate. This letter was shared with us by Patient Relations who was approached by the patient's family to acknowledge the excellent service Ibtihaj willingly provided to her patient.

Want to Thank a Nurse at JHAH?

Honor the compassion and care nurses provide their patients everyday

NOMINATE A NURSE FOR THE DAISY AWARD!

The DAISY Award for Extraordinary Nurses was created in memory of J. Patrick Barnes who died at 33 of ITP, an auto-immune disease. The Barnes Family was awestruck by the clinical skills, caring and compassion of the nurses who cared for Patrick, so they created this international award to say thank you to nurses everywhere.



*Scan to
nominate*



**The DAISY
Award®**

FOR EXTRAORDINARY NURSES

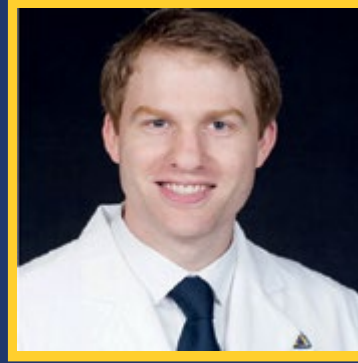
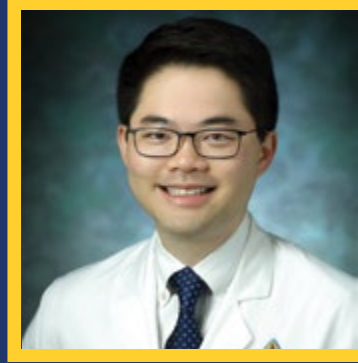
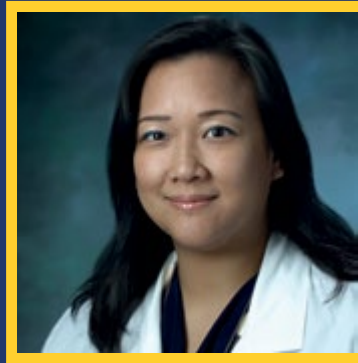
**HONORING NURSES INTERNATIONALLY
IN MEMORY OF J. PATRICK BARNES**





Find out more

The Johns Hopkins Medicine (JHM) On-site Program has expert physicians from a wide range of specialties share with us their expertise at JHAH



Blood Pressure Lifestyle Management (BLSM) Program at JHAH

Achieving population wellbeing and improving the quality of life of our patients at JHAH

Do you ever pause and think about the critical things that could happen to your body as you indulge in your morning coffee or breakfast? Are you at risk for a long-term chronic disease? We are often guilty of not being consciously aware of our diet. It is essential to take note of your daily food consumption, and your body's actual needs, which includes resisting some food urges and adopting an active lifestyle. We must understand that our bodies change with time to better approach our health.

Blood Pressure (BP) and Hypertension: Silent killers

Hypertension (HTN) and prehypertension are health issues affecting many aspects of life worldwide. It can affect a nation economically and socially. The risk of this chronic disease increases if it's combined with other metabolic diseases such as obesity and diabetes (1). Statistics indicate that an estimated 1.13 billion people globally have Hypertension (HTN), according to World Health Organization (WHO) (2), representing almost 15% of the world's population. In Saudi Arabia, a study revealed that the prevalence of HTN among Saudis has reached 31.4%. In another comprehensive survey conducted in Saudi Arabia, the percentage of hypertensive patients who were unaware of their situation reached 57.8% (2). These are significant numbers that should not be ignored.

A study conducted in India found that people in military service are more likely to be protected from HTN and its implications due to adopting an active lifestyle. Moreover, obesity, family history, and an inactive lifestyle are all risk factors that increase the probability of being hypertensive (1). That means controlling one or more of these factors reduces the likelihood of HTN.

The Population Health Division at JHAH is dedicated to supporting patients with high probabilities of being potentially hypertensive by encouraging them to participate in a well-established program focusing on early identification of elevated BP or untreated HTN. Our experts at JHAH will take you through a journey of dealing with prehypertension via a comprehensive lifestyle management program called Blood Pressure Lifestyle Management (BLSM).



JHAH'S BLSM Program: Reshaping Your Lifestyle

The Blood Pressure Lifestyle Management Program (BLSM) at JHAH is a health promotion program designed for potentially hypertensive patients based on the initial assessment of BP and Body Mass Index (BMI) in Primary Care. According to Abdullah AlMutairi, a health promotion advisor at JHAH, "the overall objective of BLSM is to enhance the physical health and wellbeing of beneficiaries within the JHAH health system through implementing a lifestyle and diet program that aims to prevent hypertension."

The BLSM program allows pre-hypertensive patients to make proper behavioral modifications regarding diet, physical activities, and weight control. Through six live virtual sessions, reinforced by video-assisted and web-based lifestyle intervention, patients will be prompted to reconsider their current habits and adopt new ones for a healthy life. Over three months of the program, the patients will perform an initial and end-point assessment for BP and BMI to measure the program's impact.

"The program is another addition to JHAH's population health prevention portfolio that has proven efficiency in tackling one of the highest prevalent diseases in the Kingdom. The program is delivered through a personal and digital platform that allows for flexibility. It increases our opportunity to expand similar programs that we have been leading on both a local and regional level," shared Dr. Mohammed Al-Ghamdi, Chief Population Health Officer at JHAH.

A milestone to be highlighted

The results of the program's first cohort of participating patients are promising. Our data shows significant changes in the level of BP; 66% of patients whose initial assessment showed signs of Hypertension reverted to the normal read at the end of the program. Surprisingly, 43% of patients who participated in the program maintained normal reads during the period of the program.

Almost 40% of participating patients in this group were considered obese, and 34% were pre-hypertensive. Today, the BLSM program is continuing with a second cohort to ensure the sustainability of these encouraging results to improve the quality of our patients' lives.

Are you eligible for the BLSM Program?

The BLSM Program is open to eligible patients with an active MyChart account. The Health Promotion Team at JHAH selects participants based on specific criteria such as BP reads and BMI measurements within a particular age group and health condition. For more information [about the BLSM program and eligibility](#), contact to Health Promotion team at JHAH (healthpromotion@jhah.com).

1. Prehypertension - StatPearls - NCBI Bookshelf (nih.gov)
2. Cureus | Quality of Life and Awareness of Hypertension Among Hypertensive Patients in Saudi Arabia

November 9 Full Scale Code Brown Disaster Drill

JHAH successfully conducted a Code Brown (Utility Failure) Disaster Drill on November 9, 2022. The drill was by far the most complex disaster drill scenario with multi-dimensional impact, testing surge capacity, capability, and mutual aid services. This year's drill was a milestone in our history of building resilience.

Take a look at how JHAH responded to the 2022 drill, and watch our video:



Sports and Nutrition



Introduction to Sports Nutrition:

Sports nutrition can be defined as the study and application of a diet/plan that is designed to escalate and improve athletic performance. Best performance is accomplished by providing the optimal food type amount (protein, carbohydrates, fats, fiber, etc.), fluids, and nutrients to maximize energy and aid in sports recovery. Sports and regular nutrition are very different since athletes require different levels of nutrients than non-athletes.¹

Designing the appropriate diet plan for an athlete needs an intimate understanding of the relevant scientific literature, the training and competitive demands of the sport, the social situation, and the individual athlete's preferences.²

Studies have established that the timing of ingestion of macronutrients may significantly affect the adaptive response to exercise. Nutritional supplements can also play a meaningful role in helping athletes consume the appropriate amount of calories, carbohydrates, and protein in their diet. Many dietary supplements have a role in improving performance.^{3,4}

Caloric Needs for Athletes (Energy):

Through nutrition, it is essential to ensure that the athlete is taking sufficient calories (Energy) to balance energy expenditure and optimize training and performance.⁵

People who participate in a general fitness program (e.g., exercising 30–40 minutes per day, three times per week) can typically meet their nutritional requirements following a regular diet (35kcal/kg/day).

⁶Athletes involved in moderate levels of intense training (e.g., 2–3 hours per day of intense exercise performed 5–6 times per week) or high volume intense training (e.g., 3–6 hours per day of intense training in 1–2 workouts for 5–6 days per week) need to take 50–80kcal/kg/day.^{6,7}

Consuming the Proper Amount of Macronutrients:

The essential component to optimal training and performance through nutrition is to guarantee that athletes consume the appropriate amounts of macronutrients (carbohydrates, protein, and fat) in their diet.⁵

1- Carbohydrates:

Individuals committed to a general fitness program can typically meet macronutrient requirements by consuming a regular diet containing 45–55% carbohydrates (3–5g/kg/day), 10–15% proteins (0.8–1g/kg/day) and 25–35% fats (0.5–1.5g/kg/day).⁶ Athletes committed to moderate and high-volume training need more carbohydrates and protein in their diet to meet macronutrient requirements.

²Research has shown that athletes undertaking high-volume intense training (e.g., 3–6 hours in 1–2 workouts for 5–6 days) may need to consume 8–10g/kg/day of carbohydrates.^{3,6} Carbohydrate-rich meal with a low glycemic index approximately 1–2 hours before training is advisable to be consumed as a primary source of carbohydrates.^{6,8}

2- Protein:

Athletes engaged in intense training must ingest about double the usual recommended daily allowance (RDA) of protein in their diet to maintain protein balance. Insufficient protein consumption can cause negative nitrogen balance, increasing protein catabolism and slowing post-workout recovery, causing wasting muscle, training intolerance, and overtraining. Competitive athletes require 1.5–2g/kg of protein daily.⁶

The protein type consumed will determine the conversion efficiency into myofibrillar protein.⁵ The biological value of a protein is assessed by measuring the efficiency with which a given protein is absorbed and assimilated into an organism's protein.⁹ The best dietary sources of low-fat, high-quality protein are light skinless chicken meat, turkey, beef, fish, egg white, and skimmed milk (casein and whey). The finest high-quality protein sources found in nutritional supplements are whey, colostrum, casein, milk peptides, and egg protein.⁹ In contrast, plant sources (e.g., soy and soy products) have a relatively low value.^{10, 11} Ideally, proteins should be consumed every 2.5–3 hours in portions of 30–40 g for 6–8 meals per day. Substituting food sources with protein drinks is sufficient for those individuals who cannot take enough protein.⁶

3- Fat

Consumption of moderate fat is recommended for athletes (approximately 30% of their daily caloric intake).³ For athletes trying to lower body fat, it has been suggested that they consume 0.5–1g/kg/day of fat. "Fatty" fish such as (salmon, tuna, and mackerel), some seeds (flaxseeds, pumpkin seeds, walnuts), and oils (flaxseed oil, soy oil, olive oil) are considered the best sources of essential fatty acids.¹²

Nutritional Supplements Regulation and Standards:

Nutritional supplements are classified into three categories:

1. Dietary supplements supporting mass muscle growth:

Proteins are the most effective supplements from this category (powders or ready-to-serve drinks);¹³ drinks and powders named "weight gainers" that have more carbohydrates than proteins (70–90% : 10–30%), creatine (monohydrate, ethyl-ester, Kre-alkalyn), essential amino acids (EAA),¹⁴ branched-chain amino acids (BCAA)^{13,16,17} and in young athletes also-Hydroxy Methylbutyrate (HMB).^{14,3}

2. Dietary supplements supporting weight loss and fat burning:

Diet replacements are considered the most effective substances from this category of supplements. They are high in protein and fiber and lower carbohydrate and fat.⁶

3. Dietary supplements enhancing performance and endurance:

Considered effective supplements for improving performance and endurance are sports drinks with the ideal content and balance of carbohydrates and minerals,³ and creatine,^{6,8} caffeine,¹⁷ EEA,^{14,18} and BCAA.

Understanding Food Labels:

The Saudi Food and Drug Authority (SFDA) requires producers to label foods accurately.

There is the information required on every food label, except for fresh produce and seafood:

1. Statement of identity (what type of food is it?)
2. Net contents of the package
3. Ingredients list
4. Nutrition information (what is the number of nutrients included in a serving of food?)
5. Name/address of the manufacturer

Statement of identity (points to 'Tomato Basil Soup')

Nutrition information (points to the Nutrition Facts label)

Ingredients (points to the ingredients list)

Name/address of manufacturer (points to 'Pacific Foods of Oregon, LLC')

Net contents (points to '32 FL. OZ. (1.07) 946 mL')

Label Text:
Pacific FOODS™
 ORGANIC Creamy **Tomato Basil Soup**
 90 Calories* | Vegan | Gluten Free
 USDA ORGANIC
Organic Creamy Tomato Basil Soup
Nutrition Facts
 About 4 servings per container
 Serving size 1 cup (240 mL)
 Amount per serving
Calories 90
 Total Fat 2g 3%
 Sodium 630mg 27%
 Total Carbohydrate 13g 5%
 Dietary Fiber 2g 7%
 Total Sugars 9g
 Includes 3g Added Sugars 6%
 Protein 4g
 Iron 1mg 6% • Potassium 459mg 10%
 *The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.
INGREDIENTS: WATER, SOY BASE (WATER, SOYBEANS*), TOMATO PASTE*, CANE SUGAR*, SEA SALT, ONION PUREE*, HIGH-OLEIC SUNFLOWER OIL*, SODIUM CITRATE, GARLIC PUREE*, SPICES*, RICE FLOUR*, BASIL OIL*, *ORGANIC
 CONTAINS: SOY
 Distributed by: Pacific Foods of Oregon, LLC, Tualatin, OR 97062 USA
 Certified Organic by Oregon Tilth

1. Serving size information (points to '8 servings per container' and 'Serving size 2/3 cup (55g)')

2. Calorie information (points to 'Calories 230')

3. Nutrient amounts (points to the list of nutrients and their amounts)

4. % Daily values (points to the % Daily Value column)

Label Text:
Nutrition Facts
 8 servings per container
 Serving size 2/3 cup (55g)
 Amount per serving
Calories 230

	% Daily Value*
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%

 *The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

In conclusion, athletes should be able to compose a regimen of proper sports nutrition, including an adequate amount of carbohydrates, fats, and proteins, water for better hydration, electrolyte replacement, vitamins, and minerals.

The topic of sports nutrition is so broad. Therefore it is required to seek results from a wide range of studies and to ensure these results are fitting to each situation.

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JHAH Healthy Recipes

Hot Chocolate with Cinnamon

Prepared by: Ghadah Al-Habib
Manager of Clinical Nutrition Services

Ingredients

(6 Servings, 1 serving per cup)

- 1 1/4 cup low-fat milk
- 2 tbsp cocoa powder
- 1/4 tsp vanilla extract
- 1/2 tsp ground cinnamon
- A pinch of sea salt
- Ground allspice
- 1/2 tsp ceylon cinnamon
- 1/8 tsp ginger powder
- 1 pinch of cardamom
- 1 pinch of cloves
- 1 tsp blackstrap molasses



Preparation

- Healthy hot chocolate mix: whisk the cocoa powder in a small bowl with all of the dry ingredients.
- Heat a large saucepan over medium heat on the stove.
- Add some milk: Pour half the milk into a small saucepan and add in the cocoa powder mixture.
- Whisk until smooth, and make sure there are no lumps.
- Add the rest of the milk and whisk together until combined. Please note: the hot chocolate mixture should only be heated until very warm, not boiling.
- Serve into mugs and enjoy.

Why is this Hot Chocolate With Cinnamon Healthy?

Low-fat milk: no need for whole milk; only some fat is essential to make this hot chocolate feel rich!

Ceylon cinnamon and ground cardamom: Both have anti-inflammatory, antioxidant, and antimicrobial effects.

Blackstrap molasses: a sugar substitute that is rich in calcium, magnesium, and iron and is a low glycemic sweetener.

Women's Health



Women and men have many of the same health problems, but they can affect women differently. For example, women may have different symptoms of heart disease. Some diseases or conditions are more common in women, such as osteoarthritis, obesity and depression. And some conditions, such as pregnancy and menopause, are unique to women.

To maintain a healthy body, it is important for women to:

- Plan for pregnancies and see your health care provider regularly while you are pregnant.
- Have regular mammograms.
- Get regular checkups and screenings. Early detection is important for treating breast, cervical, uterine and ovarian cancer.

Preventing Health Threats

The biggest threats to women's health are often preventable. The top health threats to women include:

- Heart disease
- Cancer
- Stroke
- Chronic lower respiratory disease, such as bronchitis and emphysema.

- Alzheimer's disease.
- Type 2 diabetes.

To reduce your risk of developing one of these life threatening conditions, adopt healthy habits.

- Don't smoke or use tobacco products. Avoid secondhand smoke. Talk to your health care provider if you need help quitting. Limit alcohol intake. If you choose to drink alcohol, do so only in moderation.
- Avoid pollutants. Minimize your exposure to chemicals and outdoor air pollution.
- To prevent infections and illnesses, wash your hands with soap and water often. You should wash your hands before you eat, after you go to the bathroom and any other time you have touched something that is not clean.
- Eat a healthy diet. Choose vegetables, fruits, whole grains, high-fiber foods and lean sources of protein. Limit foods high in saturated fat and sodium.
- Manage chronic conditions. If you have high cholesterol or high blood pressure, follow your health care provider's treatment recommendations. If you have diabetes, keep your blood sugar under control.

- Include physical activity in your daily routine. Participate in activities you enjoy, such as sports or dancing. Regular exercise can help you control your weight and relieve stress.
- Maintain a healthy weight. Being overweight increases your risk of many health problems.
- Manage stress. If you feel constantly on edge or stressed, your lifestyle habits may suffer. Take steps to reduce stress. Talk to a friend or family member who supports you emotionally. Make time to relax. Take a bath, read a book, go for a bike ride or meditate.
- Visit your health care provider for regular check-ups and screenings. Screenings can detect problems before they cause symptoms.

Breast Health

Breast cancer affects 1 in 8 women during their lives. Thanks to screening, breast cancer can be found early, when the chance of successful treatment is best.

Early breast cancer usually has no symptoms. Later, as the cancer grows, it may cause a lump that can be felt in the breast. Sometimes, the skin over the tumor becomes coarse and wrinkled. Discharge from the nipple can also be a sign of breast cancer.

Most breast cancer cases are discovered either by a mammogram or clinical breast exam. During a clinical breast exam, your health care provider examines your breast.

Breast screening

Mammogram

From the age of 40, women should begin having special X-rays called mammograms, annually. A mammogram can detect changes inside the breast.

Self-Breast Examination/Clinical Breast Examination

Once a month do a self-breast exam. As part of your annual mammogram, your doctor should examine your breasts as the doctor may notice something you have missed.

Magnetic Resonance Imaging (MRI)

Women who are at high risk (have several risk factors) based on their family, medical or personal history, should have a yearly MRI as well as a mammogram. Your doctor will determine if you are at high risk, and if you are, will advise you about this test.

Menstruation

The menstrual cycle provides important body chemicals,

called hormones, to keep you healthy. It also prepares your body for pregnancy each month. The rise and fall of levels of hormones during the month control the menstrual cycle.

Birth control is any means designed to prevent pregnancy. It is also known as contraception. There are many different birth control methods. A woman should choose the method that best suits her health and preferences.

Pregnancy

The clearest sign of pregnancy is that your menstrual period stops. But women should see a health care provider if their period stops. There may be another medical condition causing missed periods.

Some women also experience morning sickness. Morning sickness is nausea or vomiting that usually happens during the first trimester of pregnancy.

Another common symptom of pregnancy is craving certain foods. Some women may also develop distaste for some foods while pregnant.

Other symptoms of pregnancy include:

- Frequent urination.
- Headaches.
- Mood swings.
- Sore breasts or nipples.
- Tiredness.

Pregnancy lasts about 40 weeks, counting from the first day of your last normal period. The weeks are grouped into three trimesters.

A health care provider can also give you information on prenatal care. Prenatal care is the care a woman gets during pregnancy. Prenatal care includes health care, along with education and counseling about how to handle a pregnancy.

Most women are healthy enough to deliver a baby through normal vaginal delivery. Vaginal delivery means that the baby comes down the birth canal and no surgery is needed.

Some situations make vaginal delivery dangerous. In these cases, the health care provider may perform a Cesarean section, or C-section. This is the surgical delivery of the baby through an incision in the abdomen.

After delivery, your health care provider or midwife will teach you the best ways to take care of your baby. He or she will also help you with breast feeding and answer any questions you may have.

Menopause

Menopause marks the time when a woman stops having a menstrual period. All women go through menopause, usually between ages 40 and 55. During menopause, women go through physical and mental changes.

Menopause causes a woman's period to become irregular and eventually stop. Menopause happens when the ovaries stop making hormones and releasing eggs.

Menopause can weaken your bones and cause osteoporosis. Osteoporosis can lead to fractures of the hip, wrists or other bones in the body.

To prevent osteoporosis, get plenty of calcium and

vitamin D before and after menopause. Milk and dairy products are good sources. Regular exercise can also help keep muscles and bones strong.

Peri-menopause is the stage before the last menstrual period. This stage starts three to five years before the last period and ends about a year after the last period. A woman can become pregnant during perimenopause. Even if periods are irregular, use birth control if you do not want to become pregnant.

Post-menopause is the stage after menopause. The signs of menopause go away. During this stage, a woman no longer has periods and she cannot get pregnant.

Internet Safety Tips for Kids in Cyberspace

Educate your child about the importance of privacy, and not accepting friend requests unless it's people they actually know.

Adjust security, privacy, and content category settings for their social accounts.

Educate your child to not open anonymous messages or click on any suspicious link.

Make a plan and discuss it with your child about how to use the internet safely, a list of safe sites and agree on how much time they can spend online.

Don't let your kids talk to strangers on the Internet.

Be mindful of links and downloads, to avoid having any malware installed on your device. Refer to official store or trusted source.

Make sure they are aware of cyberbullying and that you can be reached if they experience child abuse.



Orthopedic Services at JHAH

Whether you need help to treat a sports-related injury, a condition related to aging, or an accident injury, our orthopedic teams at Johns Hopkins Aramco Healthcare (JHAH) provide comprehensive surgical and non-surgical care.

Our experts are here to help improve your quality of life, range of motion and mobility, using the most up-to-date practices and equipment. We pride ourselves on providing orthopedic services rarely seen in the region, and on a par with the most advanced centers in the world. Learn more about our orthopedic services by [visiting us on jhah.com](https://www.jhah.com)



Heart and Vascular Services at JHAH



At JHAH, our Heart and Vascular experts provide comprehensive treatment if you are living with heart problems, from prevention and diagnosis to treatment and recovery. Learn more, and if you are registered with a JHAH network provider, request a call-back by [visiting us on JHAH.com](https://www.jhah.com).

Bariatric Surgery at JHAH

At JHAH, our bariatric surgery team specializes in procedures to tackle obesity and reduce weight, empowering you to adopt a healthier long-term lifestyle. Our surgical procedures are complemented by expert guidance on managing weight after surgery.

Learn more, and if you are registered with a JHAH network provider, request a call-back by [visiting us on JHAH.com](https://www.jhaa.com).



COVID-19 Booster Vaccination

JHAH is now offering Moderna COVID-19 booster vaccinations (first booster and second booster) that are bivalent to eligible patients in alignment with the MOH's new COVID-19 vaccination guidelines.

Bivalent COVID-19 vaccines include a component of the original virus strain to provide broad protection against COVID-19 and a component of the omicron variant to provide better protection against the virus.

Information about the booster dose

Why do I need the COVID-19 booster vaccine?

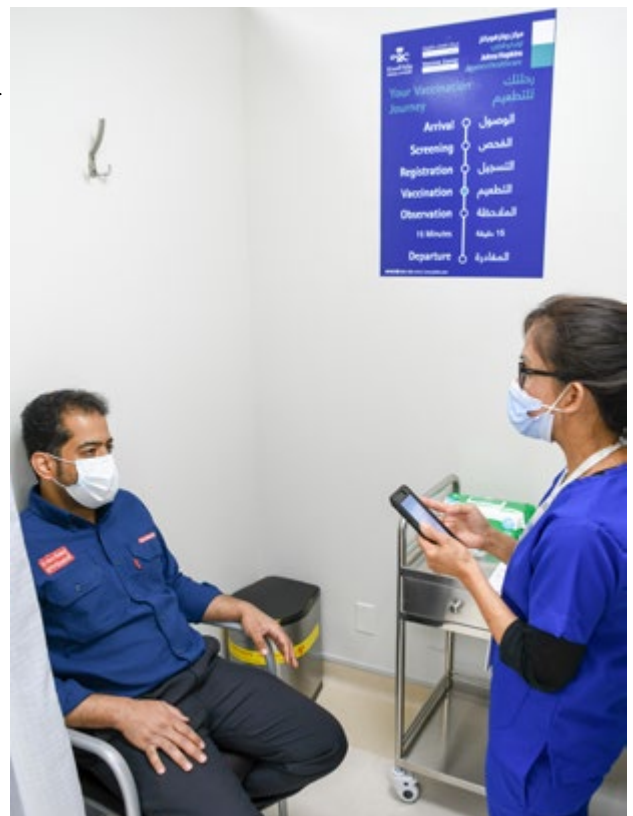
Vaccines offer great protection against severe illness. However, their effectiveness decreases over time. Getting your booster dose boosts your immunity and protects you from new COVID-19 variants.

How do I book an appointment for the booster dose of the vaccine?

If you meet the conditions to receive the booster dose of the vaccine, you can book your appointment using MyChart if you are registered for care at JHAH.

I want to know more

Learn more about the COVID-19 vaccination and the booster dose appointments at [JHAH.com/COVID-19-Vax](https://www.jhaa.com/COVID-19-Vax)



JHAH Celebrates Zero CLABSI Incidences in the NICU in over a year

JHAH's Neonatal Intensive Care Unit (NICU) has achieved zero Central Line Associated Blood Stream Infection (CLABSI) incidences for more than one year (September 2021 – October 2022). This is a key indicator of Patient Safety and a quality and safety milestone we celebrate at JHAH. CLABSI is associated with increased mortality/death rates (mortality rates up to 25%) and costly hospital-associated infections. JHAH's aim is for zero CLABSI rates in our multiple ICUs.

Newborn infants, including premature infants over 23 weeks (450 grams) gestation, are high-risk patients and susceptible to various microorganisms. Late-onset sepsis occurs in plus or minus 35% of deficient birth-weight infants. Most onset is caused by central lines such as an Umbilical Venous catheter, Umbilical Arterial Catheter, and Peripherally Inserted Central Catheter.



Infants who experience CLABSI have a high mortality rate, poor growth, neurodevelopmental outcomes, and prolonged hospital stays. With zero CLABSI, we enhance the babies' survival, prognosis, and quality of life as well as reduce time spent at the hospital.

Insurance Excellence Forum

Insurance Excellence Forum (#CHIEF) in Riyadh on December 11 - 12, 2022. JHAH's Dr. Jean-Jacques de Gorter, Chief of Staff, Ian Wright, Chief Financial Officer, Reem Boubshait, Assistant to the Chief Executive, and Dr. Hadi Alenazy, Family Physician Consultant and CHIEF Chair participated and shared their knowledge, best practices, and experiences in value-based healthcare and various critical topics in the health sector.

CHIEF was launched under the slogan "To a Healthcare System Based on Quality" to strengthen and encourage the private health insurance sector to achieve sustainable development with the highest standards of quality and efficiency.



What is a Cochlear Implant?

For children and adults with severe hearing loss, a Cochlear Implant can help. It is a small electronic device that stimulates the cochlear (hearing) and is surgically embedded to stimulate the hearing nerve to receive sound. To learn more please visit our page on jhah.com



Have you been tested for Keratoconus yet?

Of the 50-60 patients screened at JHAH, two suffered from Keratoconus, while at least six were identified as high risk. If you or your child have not been tested for Keratoconus yet, check your eligibility and register by visiting JHAH.com or click [here](#).



Service Excellence Unit

A message from the Person-Centered Care Chair

Shaping the positive experiences that our patients and families expect remain our focus at JHAH. Positive experiences generally lead to better healing, better patient engagement, and lower readmission rates.

Human value remains one of the central pillars of the Patient Experience. It guides us to communicate with our patients in a way they can understand, treat them with dignity and respect, and, most importantly, address them as persons, not as diseases.

The Person-Centered Care Committee has been meeting regularly as we continue our Person-Centered journey. This multi-disciplinary committee aims to direct the efforts on what matters most to our patients and staff. One of its objectives is to align improvement projects within JHAH, ensuring that the priorities identified on our patient and staff satisfaction surveys are addressed, gaps are closed, and by default, meeting the requirements of the Person-Centered Care (Planetree) re-certification.

"As we approach the end of 2022, a thank you from my heart to each and every staff member who continues going the extra mile for our patients. Thank you for your commitment, positive energy and high level of professionalism. Your efforts are recognized and reflected in our patient comments".

- Tatiana Mezerhane





JHAH is committed to upholding a person-centered culture of care where all staff, patients, and families have their needs and desires heard. We will continue to ensure we provide an accessible and inclusive environment for all.

Demonstrating Excellence in Patient Care

'Udhailiyah

Greetings

A letter of warm thanks to someone who took care of my daughter while she was hospitalized in the children's department by drawing blood samples, taking care of the children, caring for them, and the way to deal with the child in taking samples. Also my appreciation for this reaches his administration for having such a success man, I wasn't lucky to get his full name (Dr. Hadi).

Thanks JHAH Laboratory Department , and I ask God to grant him success and success always.

I would like to express my highest gratitude to the following specialists doing their job at the best level: - Gp dr Reem- pediatrician dr Fahad Dossary- obgyn dr Jan Charmine- obgyn Dr Omaima Fareh- lactation consultant dr Shareefah- delivery and labor unit midwife Annama! Thank you very much!

Dr. Akkad read my file carefully as soon as I got in the room and was friendly and courteous. He thoroughly explained what he was seeing in the X-rays- what the results we wanted were and what to expect in the future. He explained the expected timeline of recovery and listened to my questions and asked follow up questions to understand well then provided sufficient answers. I am very satisfied with my visit and very grateful to the doctor.

Dr. Arsalan was very prepared in my case and read my file very well and spent time to see my reports before I show up in my appointment.

Radiology: Celebrating 127 Years of Medical Imaging “Magic”

On November 8 of every year, the radiology world celebrates the International Day of Radiology as a reminder of the profound impact radiology has on medicine and the evolution witnessed both in the technology being used and the profession itself. While radiology is a young profession, its advancement has been fast paced, and there is no sign of it slowing anytime soon.

Digital images and reports at your fingertips, real time imaging to guide surgery and treatment, periodic monitoring of progress and tailored treatments specific to findings would not have been possible without radiology. With that in mind, it is hard to imagine healthcare being practiced without these capabilities. But how did it all start?

In 1895 a German physicist, William Roentgen accidentally discovered invisible rays while performing an experiment. He named them “X-rays” in reference to the unknown nature of these rays.



William Roentgen

(Photos from the European Society of Radiology: The History of Radiology Volume 1)

The discovery of X-rays created an uproar in the scientific and medical world and reshaped clinical practices. Seeing inside the human body without explorative surgery was a novelty. The first X-ray image produced was the hand of William Roentgen’s wife. When she saw the image, she exclaimed, “I have seen my death.” The image has since become a historic document of the invention that reshaped medicine.



First X-ray image



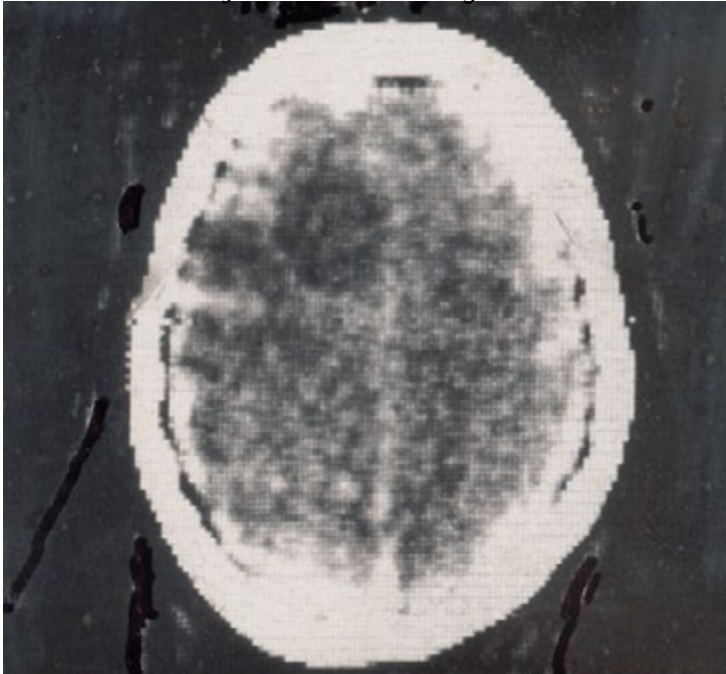
X-ray equipment in a horse-drawn wagon 1905-1910

The first Committee of Radiation Protection was established in England in 1920 after the hazard of unregulated radiation usage was identified.

Ultrasound and cross-sectional imaging like Computed Tomography (CT) and Magnetic Resonance Imaging (MRI) were introduced much later. Though the application of medical ultrasound started in the early 1940s, the first real-time ultrasound scanning was not conducted until the 1970s.

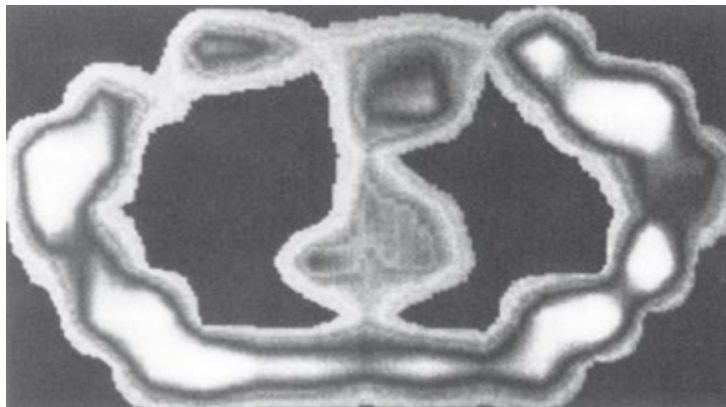
Surgery was often guesswork that used the clinical symptoms of the patient as guides to where to operate. The first CT image of the brain was done in 1971 and

took hours to process. The image showed a tumor in the frontal lobe, and the surgeon confirmed that the tumor was found exactly where the CT image showed it.



The first CT image showing a frontal tumor

MRI experimentation started with brain scans and evolved into body scanners in late 1970s. Similar to processing the early CT scans, a single MRI image took more than five hours to produce.



First image of body MRI

The infinite possibilities with these discoveries unleashed scientific creativity. As a result, modern radiology practices allowed 3D imaging, non-invasive visualization of blood vessels using CT and MRI, 4D ultrasound images, image guided biopsies, operating room MRIs and CTs with real time guidance for surgeons and physiological assessment of organs with nuclear medicine.

Films and viewing boxes were replaced with digital images accessible from any device. With the centralization of image archiving and creation of image databases, artificial intelligence-aided radiology scanning and reporting became the future.

The first technologists were physicists who worked on the X-ray invention; in 1927, 37% of the technologists were nuns. During World War I, engineers, electricians, chemists and science professors were trained as technologists.

As technologies developed, the radiology profession itself evolved as well. Physicists, engineers, surgeons and nurses led the profession to highly specialized radiologists and technologists.



Practical training for technologist candidates

The impact of X-ray discovery on other fields

The impact of the discovery of X-ray extended beyond medical imaging and radiation therapy. In 1950, a form of X-ray was used to see the double-helix structure of DNA, which was a breakthrough in genetics. X-Ray crystallography allowed examination of biological molecules and determined the structure of cholesterol in 1937, vitamin B12 in 1945, penicillin in 1954 and the structure of insulin in 1969. X-rays have been used in art to examine paintings and hidden initial sketches and ancient Egyptian mummies without damaging the artifacts. NASA has been using X-ray astronomy since 1979.

Summary

X-rays allowed physicians and surgeons to move from guesswork to certainty as radiology moved from images on glass plates to digital images accessible from anywhere, from a single image taking several hours to multiple images within milliseconds. Though the magic of medical imaging started with unknown rays, so much has been discovered that cements the role of radiology in diagnosing and treating patients. Medicine continues to branch and subspecialize, and radiology remains at the heart of all of these specialties. The magic of medical imaging continues to surprise healthcare professionals. Stay tuned!

References

1. European Society of Radiology: The History of Radiology Volumes 1 and 2
2. Photos from European Society of Radiology: The History of Radiology Volume 1



The Story of Radiology

1



THE BEGINNING

(X-ray) Wilhelm Roentgen, 1895

The first X - Ray was for Roentgen Wife's hand and she said "I have seen my death!" when she saw the image.

The Medical Ultrasonics

(ultrasound) Karl Dussik, 1940s

The first use of ultrasonic waves as a diagnostic tool was attempting to detect the brain tumors. Additional discoveries and now we have 4D ultrasound images

2



Theranostic Applications

(Nuclear Medicine) MGH - MIT team, 1946

The use of iodine therapy 131 to treat thyroid cancer and thus new era of theranostic applications

3



Gentleman's Crazy Idea

(Computer Tomography)
Gogfrey Hounsfield, 1971

Hounsfield wanted to depict the inside of objects in individual layers, "like putting the object through a bacon slicer." This inspired him to create 3D technique in acquiring the first CT Brain Image.

4



5

Indomitable

(Magnetic Resonance Imaging)
Raymond Damadian, 1977

It was noted that different animal tissues emit various signals when subjected to magnetic field. With that MRI was born. The first body scanner was called "Indomitable".

By: Areej Al Shehri, Nuclear Medicine Technologist

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JHAH NetworkPlus launched in October



JHAH NetworkPlus is Johns Hopkins Aramco Healthcare's new service approval requests management platform for our patients who chose to receive their medical care through the Medical Designated Facilities (MDFs) Network.

Up until now, you have had to visit the Johns Hopkins Aramco Healthcare office at your registered network provider or call them by phone to get the status update on your service requests.

NetworkPlus is currently available for beneficiaries of the following providers:

- Arrawdha General Hospital

- Procure Riaya Hospital
- King Abdulaziz Hospital Al-Hasa (National Guard Hospital)
- Al Ahsa Hospital, Al-Hofuf
- Almoosa Specialist Hospital, Al Mubarraz
- Saudi German Hospital, Dammam

NetworkPlus Portal Access

The portal link may not work from a Saudi Aramco network-connected device. You may use your mobile phone or another personal device to access the portal.

Home Healthcare Program at JHAH



JHAH launched the Home Healthcare (HHC) program to support JHAH patients that face difficulty in their movement by moving care away from the hospital and towards home. Since the launch, HHC has gone through several stages of development with plans for further expansion of services.

The HHC program at JHAH is in alignment with Saudi’s Vision 2030 strategy for Healthcare Transformation and in response to the expected growth in the elderly population in the kingdom from 1.96 million in 2018 to 4.63 million by 2030. Currently, JHAH HHC offers the following services:

- Skilled Nursing Care
- Laboratory Services
- Wound Care
- Vaccination
- Antibiotic Administration
- Urinary Catheter Care

The program covers a 50 kilometer radius of JHAH’s healthcare facilities (in Dhahran, Al-Hasa, Ras Tanura and Abqaiq), and provides service to JHAH registered patients above the age of 14 years with limited Activities of Daily Living (ADLs) in one or more domains, or who are largely dependent on their family/caregiver, and they have frequent admissions/re-admissions.

For more information about the HHC program or to inquire about eligibility, speak to your Primary Care physician at your next clinic appointment.

Service Hours:

Dhahran

Sunday – Saturday, 7 a.m. – 6 p.m.

Ras Tanura, Al-Hasa, and Abqaiq

Sunday – Thursday, 7 a.m. – 3 p.m.



Bringing World-Class Care, Close to Home

Southern Area Update



JHAH Southern Area will continue to provide specialty care service offerings with Al-Hasa specialists in the coming months.

Upcoming specialty care appointments in JHAH's Abqaiq Health Center

JHAH Southern Area is pleased to announce specialty care consultations in JHAH's Abqaiq Health Center. JHAH specialists will be visiting Abqaiq to provide consultations through the end of January to ease the way of care for Southern Area patients.

The following services will be available through January 2023:

Specialty Service	JHAH Physician	Availability
Dermatology	Dr Abdulaziz AlKhateeb, Dermatologist	January 2023
Ears, Nose, and Throat (ENT)	Dr Mohammed Hasan, Senior Staff Surgeon	January 2023
Orthopedics	Dr Mohammed Khamis, Staff Surgeon	January 2023
Ophthalmology	Dr Gulrez Ansari, Ophthalmologist	January 2023

To schedule an appointment with a visiting JHAH specialist, speak to your Primary Care physician. For more information about JHAH specialty services, please visit JHAH.com.

Your Health in Cold Weather



Johns Hopkins Aramco Healthcare shares expert advice on how to stay healthy during winter, follow these recommendations to keep your health and wellbeing in check!

Eat Healthy

Healthy eating is key to a healthy life, ensure that you continue to boost your immunity during winter by: consuming a minimum of five servings of fruits and vegetables to enrich your body with the antioxidants, vitamins and minerals that nourish your immune system, keeping hydrated by drinking an adequate amount of fluid, primarily water. This helps your body function properly, including your immune system. And finally, consuming well-balanced, healthy meals that provide your body with nutrients that boost your immune system. These include protein, vitamins (vitamins A, B6, C and E), minerals (iron, zinc, selenium, and folic acid), antioxidants and fiber.

Exercise

Regular exercise is a critical part of staying healthy. People who are active live longer and feel better. Exercise can help you maintain a healthy weight. It can delay or prevent diabetes, some cancers and heart problems.

Most adults need at least 150 minutes of moderate physical activity per week. Examples include walking briskly, mowing the lawn, dancing, swimming for recreation or bicycling. Stretching and weight training

can also strengthen your body and improve your fitness level.

The key is to find the right exercise for you. If it is fun, you are more likely to stay motivated. You may want to walk with a friend, join a class or plan a group bike ride. If you've been inactive for a while, use a sensible approach and start out slowly.

Take care of your skin

During winter, the cold weather can dry your skin. Make sure you properly moisturize your skin and lips, wear sun screen, and drink fluids.

Stay Hydrated

Did you know that staying hydrated can help boost your immunity? Hydration is always important, but during winter perhaps the last thing on your mind is an ice-cold glass of water. Drink room temperature or hot water with some lemon, or herbal tea. You can also get your water from fruits such as watermelon, cantaloupe and grapes. Add soups and broths to your diet.

Get better sleep

Sleep restores the body's energy levels. Sleep also lets the body rest and is necessary for health and quality of life as a good night's sleep can help repair damaged heart and blood vessels. If you do not get enough, you are at increased risk for heart disease, kidney disease, high blood pressure, diabetes and strokes. Adults should aim to get seven to eight hours of sleep

per night. To help you get better sleep, take time to relax before going to bed. Drink a soothing herbal tea or hot milk, try aromatherapy, meditate or pray. Do something that helps you wind down. Try to keep regular sleep hours – go to bed and get up at roughly the same time each day and cut down on caffeine, especially in the evening, as it can make it difficult to go to sleep

Get you Vitamin D

Vitamin D helps your body absorb calcium. Calcium is one of the main building blocks of bone. A lack of vitamin D can lead to bone diseases such as osteoporosis or rickets. Vitamin D also has a role in your nerve, muscle and immune systems.

You can get vitamin D in three ways: through your skin, from your diet and from supplements. Your body forms vitamin D naturally after exposure to sunlight, and with nice weather upon us, try to spend some time outdoors. You can also get vitamin D from food sources

such as: egg yolks, saltwater fish and liver. Some other foods, like milk and cereal, often have added vitamin D. You can also take vitamin D supplements. Check with your health care provider to see how much you should take.

With nice weather upon us you can spend some time outdoors doing fun activities and exercise.

Build healthy habits

If you smoke, work on quitting! When a patient quits smoking the body tends to recover and repair some of the damages caused by smoking. For example, within 3 months of quitting, lung function improves by about 30%. In about one year, the risk of heart problems is half of what it would have been if the patient had continued to smoke. Bing watching TV while becoming a couch potato? Get moving by being more physically active in your home and outside of it. Take a break from your sedentary time to walk around do some stretches or household chores.

Tareeqi

Find your way from your car to your clinic in just a few steps, download Tareeqi from the Apple App Store or Google Play now.

Download the Tareeqi app today! Select your destination and go

Using Tareeqi, find the way to your destination within JHAH with ease

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Tareeqi

Nutrition Tips for Healthy Skin

Look healthier...look younger...and feel better



Proper and well-balanced nutrition plays an important role in determining the way we look and the condition of our skin, where all of the nutrients that are necessary for healthier and beautiful skin are provided. To achieve this goal of having healthy and glowing skin, the following nutrition tips are recommended:

Consume well-balanced meals that nourish all of your body, including your skin and prevent skin damage or dryness or dullness. These meals can include the following food groups:

- Fruits and vegetables with bright colors, such as tomatoes, carrots, cucumbers, oranges, grapes, spinach, peppers, broccoli, banana and kiwi. The recommended daily serving of fruits and vegetables is five.
- Healthy oils such as olive, canola or sunflower oil,

unsalted nuts including walnuts, almonds and seeds are also important for skin health. Oils and nuts should be used in moderation in order to avoid oily skin.

- Dairy products to provide Calcium and vitamin D, in which low-fat or nonfat products are preferred.

Importance of Antioxidants

Antioxidants fight many diseases and reduce the effect of aging on skin health and keep the body healthy with younger looking skin. Antioxidants promote a healthier and more youthful appearance, particularly of your skin. They neutralize the free radicals that damage the skin and contribute to premature aging of the skin and the appearance of wrinkles. Antioxidants are found in fruits and vegetables, unsalted nuts, green tea, seeds and

salmon. Omega 3-fatty acid is an antioxidant that also encourages skin health. It is found in walnuts, almonds, avocado, tuna and salmon.

Importance of Selenium

Selenium is a nutrient that helps in protecting the skin from sun damage and fights the appearance of wrinkles by reducing the effect of free radicals on the skin. It is found in seafood, fruits and vegetables, dairy products (preferred to be low fat or non-fat varieties), whole grains, and skinless poultry. Importance of Beta carotene Beta carotene nourishes the skin and keeps it healthy while contributing towards skin repair. It is found in green leafy vegetables and carrots.

Importance of Protein

Protein provides the skin with the nutrients needed for making collagen, which keeps the skin healthy and supports its ability to repair itself. Protein is found in seafood, poultry, meat, dairy products, eggs and dried legumes such as beans and lentils. Lean protein is recommended to be consumed in foods such as low-fat or non-fat dairy products, skinless poultry and fat-free red meat.

Importance of Fluids

Fluids, including low-fat soup, unsweetened fruit juices, vegetable juices, and water, keep the skin well hydrated and avoid dryness, as dehydration can negatively affect all body organs, including the skin. Caffeine containing beverages (coffee, tea, and cola) do not

contribute to hydration of the body or the skin. Caffeinated beverages deplete water from the body, if an excessive amount is ingested. Fluids also contribute to distributing antioxidants to the body parts and getting rid of free radicals.

Importance of Vitamins

Vitamins A, B, C, D and E contribute to skin health and skin repair in addition to protecting it from the harmful effects of sun. These vitamins neutralize the free radicals that cause skin damage and the appearance of wrinkles. Consuming well-balanced meals in recommended portions provides the body with all the necessary nutrients that will keep the skin healthy and support skin cell regeneration and repair.

Importance of Having Adequate Sleep

Adequate sleep (7 to 8 hours a day) is important for the body to produce new cells and repair damage, including the skin, in addition to the other benefits of sufficient sleep for the brain and the rest of the body.

Other Healthy Tips

- Avoid smoking (active or passive), as smoking causes damage to the skin, accelerates its aging, and reduces the skin's nourishment by limiting blood flow.
- Reducing anemia, as it causes less blood supply and delivery of nutrients to the body's organs, including the skin. Foods rich in iron, folic acid and vitamin B12 are important

to avoid anemia. These include seafood, fortified cereals, lean meat, green leafy vegetables, skinless poultry and eggs.

- Protecting the skin from pollution and excessive exposure to sunlight. It is important to keep the skin protected by limiting the exposure to intense sunlight by using medically approved sunscreen creams.
- Performing regular exercises promotes wellbeing of the body, including the skin, as it improves blood circulation and the delivery of oxygen and nutrients to the skin. This will also help the body in getting rid of toxins that damage the skin and accelerate its aging processes. Physical activity daily or at least 5 times per week for 30 to 45 minutes is recommended, especially combining aerobic and strength exercises.
- Maintaining skin hygiene supports skin health, reduces the risk of skin infection and removes dead skin cells.
- Staying healthy and ensuring that the levels of blood sugar, blood pressure and lipids are within the recommended ranges will keep the skin healthy, as elevations of these levels will affect the skin, reduce blood circulation and the delivery of nutrients to the skin and to all other parts of the body.

JHAH Bulletin Board

Emergency Numbers: Save these Numbers to your Mobile Phone

Dhahran and all areas: From a landline inside Saudi Aramco or from outside Saudi Aramco, dial 911.

Abqaiq: From your mobile phone inside Abqaiq, dial +966-13-572-0911

al-Hasa: Dial 911

Ras Tanura: From your mobile phone inside Ras Tanura, dial +966-13-673-0911

'Udhailiyah: From your mobile phone inside 'Udhailiyah, dial +966-13-576-7911

Help with your healthcare:
Contact Patient Relations at PatientRelations@JHAH.com or call 800-305-4444 In Kingdom or +966-13-870-3888 out of Kingdom

Urgent healthcare access helpline for MDF patients dial +966-55-600-0468 (after 4 p.m.)

If you have an immediate medical concern, make an appointment with your primary care physician. In the event of a medical emergency, go to the emergency room at the nearest hospital.

Appointments: To make medical or dental appointments and to access multiple medical services, call:
Centralized Contact Center
800-305-4444
Out of Kingdom +966-13-870-3888

Feeling Stressed? Have psychological, emotional or social problems? Call Community Counseling Clinic for an appointment +966-13-870-8400

Quit Smoking: JHAH help for employees, dependents, contractors and retirees to quit smoking, email SmokingCessation@JHAH.com

Pregnant? Attend the Pregnancy Wellness Program in Arabic or English. To register, go to jhah.com/pregnancy-wellness. You must be 12 weeks or more into a pregnancy.

Register for the Mother and Baby Unit Pregnancy Tour in Arabic or English. The tour starts at 1 p.m. on the first and third Tuesday of the month. To register, email Eman.Mutairi@JHAH.com (you must be 30 weeks or more into your pregnancy.)

Register for MyChart today

Visit www.JHAH.com/en/about-mychart

Find FAQs

How-To Guides

If you need help signing up for MyChart, or would like to ask a question, call: 800-305-4444 (013-870-3888 from out-of-Kingdom) and select Option 8 (hours of service 7 a.m. to 4 p.m.)

Community Counseling Clinic: Call +966-13 870- 8400, +966-13 870-8306

Patient Relations:
PatientRelations@JHAH.com

Patient Relations is available to help with issues that you are unable to resolve with specific clinical areas.

Al-Midra Wellness Center offers consultations, lifestyle wellness coaching and health screenings (Mon. to Wed. 1- 3:30 p.m.) Pharmacy (Sun. to Thurs. 12-4 p.m.)

Patient Relations



Our multilingual Patient Relations team is here to talk with you about:

- Any concerns you may have with your care at JHAH
- Choosing or changing your Primary Care Physician
- Talk with you about a staff member who has “gone the extra mile” in caring for you or something you feel we could have done better

Visit the Patient Relations office

Our offices are open Sunday to Thursday, 7 a.m. - 4 p.m. For urgent requests, while you are in the hospital, ask the nearest charge nurse.

Dhahran:

- Emergency Services
- Surgicare, behind reception
- Gastrointestinal clinic area
- Building 61, in front of OB /GYN clinic
- Primary Care

Al-Hasa Health Center:

Outpatient Clinics reception area

Abqaiq Health Center

Administration Office

Ras Tanura Health Center

building 2, ground floor

Medical Liaison Office



Our Medical Liaison Office team is here to assist you with:

- Requests for medical reports/summaries
- Copies of medical records, diagnostic imaging and lab reports
- Issuing off-duty certificates
- Issuing escort certificates, Hospital Attendance, and disabled parking stickers

Visit the Medical Liaison Office

Our offices are open Sunday to Thursday, 7 a.m. - 4 p.m. For urgent requests, while you are in the hospital, ask the nearest charge nurse.

Dhahran Main Hospital

Building 60, main lobby

Dhahran Primary Care

Al-Hasa Health Center

Outpatient Clinics reception area

Abqaiq Health Center

near the Primary Care waiting area

Ras Tanura Health Center

Near the Emergency room reception



Become a patient at Johns Hopkins Aramco Healthcare



How to register

1. On the Saudi Aramco corporate portal, go to **myhome**
2. Click on **My Information**
3. Select **My Family**
4. Select the individual to be registered, then click on **Change Medical Provider**
6. Once you click on Change Medical Provider, you can select **Johns Hopkins Aramco Healthcare, (Dhahran or Al-Hasa)**
7. You will receive a confirmation in your Saudi Aramco email Inbox.

For more information on how to change your registration, contact your local HR Service Center or visit HR Online.

Eligible Saudi Aramco employees and their dependents are invited to register for healthcare at JHAH.

Visit *JHAH.com*

Visit our website

JHAH.com

- Find a Doctor
- Our Care Services
- Hours of Service and Contact Information



800-305-4444 | www.jhah.com