# TALAASH OGDCL NEWS

April - June 2022



A quarterly publication of OIL & GAS DEVELOPMENT COMPANY LIMITED



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PATRON IN-CHIEF
Syed Khalid Siraj Subhani
EDITOR IN-CHIEF
Shabina Anjum

SUB-EDITORS
Nijesh Kumar
Omair K. Chishti

PHOTOGRAPHER Zafar Abbas



## OGDCL STRIKES GAS DISCOVERY AT UMAIR SOUTH EAST-1 WELL



The joint venture of the Guddu block comprising Oil & Gas Development Company Limited (OGDCL) as operator (70 %), SEPL (13.5 %), IPRTOC (11.5 %) & GHPL (5 %) has discovered gas from an exploratory well namely Umair South East # 01, which is located in District, Ghotki, Sindh province.

Umair South East # 01 was spudded on 09th May, 2022 as an exploratory well to test the hydrocarbon potential of Pirkoh formation and Habib Rahi Limestone (HRL) to a planned depth of  $\pm$ 785m into HRL. The well was drilled down to a depth of 790m into HRL. Based on the results of wireline logs

interpretation, successful Drill Stem Test-1 in HRL has tested 1.063 million standard cubic feet per day (MMSCFD) gas through choke size 32/64" at well head flowing pressure (WHFP) of 210 pounds per square inch (Psi).

The discovery of Umair South East-1 is the result of an aggressive exploration strategy adopted by Guddu Joint Venture partners. It has opened a new avenue and will positively contribute to mitigating energy demand and supply gap from indigenous resources and will add to the hydrocarbon reserves base of OGDCL and the country.



## OIL & GAS DISCOVERY AT NIM EAST—1



The joint venture of the Nim Block comprising Oil & Gas Development Company Limited (OGDCL) as an operator (95 %) & GHPL (5 % carried) has discovered oil and gas from an exploratory well Nim East-1 which is located in District, Tando AllahYar, Sindh province.

Nim East-1 was spudded on 21st March, 2022 as an exploratory well using OGDCL's in-house expertise and in collaboration with the GHPL team. The well was drilled to a depth of 2,573 meters. Based on the results of wireline logs interpretation, Drill Stem Test-1 in the Basal Sand has tested 1,400 barrels of oil per day (BOPD) & 5.02 million standard cubic feet per day (MMSCFD) gas through choke size 32/64" at well head flowing pressure (WHFP) of 1820 pounds per square inch (Psi).

The said discovery is the 11th discovery in Nim Block which shows the commitment of Nim joint venture partners to exploit the hydrocarbon potential of the block and their aggressive exploration strategy.





## YET ANOTHER STRIKE AT KALERI SHUM-01

Oil and Gas Development Company Limited which is the operator of Kalchas Exploration Licence (50%) along with Mari Petroleum Company Limited (50%) as a joint venture partner, has made a gas discovery from its exploratory efforts at the Kaleri Shum-01 well located in District, Rajanpur (tribal area), Punjab province.

Kaleri Shum-01 was spudded on 31st December, 2021 to test the hydrocarbon potential of the Pab, Fortmunro/ Mughalkot, and Parh formations. The well was drilled down to a depth of 1,907m. Based on the results of wireline logs interpretation, OGDCL as an operator has successfully conducted four DSTs in Parh, Fortmunro/ Mughalkot, Pab, and Ranikot formations.

During Drill Stem Test (DST)-1 in Parh & Fortmunro/Mughalkot formations, the well flowed at a rate of 1.24 million standard cubic feet per day (MMSCFD) gas through choke size 32/64" at well head flowing pressure (WHFP) of 220 pounds per square inch (Psi). During DST-2 into Fortmunro/Mughalkot formations, the well tested 0.489 MMSCFD gas through choke size 32/64" at WHEP of 300 Psi.

The well also tested 0.192 MMSCFD gas from Pab Sandstone during DST-3 through choke size 32/64" at WHFP of 10-75 Psi. During DST-4 conducted in Ranikot formation, The well tested 0.16 MMSCFD gas through choke size 32/64" at WHFP of 100-130 Psi.

The discovery is a result of OGDCL's aggressive exploration strategy which will help in bridging the gap between demand and supply within Pakistan.







## OGDCL ANNOUNCES FINANCIAL RESULTS FOR NINE MONTHS (July, 21 to March, 22)

The Board of Directors of Oil and Gas Development Company Limited (OGDCL) in its meeting held on April 28, 2022 in Islamabad approved the financial results for the nine months ended March 31, 2022 of the fiscal year 2021-22. The company's net sales clocked at Rs 240.267 billion translating to a profit after tax of Rs 112.044 billion and earnings per share of Rs 26.05.

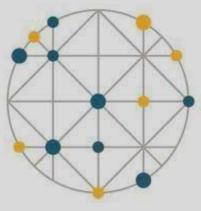
The Board of Directors also approved the third interim cash dividend @ Rs 1.0 per share in addition to earlier interim dividends of Rs 3.75 per share. The Company paid Rs 17.495 billion as royalty and Rs 49.260 billion in the form of taxes during the nine-month period.

OGDCL continues to be the market leader in the E&P sector and plans to accelerate its exploratory activities in the future as a result of seismic work to be undertaken in newly awarded blocks.



## OGDCL INCLUDED IN MSCI INDEX PAKISTAN

MSC



MSCI Inc. is a leading provider of critical decision support tools and services for the global investment community. MSCI announced induction of OGDCL in MSCI Pakistan Index. The MSCI announced results of the May, 2022 Semi-Annual Index Review for the MSCI equity indexes — including the MSCI

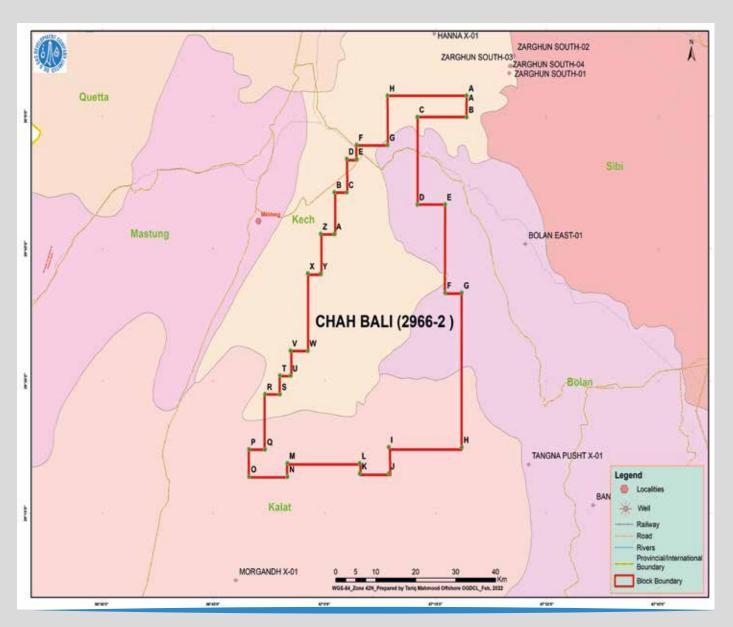
Global Standard, MSCI Global Small Cap and MSCI Micro Cap Indexes, the MSCI Global Value and Growth Indexes, the MSCI Frontier Markets, and MSCI Frontier Markets Small Cap Indexes, the MSCI Global Islamic Indexes.







## OGDCL PROVISIONALLY AWARDED NEW EXPLORATION **BLOCK IN BALOCHISTAN**



The Directorate General of Petroleum Concessions (DGPC) has granted a provisional award of a new exploration block Chah Bali in Balochistan to Oil and Gas Company Limited (OGDCL) and Pakistan Oilfields Limited (POL).

OGDCL participated in the competitive bidding round for exploration blocks held by the Government in April and the block has been awarded based on work units committed by OGDCL, with a working interest of 70%. Its joint venture partner POL has the remaining 30% working interest.

The provisional award will be formalized upon execution of petroleum concession agreement with DGPC, necessary agreements with joint venture partner, and completion of regulatory and procedural formalities. Participating in the bidding round is part of the Company's strategy to invest in its core business, accelerate exploratory activities, and augment hydrocarbon reserves balance.



## SALE OF CRUDE OIL FROM CHAK **NAURANG SOUTH WELL#1**



Chak Naurang oil field is located in District, Chakwal of Punjab province. OGDCL is the operator with a working interest of 85% and POL with 15% as a JV partner. Chak Naurang South well #01 was shut-in on 29 June, 2019 due to the non-acceptance of crude by refineries having heavy and waxy contents. OGDCL had made a substantial investment on account of work-over, completion cost, and installation of surface facilities which includes a steam boiler to keep insulated tanks warm from 130-140°F. Flow lines from well to tanks are also insulated.

The well has the capacity to produce 800-1000 bpd of crude with 13 API gravity. To dispose off the product, NOC from the Ministry was obtained to export or sale in the local market at competitive prices. Efforts were made to export the subject crude but could not be materialized due to economic constraints. After completion of due process and approval from the Board of Directors. OGDCL succeeded to sign a contract with ARL initially for 03 years and starting with the supply from 4th June, 2022.

The sale of said product will not only generate revenue for the operators but also for the national exchequer in the shape of royalty and taxes. This milestone has been achieved under the vision and leading role of Mr. Jahangaiz Khan, AED (Production), and the efforts of the professionals from the Production, Finance, CLSD, and Commercial departments.



## TALAASH OIL & GAS DEVELOPMENT COMPANY LIMITED April June 2022



## RESEARCH PAPER PRESENTED BY DR.SHABEER AHMED IN AAPG WORKSHOP



A research paper was presented by the OGDCL's professional Dr. Shabeer Ahmed, Senior Geophysicist, Basin Study (Exploration) in the workshop organized by The American Association of Petroleum Geologists (AAPG), USA held at Sydney, Australia from 6-7 July, 2022. The theme of the workshop was "Structural Geology and Our Future - The role of Tectonic Geoscience in energy transition, focusing on the Asia-Pacific Region". The workshop aimed to share, discuss, and explore many of the latest developments in structural geology, tectonic geoscience, energy transition, and why and how geoscientists should take the front row seat in the energy transition.

The workshop provided a platform for discussion and knowledge sharing, bringing workers and scholars from different backgrounds in geoscience together. The workshop was Chaired by Dr. Andre Coffa, Managing Director, URO Corporation Pvt. limited, Australian Exploration, Mining, and Energy Transition Company.

The main objective of the presented paper was to present a comprehensive catalog of structural styles formed as a result of different tectonic episodes of the Indian Plate within the subsurface of Southern Sindh Monocline, Pakistan, through seismic and GPlates reconstruction models. Dr. Ahmed acknowledged the management of the company for facilitating him to present his work in such a highly ranked international forum. Speakers in the workshop hailed from different international oil, gas and energy exploration companies and universities.

The format of the workshop consisted of keynotes by the International geoscientists, oral, poster presentations, and panel discussions. At the end Certificates of Appreciation were distributed among the speakers and participants. Dr. Ahmed received a Certificate of Appreciation from Dr. Sabin Zahirovic, who is a Robinson Fellow in the School of Geosciences, The University of Sydney, Australia.



## **OGDCL'S DIGITAL** TRANSFORMATION IS LIVE !!!

OGDCL is digitally transforming. One of the major steps in this regard is the implementation of SAP's Enterprise Resource System. ERP is described as the central nervous system of a company. SAP ERP provides the automation, integration, and intelligence that is essential to efficiently run all day-to-day business operations needed in an enterprise: financé, HR, joint venture accounting, supply chain management, sales and distribution, materials management, plant management and others. Overall, more than 1000 employees of OGDCL have been trained.

SAP has customer base worldwide, more than 87% of oil and gas companies run SAP in 118 countries. In OGDCL, the scope of work included SAP Business Modules (FI, CO, FM, JVA, PS, SD, AM, MM, MDG, SCM, Ariba, HCM, SF and RE-FX),

Business Planning and Consolidation, SAP User Experience (Fiori), Analytics (BO/BI/BW), SAP Technical Modules (BASIS, Workflows) and SAP integrations with external systems. Under ASAP implementation strategy SAP project is divided into four stages. Stage-I, is the preparation stage started in October 2020 which included initial project planning, project procedures and strategy, project kick off, technical requirements, and SAP overview sessions. This phase was completed in November, 2020.

The second stage was Business Blueprint phase which started in December, 2020 and was completed in March, 2021. This phase included requirement gathering sessions, process definition/analysis, organizational business structure, identification of reports, and business blueprint



documents sign off. The stage was completed on April, 2021.

The third stage was the realization stage, which included baseline configuration and confirmation, final configuration and confirmation, development plans/reports, final integration test, authorization preparation, data migration preparation, power user training and user acceptance testing. It was started in April, 2021 and completed in December, 2021. The fourth stage i.e. final preparation stage started in January, 2022 included readiness assessment, setup production environment, data migration/upload, and cutover.

After completion of these phases, the system was made live on July 01, 2022 adopting cold cutover strategy. Overall the benefits of SAP implementation will enable value addition in terms of transparency, automated workflow, reporting accuracy, streamline of procedures, real-time calculations and integration. In future, OGDCL is also considering to include upstream operation management, production sharing accounting, and digital oil fields in SAP modules. OGDCL's Centre of Excellence (COE) which is sub divided into smaller COEs for SAP landscape will be ensuring content delivery of the consistent delivery of change initia-

#### SAP IMPLEMENTATION TEAM OGDCL

#### Name

**Anas Farook** Nadeem Rizvi Kamran Yusuf Shami Farooq Saleem Ahmer Shahab

#### Designation

CFO/Project Director GM (Treasury)/PM SAP-Functional CIO/PM SAP -Technical Chief Accountant/PC-Functional Chief ERP/PC-Technical

**Number of Power Users Powers Users Training End Users Trainings at OGTI Refresher Trainings at OGTI Trainings Imparted** 

130 Plus **April to June 2021** Dec. 2021 to June 2022 **July to August 2022** 1100 End Users



### **OGDCL CONSTRUCTS BLOCK AT GOVERNMENT GIRLS HIGH SCHOOL CHAKWAL**

OGDCL under its CSR program is proactively playing its role in providing good health, quality education, clean water, infrastructure, renewable energy, a clean environment, and healthy sports activities to the communities residing around its operational areas. Mr. Zia Salahuddin, Executive Director, Services in a small ceremony, inaugurated the OGDCL block at Government Girls High School, Mulhal Mughlan Tehsil and District Chakwal on 16 June, 2022.

The ceremony was attended by the community, school staff, students, and the District Education officials who appreciated the role played by the OGDCL in uplifting the facility. Mr. Zia assured the stakeholders regarding OGDCL's unwavering resolve in improving the lives of the communities residing in and around its operational areas.

Speaking at the ceremony, Mr. Zia appreciated the efforts of the school management, and local government and expressed his pleasure upon completion of the project on time. He also expressed his trust that with the inauguration of the facility aligned with the enthusiasm and devotion of the teachers and staff, the teaching and learning experience at the school will



Inauguration of OGDCL block in Govt Girls High School, Chakwal

excel. The project was completed at a cost of Rs 5.13 million and this construction has contributed to perfecting the facilities for Government Girls High school. OGDCL hopes that by completing this project the number of students will be facilitated. On behalf of the locality, the Deputy Commissioner expressed his deep gratitude to OGDCL for constructing the classrooms and veranda and ensuring that the School's teachers and students will make their best efforts to "teach well - learn well" and to live up to the expectations. The inauguration event was also attended by Mr. Zeeshan Zaidi, Manager, CSR OGDCL, Dr.Javed Igbal, CO Education, District Education officials, the Principal of the School and OGDCL Rajian field officials.

## FREE SURGICAL EYE CAMP SETUP AT **CHAKNAURANG OIL FIELD**



Three days free Surgical Eye Camp at Chaknaurang oil field

OGDCL, under its CSR Program, established a three-day free surgical eye camp at OGDCL CSR dispensary situated in Chak Naurang. In addition to the free camps, school screenings at various locations in Chak Naurang and its surroundings were carried out from 18th to 21st May, 2022 in collaboration with Al-Shifa Eye Trust

An opening ceremony was organized at OGDCL CSR Dispensary District, Chakwal on 19 May, 2022. Additional Deputy Commissioner (F&P), Chakwal, Mr. Mujahid Abbas inaugurated the eye camp as Chief Guest. Mr. Igbal Khan, Field Manager, Col. Tariq Usman, General Manager-Al Shifa Eye Trust, and Mr. Muhammad Shujah ur Rehman, Sr. CSR officer participated in the inaugural ceremony.

The Additional Deputy Commissioner visited the eye camp and inquired about the health of patients whose surgeries had been performed. The patients showed their complete satisfaction with the overall process. Thereafter, the ADC visited the operation theater established at OGDCL CSR dispensary by the doctors of Al-Shifa Eye Trust and witnessed operation/laser procedure. All the expenses incurred at the three-day eye camp including laser/phaco surgery, provision of glasses, and medicines were borne by OGDCL under its CSR program.

Eight Hundred and Ninety Seven (897) patients were screened, 801 were provided medicines, 695 were provided with glasses, and cataract surgery was performed on more than 121 patients. In addition, 1441 children were also screened in different schools, 166 COVID tests were conducted alongwith 133 lab screenings. 185 special glasses were issued to needy people and 50 patients were referred to Al-Shifa Trust Eye Hospital, Rawalpindi for further investigation and treatment. Additional Deputy Commissioner Mr. Mujahid Abbas appreciated OGDCL's efforts under it's CSR Initiative for the under privileged community of Chak Naurang village.







## AGREEMENT INKED WITH **FATIMID FOUNDATION**

Oil and Gas Development Company Limited (OGDCL) is establishing a modern healthcare facility in Dera Ismail Khan to serve patients suffering from thalassemia, hemophilia, and other genetic blood disorders. For this purpose, the Company has recently signed an agreement with Fatimid Foundation to establish a healthcare facility in DI Khan in line with its Corporate Social Responsibility (CSR) initiatives.

The proposed OGDCL- Fatimid Centre Dera Ismail Khan project for the people of southern districts of Khyber Pakhtunkhwa, is another feather in OGDCL's cap.

Construction of the centre will be completed in approximately 18 months. The centre will serve more than 7,000 patients suffering from blood disorders.

The OGDCL-Fatimid Hematological Centre equipped with state-of-the-art machinery would provide all possible health care to the marginalized communities having patients of thalassemia and hemophilia.

Once the centre is made operational, patients would get quality treatment for which earlier they had to travel to Peshawar.



### **OGDCL LAUNCHES CHOLERA RESPONSE**

Cholera broke out in Pirkoh District Dera Bugti due to shortage of portable water and use of contaminated water in the area. The local administration of Pirkoh declared an emergency in the area on 12th May, 2022 and requested OGDCL for assistance against cholera.

OGDCL and District Administration jointly announced and launched a CSR Emergency response package for the people of the Pirkoh area, which is the operational District of OGDCL. Under the announced package 09 water tractor trollies were hired to provide water to the locals on an immediate basis whereas, four OGDCL-owned water bouzers are also involved in helping the people in this time of need.

Expanding its assistance, OGDCL dispensary was declared a temporary Cholera Emergency Center for the provision of 24/7 services to cholera-affected patients. Apart from this, the provision of medicines and ambulances on a war footing basis to DHO, Dera Bugti is also a crucial step to help with the quick recovery of patients and shifting of critical patients to nearby hospitals.

Boarding and lodging facilities for doctors and the para-medical staff were provided within the premises of the OGDCL Pirkoh gas field. The organization also plans to drill two water bores at Pathar Nala. A resistivity survey in this regard has

#### How cholera affects the body

Cholera is an acute intestinal infection that causes severe diarrhea, dehydration and, if not treated promptly, death.

#### **How it spreads**

- People ingest water or food contaminated with cholera bacteria
- · In epidemic, feces of diseased person is source of contamination

#### Treatment

- · Salt solution, intravenous fluids, antibiotics
- · In unprepared communities, death rates can be as high as 50 percent

@ 2010 MCT Source: World Health Organization

Small

intestine

Large intestine

#### In the large intestine

Bacteria multiply rapidly



- 2 Toxin from bacteria penetrates cells of intestinal wall
- 3 Toxin prevents intestine from absorbing water from digested food: dehydration result

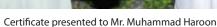
been carried out. OGDCL also installed two RO plants at Pirkoh for the supply of clean drinking water in the past, which are operational and benefiting the local community. Considering the chaotic situation and to avoid reoccurrence in the future, OGDCL is planning to explore alternate water supply mechanisms as a permanent solution to the problem for the local community.



## **ENCOURAGING EMPLOYEES-OGTI**

With the view to encourage healthy working environment, OGTI has introduced BEST PERFORMER award/certificate for each quarter. In this regard Mr. Muhammad Haroon and Sabir Hussain (Cooks) were awarded certificates for maintaining the high quality of food and for hygiene standards.







Certificate presented to Mr. Sabir Hussain

## **OGTI - IMPARTING KNOWLEDGE**



Participants of Integrated Waste Management Protocols in Oil and Gas Industry Workshop



Participants of HSE Leadership Workshop-II



Participants of Tight Gas Characterization Training



Participants of HSE Leadership Workshop



Participants of HSE Leadership Workshop-I



Participants of Advance Excel Training



## **SMOKING BOTH TRADITIONAL AND E-CIGARETTES MAY CARRY SAME HEART RISKS**

Smokers who think they can lower their risk for cardiovascular disease by sometimes smoking e-cigarettes instead of traditional ones might need to think again: A new study finds people who use both have the same cardiovascular disease risks as those who only smoke traditional cigarettes.

The fact that dual use – using both traditional, combustible cigarettes and e-cigarettes – had similar cardiovascular disease risk to smoking cigarettes is an important finding as many people are taking up e-cigarettes in an attempt to reduce smoking for what they perceive is a lower risk. It is common for people to try to switch from traditional cigarettes to e-cigarettes and get caught in limbo using both products.



Cigarette smoking and second hand smoke exposure are responsible for nearly 1 in 5 deaths. In addition to heart disease and stroke, traditional cigarette smoking causes a wide range of health issues, including cancer and lung diseases. E-cigarettes contain many toxic chemicals, but how their long-term use affects heart health has not been well-researched.

Researchers compared cardiovascular health for 24,027 traditional cigarette smokers, e-cigarette smokers and people who used both products. Nearly 1,500 cardiovascular events – heart attacks, bypass surgery, heart failure, stroke or other heart conditions were discovered. Researchers found no significant differences in heart attacks, heart failure or strokes among people who smoked a combination of traditional cigarettes and e-cigarettes, compared to those who smoked traditional cigarettes only. Those who exclusively used e-cigarettes were 30%-40% less likely to report cardiovascular disease events. However, the number of heart-related events was too insignificant for researchers to draw any solid conclusions.

While the study provides important information on the use of e-cigarettes and their impact on cardiovascular health, it relies on self-reported data over a short period of time and the event rate is still low – especially in younger people.

Because e-cigarettes are still relatively new, there is still a need for more data and ongoing research to create a strong body of evidence on their long-term risks. It's important to remember that even with traditional cigarettes, decades of use and surveillance were needed to provide the strength of evidence we now have confirming the highly significant harm of combustible cigarettes. People should know that e-cigarettes contain addictive nicotine and toxic chemicals that may have adverse effects on the cardiovascular system and its overall health.



## **OGDCL DISTRIBUTES MOBILITY DEVICES**

OGDCL in collaboration with National Disability Fund (NDF) distributed Assistive devices worth 0.5 million among persons with disabilities in Karachi in a small ceremony held on May 15, 2022. Mr. Sadiq Ali Memon, Special Assistant to Chief Minister, Sindh for DEPD Department graced the event as Chief guest in APHA Center, Karachi.

Mr. Sadiq Ali Memon, addressing the gathering said that Assistive devices which include tri-motor bikes, tri-cycle, and wheel chairs are sources of mobility and that mobility is important to every-one. He encouraged and thanked OGDCL and NDF efforts in this regard. Mr. Fida Hussain, Regional Coordinator /RO, Karachi added that OGDCL through its Corporate Social Responsibility programme is supporting disabled individuals and will continue to contribute to provide assistive devices to meet their needs.



## WHAT ARE THE BENEFITS OF EATING HEALTHY



A healthy diet typically includes nutrient-dense foods from all of the major food groups, including lean proteins, whole grains, healthy fats, and fruits and vegetables of many colors. Healthy eating habits also include replacing foods that contain trans fats, added salt, and sugar with

more nutritious options. Following a healthy diet has many benefits, including building strong bones, protecting the heart, preventing disease, and boosting the



#### **HEART HEALTH**

Heart disease is the leading cause of death for adults. High blood pressure, or hypertension, is a growing concern, the condition can lead to a heart attack, heart failure, and a stroke. It may be possible to prevent up to 80% of premature heart disease and stroke diagnoses with lifestyle changes, such as increasing physical activity and healthful eating. The foods people eat can reduce their blood pressure and help keep their hearts healthy. Eat plenty of vegetables, fruits, and whole grains, choosing fat-free or low fat dairy products, fish, poultry, beans, nuts, and vegetable oils. Limit saturated and trans fat intake, such as fatty meats and full-fat dairy products and limiting drinks and foods that contain added sugars. Lastly, restricting sodium intake to less than 2,300 milligrams per day — ideally 1,500 mg daily and increasing consumption of potassium, magnesium, and calcium and adding high-fiber foods are also crucial for keeping the heart healthy.



#### IMPROVED MEMORY

A healthful diet may help maintain cognition and brain health. Studies suggest and identified nutrients and foods that protect against cognitive decline and dementia. The researchers found that adding vitamin D, C, and E, omega-3 fatty acids, flavonoids and polyphenols and fish to your diet helps in improving memory.



#### **WEIGHT LOSS**

Maintaining a moderate weight can help reduce the risk of chronic health issues. A person who has more weight or obesity may be at risk of developing certain conditions, including coronary heart disease, type 2 diabetes, osteoarthritis, stroke, hypertension, certain mental health conditions, and some cancers. Many healthful foods, including vegetables, fruits, and beans, are lower in calories than most processed



#### **IMPROVED GUT HEALTH**

The colon is full of naturally occurring bacteria, which play important rolesTrusted Source in metabolism and digestion. Certain strains of bacteria also produce Source vitamins K and B, which benefit the colon. They may also help fight harmful bacteria and viruses.

A diet high in fiber may decrease inflammation in the gut. A diet rich in fibrous vegetables, fruits, legumes, and whole grains may provide a combination of prebiotics and probiotics that help good bacteria thrive in the colon. These fermented foods are rich in probiotics Yogurt, kimchi, sauerkraut, miso and kefir.

## BENEFITS OF EXERCISE

- ▶ **Helps you control your weight.** Along with diet, exercise plays an important role in controlling your weight and preventing obesity. To maintain your weight, the calories you eat and drink must equal the energy you burn. To lose weight, you must use more calories than you eat and drink.
- Helps you quit smoking. Exercise may make it easier to quit smoking by reducing your cravings and withdrawal symptoms. It can also help limit the weight you might gain when you stop
- ▶ Helps keep your thinking, learning, and judgment skills sharp as you age. Exercise stimulates your body to release proteins and other chemicals that improve the structure and function of your brain.
- Strengthens your bones and muscles. Regular exercise can help kids and teens build strong bones. Later in life, it can also

- slow the loss of bone density that comes with age. Doing muscle-strengthening activities can help you increase or maintain your muscle mass and strength.
- Reduces your risk of some cancers, including colon, breast, uterine, and lung cancer.
- Reduces your risk of falls. For older adults, research shows that doing balance and muscle-strengthening activities in addition to moderate-intensity aerobic activity can help reduce your risk of
- Improves your sleep. Exercise can help you to fall asleep faster and stay asleep longer.
- Increases your chances of living longer. Studies show that physical activity can reduce your risk of dying early from the leading causes of death, like heart disease and some cancers

