

Adolescent and Child Health

 Understand adolescent and children health issues globally and the burden of diseases in this age group
 Discuss major global interventions to address public health issues in adolescents and children
 Discuss and understand what preventive services for adolescent, and child health are delivered in KSA and globally.

4. Familiarize students with the national child immunization schedule

Color index:

- Main text
- Males slides
- Females slides
- Doctors notes 442
- Doctor notes
- Golden notes
- Important
- Extra





What do we mean by the term 'adolescents'?

- A transitional period from childhood to adulthood, which encompasses multiple physical, behavioural and psychological changes and shifting social expectations
- Recognized as a distinct phase of life with its own unique set of health needs.

DEVELOPMENT?

- Physical Development
- Cognitive Development
- Psychosocial Development
- Behavioural Development
- Emotional Development?some people emotionally mature

YOUNG PEOPLE POPULATIONS GLOBAL, MENA, SAUDI

- Increasing in LMIC and decreasing in HIC
- Make up 1/5 of the population in the MENA region
- In 2021:

438 notes

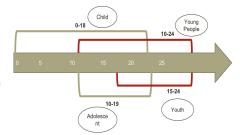
48% of the population in Saudi Arabia is less than 30 years.

57.7% of Saudis are less then 30 years of age.

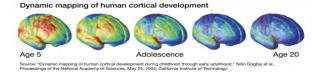
why in low in come and middle income countries the the young people increase compared to high income countries?in high income they have a lot of responsibility such as higher education



- Child (from 0 to18)
- Adolescents(from 10 to 19)
- Young People (from 10 to 24)
- Youth (from 15 to 24)
- Age of consent(The age of marriage or the age of making sexual decisions)
- Age of majority (In Saudi Arabia 21)
- سن التكليف سن البلوغ او الى سن 15 •
- Emerging Adulthood



This age group experience new challenges, develop new capacities and new habits they are semi exposed to the word and therefore it is very very critical the environment that is provided to this population is control environment otherwise they can end up developing risky behavior



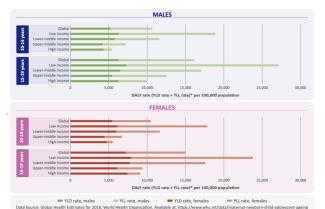
Main health problems of adolescents ?



MORTALITY 10-YEAR-OLDS

- Studies suggests that depression and anxiety are one of the main problems in this age group
- Technology use and sedentary lifestyles increase the risk for obesity
- The most common cause of death is "Road Injury"
- Third is self harm, self harm by poisoning, sharp instruments, medication overdose. This can be grouped with other causes into mental health issues leading to suicide.

ALL-CAUSE MORBIDITY AND MORTALITY BURDEN IN ADOLESCENT S B Y COUNTRY INCOME GROUPS, AGE AND SEX



TOP CAUSES OF ADOLESCENT MORTALITY, 10-14 YEAR- OLDS, 2020 IN MENA REGION





- Moreover unsafe deliveries and abortion done in facilities that aren't qualified enough may cause the mother to get infected with tetanus, which can also kill the baby.



MORTALITY AMONG ADOLESCENTS 10-19Y

(2019)	Region	Deaths (million)	%	Rate/1000
(2015)	World	0.96	100%	8
	Sub- Saharan Africa	0.42	44%	17
	Middle East North Africa	0.05	5%	7
	Europe and Central Asia	0.03	3%	3
	East Asia and Pacific	0.11	12%	4
	Latin America and Caribbean	0.07	7%	7
	North America	0.02	2%	3
	South Asia	0.86	rce: UNRTE	The State of the 🕏 o

GLOBAL CAUSES OF MORBIDITY AND MORTALITY BY AGE AND SEX, 2019



TOP CAUSES OF ADOLESC ENT MORTALI TY, 15- 19Y, 2020 IN MENA REGION (females)



Health Problems of Adolescents in Saudi Arabia

SRH IN ADOLESCENTS

- Adolescents can have their first sexual debut, marriage and/or relationships, as well as pregnancy.
- High fertility related to early marriage.
- Not studied well due to its sensitive nature and taboo topics.
- Issues regarding gender-based violence, intimate partner violence and/or domestic violence.
- Globally, there were 41 births per 1000 to girls aged 15–19 years in 2020

Health problems of adolescents in Saudi Arabia:

- There are many studies investigating health problems in the youth of Saudi Arabia .

It is well documented in the literature that young adults from the upper socioeconomic class undergo **unlawful sex**.

 Table 1

 Health risk behaviors among adolescents in Saudi Arabia and gender differences

- Sex education among females was found to be extremely deficit.
- Many studies also documented the **increasing use of energy drinks** among the kingdom's youths.
- A study also documented that about **30% of this population smokes cigarettes.**

"Jeeluna" Study:

Time for an Adolescent Health Surveillance System in Saudi Arabia: Findings From "Jeeluna"

• A study done on 12000 adolescent

Health risk behaviors	Prevalence			Prevalence by gender					
	n = 12,575 (%)	95% CI		Male n = 6,444 (%)	95% CI		Female n = 6,131 (%)	95% CI	
		Lower Upper			Lower Upper			Lower	Upper
Dietary behaviors (daily)									
Breakfast intake (sometimes/daily) ^a	54.8	50.8	58.7	62.3	60.7	64.0	46.3	44.6	48.0
Fruit intake (≥1 servings)	38.1	34.0	42.1	43.6	41.5	45.7	31.8	29.7	33.9
Vegetable intake (≥ 1 servings)	54.3	50.7	58.0	55.7	53.8	57.7	52.8	50.8	54.8
Carbonated beverage consumption (≥2 drinks)	37.5	34.0	41.1	43.9	41.9	45.9	30.4	28.3	32.5
Energy drinks consumption (≥1 drinks)	21.8	19.7	23.9	25.5	23.8	27.2	17.7	16.1	19.3
Activity									
Physical exercise (daily)	13.7	10.4	16.9	19.0	17.4	20.6	7.7	6.9	8.5
Television viewing (≥ 2 hours/day)	42.4	41.0	43.9	40.4	38.8	42.1	44.7	42.8	46.6
Video game playing (yes)	55.6	47.7	63.4	68.0	66.4	69.6	41.6	39.3	43.9
Internet use (≥ 2 hours/day)	30.1	26.8	33.4	26.0	24.3	27.8	34.6	32.5	36.8
Cellular phone (>1 hour/day)	14.8	13.2	16.3	13.2	12.0	14.4	16.6	14.8	18.3
Traffic safety									
Seat belt using (sometimes/always)	13.8	11.4	16.3	17.0	15.3	18.7	10.2	9.0	11.4
Car taking without permission (yes)	17.9	11.7	24.2	28.6	26.8	30.4	5.9	5.1	6.7
Bullying and violence									
Exposure to bullying ^a	25.0	23.0	27.0	27.1	25.1	29.0	22.7	21.3	24.2
Exposure to violence at school ^b	20.8	15.8	25.7	28.9	26.3	31.5	11.7	10.4	12.9
Exposure to violence in community ^b	19.7	17.6	21.8	22.9	21.3	24.5	16.1	14.6	17.6
Tobacco and substance (ever use)									
Cigarette smoking	16.2	12.5	19.9	22.1	20.0	24.2	9.6	8.2	10.9
Sheesha smoking	10.5	8.4	12.5	13.5	11.8	15.3	7.1	5.7	8.4
Solvents sniffing	16.2	12.7	19.6	11.5	10.3	12.6	21.4	19.7	23.0
Prescription medication use for nonmedical purpose	7.2	5.7	8.7	6.0	5.3	6.8	8.5	7.4	9.6
Alcohol consumption	1.4	1.1	1.8	2.1	1.7	2.5	.7	.5	1.0
Stimulants use	1.5	1.1	1.9	1.6	1.3	1.9	1.4	1.0	1.8
Marijuana use	1.0	.6	1.5	1.6	1.2	2.0	.4	.2	.6

 Table 2

 Health status among adolescents in Saudi Arabia and gender differences

438 notes

	Prevalence			Prevalence by gender							
	n = 12,575 (%)	95% Cl Lower Upper		Male n = 6,444 (%)	95% CI		Female n = 6,131 (%)	95% CI			
					Lower Upper			Lower	Upper		
Self-reported health status											
Chronic illness											
Bronchial asthma	8.4	7.1	9.8	10.8	9.6	11.9	5.8	5.1	6.5		
Allergies (not asthma)	4.9	3.5	6.2	4.2	3.5	4.9	5.6	4.7	6.5		
Hematological disorder	3.7	2.9	4.6	3.1	2.5	3.7	4.5	3.7	5.2		
Skin disorders	3.6	2.6	4.6	3.1	2.6	3.6	4.2	3.4	5.0		
Musculoskeletal	1.5	1.0	1.9	1.5	1.0	2.0	1.4	1.0	1.8		
Genitourinary	1.2	.7	1.6	.9	.6	1.2	1.4	.9	1.8		
Diabetes	.7	.5	1.0	.9	.7	1.2	.6	.3	.8		
Others	4.6	3.8	5.4	5.0	4.0	6.0	4.2	3.3	5.0		
Mental health											
Sadness/depression	14.3	11.0	17.6	10.1	9.3	11.0	19.0	17.6	20.4		
Anxiety	6.7	5.2	8.3	4.6	3.9	5.3	9.1	8.0	10.2		
Measured indicators of health	status										
BMI ^a											
Underweight	15.2	13.7	16.7	17.2	15.3	19.0	13.0	11.8	14.2		
Healthy weight	54.8	51.2	58.4	48.8	47.2	50.3	61.5	60.0	63.1		
Overweight	14.1	13.4	14.9	13.9	12.8	15.0	14.5	13.4	15.5		
Obese	15.9	12.6	19.1	20.2	18.7	21.7	11.0	9.8	12.3		

Click here For extra studies!

Health Problems of Adolescents in Saudi Arabia

WHY IS IT IMPORTANT TO INVEST IN THIS PHASE?

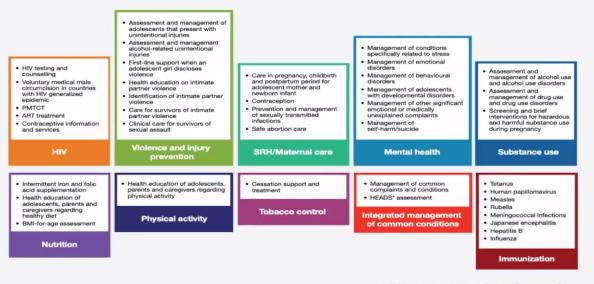
3 Demographic 2 1 Public health Economic development development **ADOLESCENCE WITHIN THE** ** **VISION 2030** \Leftrightarrow LIFE-COURSE The Vision was cascaded into strategic objectives to enable effective implementation through Vision Realization Programs. Ambitious Nation Thriving Economy Vibrant Society Grow & diversify the economy Strengthen Islamic & national identity Risk and 6 protective factors Ţ Offer a fulfilling & healthy life Enable social Increase Preconceptual influences and prenatal developn Early child Puberty and social role transitions Adulthood .. ۲ .. 27 0 Health-related behaviours and sta 96 1999 999 and a brands Health policies and health-se Level 3 Strategic Objectives Figure 2: Conceptual framework for adolescent health 2 1 * 1. The framework emphasises the crucial importance of a life-course perspective in the understanding of adolescent The tranework emphasises the crucial importance of a lite-course perspective in the understanding of addiescent health and development (represented by the horizontal flow of the framework) and the importance of social determinants of health (vertical flow). The axes intersect around the unique characteristics of adolescence (the complex interactions between puberty, neurocognitive maturity, and social-role transitions) to emphasise how these factors affect adolescent health and development. The text outside the boxes refers to settings and scope of policies, preventive interventions, and services that affect adolescent health. Health Sector Pinancial Sector Pligrim Experience National Transform Transformation Development Program Program Program ation Public Investment Privat National Industrial Development Program Logistics Program

Health services and interventions addressed in WHO guidelines

- Saudi Arabia has a plan on adolescence services that was documented in papers in 2009. However, we don't know really how it is implemented.

- if we want to plan some adolescent health services in our country, there are many guidelines this is from WHO for example.

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*HEADS is an acronym for Home, Education/Employment, Eating, Activity, Drugs, Sexuality, Safety, Suicide/Depression

Figure 4. Health services and interventions addressed in WHO guidelines

Health Problems of Adolescents in Saudi Arabia

*** NATIONAL ADOLESCENT HEALTH EFFORTS**

Awareness Visits:

- Oral Health.
- Adolescent health and healthy marriage.
- Communicable diseases and their prevention.
- Mental health and video game addiction (internet gaming disorder).
- Physical activity and obesity control.

Awareness Programs:

- Food awareness
- Healthy sleep.

https://www.moh.gov.sa/Ministry/Information-and-services/Pages/Young.aspx

- 1. Nutrition and Lifestyle
- 2. Obesity
- 3. Traffic Accidents
- 4. Reproductive Health
- 5. STIs and HIV

https://www.moh.gov.sa/Ministry/Projects/School-Health- Program/Pages/default.aspx

Awareness campaigns in schools includes:

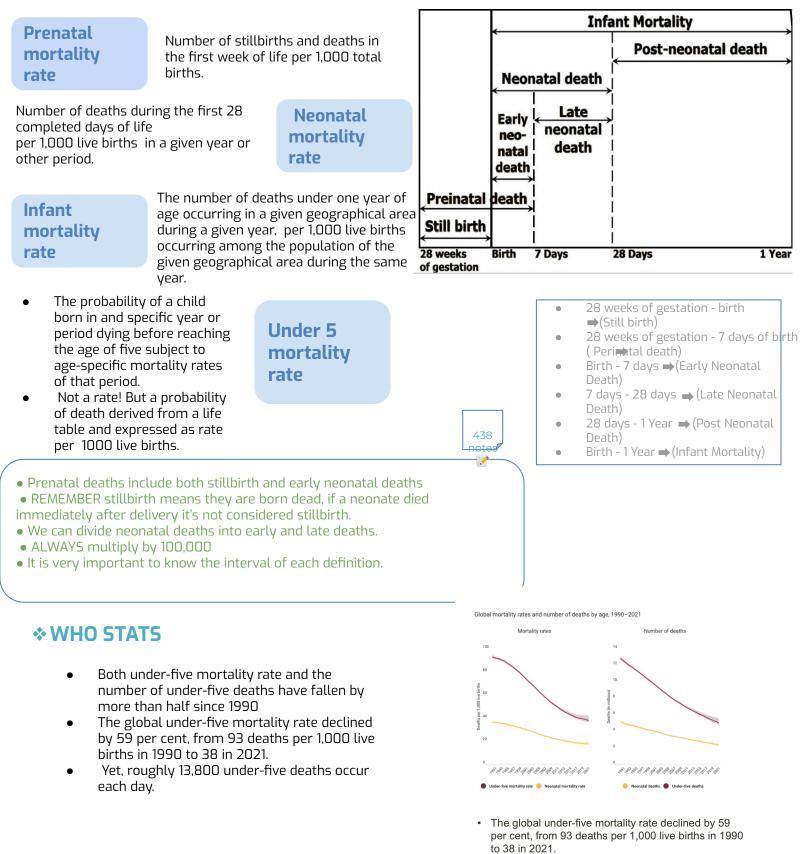
- اليوم الخليجي للصحة المدرسية وصحة اليافعين و الشباب 1.
- 2. Breast cancer
- 3. Diabetes
- 4. Smoking

Other new issues

- Social media use
- □ Violence and self-harm
- Mental health (Half of all mental health disorders in adulthood start by age 14, but most cases are undetected and untreated.)
- Drug misuse and addiction or substance use disorder (Early onset of substance use is associated with higher risks of developing dependence and other problems during adult life, and people of younger ages are disproportionately affected by substance use compared with people of older ages.)
- Limited data on this age group

Indicators of Child Health

Mortality in infancy and childhood:



Yet, roughly 13,800 under-five deaths occur each day.

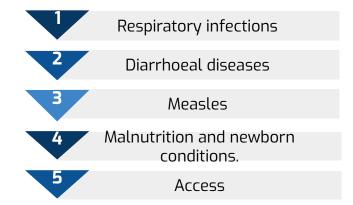
CHILD HEALTH

6

NEONATAL DEATHS

- 75% occur during the first week of life,
- In 2019, about 1 million newborns died within the first 24 hours. •
- Preterm birth •
- Childbirth-related complications (birth asphyxia or lack of breathing at birth),
- Infections
- Birth defects

CHILD M&M



Many child deaths are preventable through vaccination, adequate home care, access to health care services, improved rates of breastfeeding and better nutrition.

SUSTAINABLE DEVELOPMENTAL GOALS

- SDG 3.2.1: Neonatal mortality rate (0 to 27 days) per 1000 lives births
- SDG 3.2.2: Under-five mortality rate (per 1000 live births)

How are we doing?



SAUDI ARABIA DATA (UNICEF) 2021

Key demographic indicators



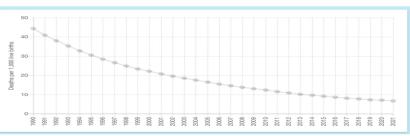


SAUDI DATA

Under-five montality rate (owners per 1,000 two births) Find out more >	7	View data
Under-five deaths @umber of deaths) Find out more >	4,350	View data
Infant mortality rate (Deaths per 1,000 live births) Find out more >	6	View data
Neonatal mortality rate (branks per 1,000 Ne birks) Find out more >	3	View data
Under-five mortality rate (Female) (beams per 1,000 live births) Find out more >	7	View data
Under-five mortality rate (Male) (Deaths per 1,000 live births) Find out more >	7	View data

Trends in under-five mortality rate in Saudi Arabia

Child survival



CHILD HEALTH

*** ESSENTIAL NEWBORN AND CHILD HEALTH INTERVENTIONS**

Intervention	Referral level	1 st level	Community
Childbirth			
Induction of labour for prolonged pregnancy	1	-	-
Prophylactic uterotonics to prevent postpartum haemorrhage	1	1	1
Active management of third stage of labour to prevent postpartum haemorrhage	1	1	-
Management of postpartum haemorrhage (e.g. uterotonics, uterine massage)	1	1	1
Caesarean section for maternal/foetal indication	1	-	-
Prophylactic antibiotics for caesarean section	1	-	-
Postnatal (mother)			
Family planning	1	1	1
Prevent and treat maternal anaemia	1	1	-
Detect and manage postpartum sepsis	1	1	-
Screen and initiate or continue antiretroviral therapy for HIV	1	1	
Postnatal (newborn)			
Immediate thermal care	1	1	1
Initiation of exclusive breastfeeding (within first hour)	1	1	1
Hygienic cord and skin care	1	1	1
Neonatal resuscitation with bag and mask (professional health worker)	1	1	-
Case management of neonatal sepsis, meningitis and pneumonia	1	1	-
Kangaroo mother care for preterm and for less than 2000g babies	1	1	
Management of newborns with jaundice	1	1	-
Surfactant to prevent respiratory distress syndrome in preterm babies	1		-
Continuous positive airway pressure (CPAP) to manage babies with respiratory distress syndrome	1	-	-
Extra support for feeding small and preterm babies	1	1	-
Presumptive antibiotic therapy for newborns at risk of bacterial infections	1		-
Infancy and Childhood			
Exclusive breastfeeding for 6 months	1	1	1
Continued breastfeeding and complementary feeding from 6 months	1	1	1
Prevention and case management of childhood malaria	1	1	1
Vitamin A supplementation from 6 months of age	1	1	1
Comprehensive care of children infected with or exposed to HIV	1	1	-
Routine immunization and <i>H. influenzae</i> , meningococcal, pneumococcal and rotavirus vaccines	1	1	1
Management of severe acute malnutrition	1	1	-
Case management of childhood pneumonia	1	1	1
Case management of diarrhoea	1	1	1
Cross-cutting community strategie	es		
Home visits for women and children across the continuum of care	-	-	1

*** EXCLUSIVE AND CONTINUED** BREASTFEEDING

Lower risk of gastrointestinal infection for the baby

More rapid maternal weight loss after birth.

Delayed return of menstrual periods.

No adverse effects on growth have been documented with exclusive breastfeeding for six months.

Reduced level of iron has been observed in some developing country settings.

* BREASTFEEDING PROMOTION

The World Health Organization recommends that:

- Breastfeeding be initiated within one hour of birth
- Infants feed on nothing but breast milk for the first six months of life
- Infants continue breastfeeding until at least the age of two
- Infants be introduced to adequate, safe and complementary foods beginning at six months
- Not just promoting but it's PROTECTING, SUPPORTING and PROMOTING breastfeeding.
- Remember the importance of policy to empower women to breastfeed!!



VACCINES GLOBAL AND LOCAL

NHS VACCINE SCHEDULE

I won't ask you about it

/		_
Age	Vaccine	
8 weeks	6-in-1 vaccine	
	Rotavirus	
	MenB	
12 weeks	6-in-1 vaccine	
	PCV	
	Rotavirus	
16 weeks	6-in-1 vaccine	
	MenB	
1 year	Hib?MenC	
	MMR	
	PCV	
	MenB	
2-10 years	Ful (yearly)	
3 years and 4	MMR	
months	4-in-1 preschool booster	
12-13 years	HPV	
14 years	3-in-1 teenage booster	
	MenACWY	1
WUKUWI H	MONITORING	

VACCINES

- \cdot Hep B \cdot Hep A \cdot RV \cdot DTaP \cdot Hib
- PCV · IPV · BCG · OPV · Measles
- MCV4 · MMR · Varicella · Tdap · HPV

SAUDI VACCINE SCHEDULE

						+BCG	السل ڈ						• الثلاثي البختيري Tdap •		
НерВ	• الكبدي ب	·Нерв	الكبدي ب	۰·He	•الخبدي ب 8¢	•Hep	الخبدي ب 8								
		٠RV	فيروس الروتا	٠RV	• فيروس الروثا	٠RV	فيروس الروتا								
		DTaP	الثلاثي ابكنيري	+DT	•الثلاثي البختيري 🛯	•DTa	• الثاني البخليري ٩			• الثاني البختيري •DTaP		• الثاني ابكليي • DTaP			
		۰Hb	مستحيمة التزلية	+HR	• المستديمة التزلية	۰Hb	المسلديمة النزلية			• المستديمة التزنية Hb•					
		RCV	العقدية لزلوية الهديخ	• • PC\	العقدية الراوية اليدوي ا	•PCV	العقدية الراوية المديني		 العقدية الراوية المدين ١٩٥٠ 						
		· IPV	شلل أطفال معظا	۰IP	• شتل أطفال معطل /	۰IPV	فللل أطفال معطل								
						+0P\	• شتل الأطغال القموي ا		• شلل لأطفل الفمري OPV •	• فلل لأظفال القمري OPV •		• شنل الأطغال الغموي VPO •			
								• الحصية المغردة Measels •							
								•الحمن الشوكية WCV4• الرتاعي المدمة	•الحمي الشوخية NCV4• الرباعي المدمخ						مەن، لىلىوكيە MCV4 • مىر المدەخ
										•HepA الخبدي أ	•الخبدي HepA •				
										• Varicella الجديري المائن		• الجديري المائن Varicella •			
													• نيروس لورم الطيعي HPV •	• فيروس الورم الحليمي HPV •	
									•الثلاثي الغيروسي MMR•	• MMR الكلي الغيروس		• الثاني القيروسي MMR•			
							hift-reaso								

Data

vild protection		
ef children under ope 5 where births are registered (w.uns) Pind out more)	99	New Sets
of women (aged 28-34 years) manted or in union before age 18 Find out more >	Not available	
If children (aged 517 years) engaged in child labour (economic activities and household chores) Find out more >	Not available	
of children (aged 1-14 years) who experienced any physical purishment and/or psychological aggression by caregivers (ind out more)	Not available	
al vormen (pged 15-68 years) who consider a husband to be justified in hitting or beating his wile for at least one of the specified reasons >>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>>	Not available	
a firme (laged 15-49 years) who consider a husband to be justified in hitting or bearing his wife for at least one of the specified reasons cos 3	Not available	
at girls and women (aged 15-49 years) who have undergane female genital inutiliation (FOM) Find out more >	Not evaluate	

GROWTH MONITORING

Refer to the MoH website for all growth charts applied in Saudi Arabia and WHO website for universal charts. They include:



Practice Questions											
Q1: What is the name of the age stage from 0 to 18 years?											
A. Child	D. Young										
Q2:What is the TOP CAUSES OF ADOLESCENT MORTALITY, 10-14 YEAR?											
A. Road Injuries B. Cancer C. Murders D. Covid-19											
Q3: WHY IS IT IMPORTANT TO INVEST IN THIS PHASE?											
A. Public health	B. Economic development	C. Demographic development	D. All								
Q4: When is the initi	al breastfeeding?		<u>6</u>								
A. 2hours of birth	B. 1hour of birth	C. Iweek of birth	D. 1momth of birth								
Q5: Breastfeeding continues until age											
A. 2 years B. 3 years C. 1 years D. 10 months											
Q6: One of the benefits of breastfeeding											
A. Increased risk of infection B. Loss weight C. Increased possibility of pregnancy pregnancy D. Protects again											
Answer 1- A	2- A 3- D	4- B 5- A	6-B								

Thanks to all leaders and members from team 439 and team 441



Shahad Alaskar Reema Alquraini Lina Alyahya

Qusay Alsultan Hassan Alabdullatif



The amazing Members:

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