

# CILMIGA NAFAQADA

DABACAADII 1<sup>AAD</sup>

YALAX PRINTING

MUQDISHO-SOOMAALIYA

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## MAHADNAQ

Mahad oo dhammi waxa ay u sugnaatay allah SWT oo siiyay nicmooyin aan la soo koobi Karin. I siiyay fursad in aan dadkeyga ku baraarujiyo cilmiga nafaqada.

Sidoo kale waxaa mahad-gaar ah leh waalidiinteyda oo har iyo habeen igu dhiirrigaliya in aan horay u socdo oo aan ka gun gaaro dhammaan hadafka aan noloasha ka leeyahay, Alle SWT ka sogoow heerka maantay aan taaganahay waxaa isoo gaarsiiyay waalidiinteyda qiimaha leh oo kala ah hooyo macaan **fartuun mire xasan** iyo aabe macaan **cabdi axmed saciid** ,

Sidoo kale waxaan u mahad celinaya dhamaan inta igu dhiirrigalisay qorista

buuggan asxaab iyo ehelba waxaan uga mahadnaqayaa dadka kala ah:

- ❖ Cabdishahid cadulkhadir maxamed ( DR. shaahid)
- ❖ Xuseen cabdi diiriye (DR. diiriye)
- ❖ Najax maxamed nuur
- ❖ Cali-deq khaliif maxamed
- ❖ DR. Ismacil maxamed nuur
- ❖ Sucaado khaliif maxamed
- ❖ Axmed cabdikhani axmed
- ❖ Naciimo khaliif maxamed
- ❖ Asma ibraahim muqdishawi

Dhiirrigalin aad igu dhiirra galiseen qorista buuggaan ma aha mid aan hilmaami karo ama qalbigeyga ka tirmeysa ama aan idiin gudi karo adduun iyo aaqiraba farxad ayaa idiin rajeenayaa dhamantiin insha allah.

## Arar

Bugaan wuxuu ku saabsan tahay dadka,  
cabiraadda heerka nafaqada dadweynahuna waa  
mid ka mid ah tusiyaasha ugu muhiimsan ee  
lagu ogaado baraaraha/horumarka Bulshada,  
mana jirto meel ay uga muhiimsan tahay  
waddamada ay naafeeyeen dhibaatooyinka iyo  
Mushkiladaha, sida Soomaalya oo kale.

Maqnaanshaha ilaha kale ee xogta assaasiga ah  
ee Soomaaliya ayaa baahida loo qabo in la helo  
macluumaad wax ku ool ah oo la xiriira heerka  
nafaqada sii kordhisay. Hay'adaha dawliga ah  
iyo kuwa aan ahaynba waxay ururiyaan, darsaan,  
oo isticmaalaan macluumaad. Kororka xaddiga  
nafaqodarada dadka Soomaalida ah ( oo ay ku  
jiraan soomaalida ku dhaqan wadamada deriska  
ah sida Itoobiya iyo Kenya) ayaa keentay in  
falanqayn dheeraad ah lagu sameeyo sababaha  
keenaya nafaqodarrada.

Iyadoo ay qayb ka ahayd balaanqaadkii  
hay'adda Beeraha iyo Cuntada ee Qaramada

Midoobay (FAO) oo ahaa in la horumariyo xaaladda nafaqada ee dadka soomaliyeed, ayey waxay taageertaa hergelinta falanqeynta heerka cunto helidda iyo la socodka heerka nafaqada ee ay fuliso Waaxda Falanqaynta heerka Cunta helidda ee Soomaaliya (FSAU). FSAU waxay la shaqaysaa Hay'ado xiriir wadashaqayneed ka dhexeeyo si loo xoojiyo tayada macluumaadka la xiriira nafaqada Soomaaliya. Wada shaqayntaasina waxay ahayd mid sii xoogaysanaysa wixii ka danbeeyey sanadkii 2000, FSAU waxay hormuud ka tahay, falanqaynta, kaydinta iyo baahinta macluumaadka la xiriira nafaqada soomaaliya. Sida ka dhalatay ka qaybgalkaas waxaa jirey iskaashi xoogan oo u dhexeeya dhammaan qaybaha gaar ahaan qaybaha falanqaynta cunta helida iyo caafimaadka, tani waxay wax ka tartay dadaalada loogu jiro kor u qaadista baraaraha bulshada soomaaliyeed. .

Iyadoo laga jawaabayo baahida ka imaanaysa hay'adaha bahwadaagta ah (partners) ee la xiriirta in la helo macluumaad sugan oo ku

saabsan maaraynta xogta nafaqada ayaa waxaa la soo saaray agab badan (material) sanadihii ka danbeeyey 2000, waxaa la mideeyey habraacyaddii, waxaana kaloo la soo saaray haggayaal iyadoo loo maray wada tashi iyo tijaabooyin lagu sameeyey goobaha shaqada. Intii lagu jirey sanadihii ee ina dhaaftey agabkaa la soo ururshey, ayaa loo isticmaalay xilliyadii tababaradii maareeyayaasha heerka dhexe, tababaradaasi waxay ka dhaceen goobo kala duwan sida Somaliland, Puntland iyo Gobollada Koonfurta Soomaaliya.

## **Ereyada ingiriisiga ee la soo gaabgaabshay**

- Health extension workers(HEWs)  
= shaqaalada fidinta caafimaaka
- Mid-upper arm circumference ( MUAC)  
= cabirka wareega cududa gacanta
- Out patient therapeutic program( OTP)  
= barnaamijka daaweynta bukaan socoka qabo Nafaqodarada.
- Ready to use therapeutic food (RUTF)  
= cuntada loo diyaariyay isticmaalka daaweynta caruurta qabta Nafaqodarada.
- Severe Acute Malnutrition (SAM)  
= xaalada aadka u daran ee Nafaqodarada ah.
- Stabilized ceter (SC)  
= qeybta bukaan jiifka ee lagu daaweeyo bukaanka nafaqodarada aadka u daran.
- Targeted supplementary food program (TSFP)

= dadka yoolka u ah barnaamijka cunto u  
kordhinta kuwa liita



## TUSMADA BUUGA

### Contents

MAHADNAQ.....	2
Arar .....	4
Ereyada ingiriisiga ee la soo gaabgaabshay .....	7
CUTUBKA 1AAD .....	11
Nafaqo=Nutrition.....	11
Nafaqeyayaal. ....	11
Nafaqeyayaalka waa weyn –.....	12
Nafaqeyayaalka yaryar.....	13
CUTUBKA 2 <sup>AAD</sup> .....	28
NUUCYADA NAFAQADA IYO SHAQADOODA .....	28
CUTUBKA 3AAD .....	37
NAFAQO DARO (Malnutrition) .....	37
Acute malnutrition.....	41
Cabiraadda Heerka Nafaqada .....	46
Qiimaynta Cabbiraadda jirka.....	47
Hababka Bayoloji Kiimiko ahaaneed .....	55
Qiimaynta Calaamadaha Muuqda .....	56
MAAREYNTA BUKAAN SOCODKA QABA NAFAQODARADA..	62
MAAREEYTA CARUURTA NAFAQADOODA LIIDATO .....	71
	9

## CILIMIGA NAFAQADA

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LA SOCODKA XAALADDA CARUURTA BUKAAN SOCODKA....	76
Naasnuujinta.....	81
TALAALKA .....	90
Nuucyada Tallalada & waxa loo isticmaalo .....	98
Cold Chain (Qalabka lagu keediyo talaalka) .....	108

## **CUTUBKA 1AAD**

### **Nafaqo=Nutrition**

Maadada nafaqada waxay quseysaa sida ay dadku ugu nool yihiin xaalad wanaagsan iyagoo isticmaalaya cunto. Waxaa soo hoos gelaya siday dadku cuntada ku helaan, sida ay u habeeyaan, u dhawraan, u diyaariyaan u wadaagaan, uu u cunaan, iyo waxa ka dhaca jirka gudihiisa—sida loo dheefshiido, loo nuugo, isla markaana u isticmaalo jirka si ay taasi gacan uga geysato caafimaad wanaagsan

### **Nafaqeeyayaal.**

Nafaqeeyayaalku waa qeybo yar yar oo cuntada ka mid ah oo uu jirku u isticmaalo hawlo kala duwan.

- Borotiin: Dhisidda nudaha jirka
- Kaarbohaydareyt: Soo saaridda tamarta
- Fitamiinada iyo macdanaha:

La dagaalanka caabuqyada Nafaqeeeyayaalka waxaa loo kala saaraa nafaqeeeyayaalka yar yar iyo nafaqeeqeeeyayaalka waa weyn ilahooda ka eeg lifaaqa 8aad.

### **Nafaqeeeyayaalka waa weyn –**

Cuntada aan isticmaalno waxay ka kooban tahay cuntooyin xambaarsan nafaqeeeyayaal waa weyn kawaasoo sameeya qeybta ugu ballaaran ee cuntada aynu cunno waxaana loo yaqaannaa nafaqeeeyayaalka waa weyn. Nafaqeeeyayaalka waa weyn waxaa ka mid ah borotiin, kaarbohaydareet, dufan iyo sidoo kale biyaha. Sida ugu habboon, nafaqeeeyayaalkaani waa inay siiyaan jirka dhammaan tamarta uu u baahan yahay. Intaa waxaa dheer, nafaqeeeyayaalka waa weyn waxay qaataan qeybta ugu badan ee cuntada aynu cunno. Waxaa la xaqiijiyey in 80%

cuntada aan qaadanno ay ka kooban tahay nafaqeyayaalka waa weyn. Si jirku u fushado shaqooyinkiisa caadiga ah wuxuu u baahan borotiin, kaarbohaydareyt, iyo dufan.

### **Nafaqeyayaalka yaryar**

Kuwani waa walxo jirku uu uga baahan yahay xaddi aad yar si uu u koro, u kobco, una joogteeyo shaqooyinka kala duwan ee jirka. Waxay ka kooban yihiin fitamiino iyo macdano. Fitamiinada muhiimka waa fitamiin A, fitamiin B, fitamiin C, fitamiin D, iyo fitamiin E halka ay macdannada muhiimka ay ka mid yihiin Birta, Zink, ayodhiin (yood). Fitamiin A wuxuu ka caawiyaa jirka inuu iska caabbiyo caabuqyada isla markaana uu dhawro caafimaadka unugyada maqaarka jirka.

### **Maxay Yihiin Nafaqeyayaalka Yar Yar?**

Nafaqeeyayaalka yar yar waa nafaqeeyayaalka muhiimka u ah koritaan caafimaad leh ee jirka iyo horumarkiisaba, hase yeeshee jirku wuxuu uga baahan yahay xadiyo yaryar. Waxay door muhiim ah ka ciyaaraan shaqooyinka Jirka ka socda. Waxay saameeyaan wax soo saarka dadka waa weyn (Qaangaarka), u adkeysiga cudurada, horumarka waxbarasho (cognitive development), badbaadada ilmaha iyo caafimaadka hooyada. Nafaqeeyayaalka yar yar ee Muhiimka ah. Iron, Vitamin A, Iodine, Vitamin C and Zinc.

### **Iron (Macdanta Birta)**

Iron waxay caawintaa sameysanka dhiigga, gaar ahaan soo saaridda heamoglobin, borotiinka ku jira unugyada cas cas ee dhiigga ee qaada ogsijiinta. Waxay kaloo caawintaa sameysanka enzymada muhiimka ah kuwaasoo suurtageliya habsami u socodka shaqooyinka maskaxda, muruqyada iyo habka difaaca jirka.

### **Yaraanshaha Macdanta Birta**

Hoos u dhaca ama la'aanta macdanta birta ee jirka ku jirta waxay horseedda yaraanshaheeda. La'aanshaha aad u ba'an ee macdanta birta wuxuu horseedaa dhiig yaraanta ay feeradu keento (IDA). Yaraanta birta waa nafaqodarrada ugu caansan. Carruurta yar yar iyo haweenka uurka leh waxey la dhibtoodaan dhiigyari aad u u saraysa oo ku dhacda. Calaamadaha ugu waa weyn waa Caddaad, daal, ciddiyo burbur, nabarro carrabka {sore tongue}, and timahoo jajaba , neef, hamuunta cuntada loo qabo oon caadi hayn, hoos u dhicid cadaadiska dhiigga, wadna garaac aad deg deg u ah, difaaca jirka oo hooseeya, madax xanuun, hoos u dhac rabitaanka cunto , xanuun ba'an oo yimaada xilliga caadada iyo dhiig bax iyo hurdadoo qasanta.

### **Ilaha cuntada laga helo macdanta birta**

Qaar ka mid ah ilahaas waa Hilib (Beer-yaro, kelyo and gaar ahaan beerka), digaag, kalluun, ukun, miro la qallajiyey, digir (digir, salbuko), kookaha iyo waxaa ka soo baxa iyo khudaarta caleemaha aadka u cagaaran. Firiley (Galley,

Bariis iyo Qamadi) waxaa ku jira bir cadad dhexdhexaad ah hase yeeshee maadaama cadad fara badan laga cuno waxay bixiyaan macdanta birta ee ugu badan. Waxaa kaloo laga heli karaa dheriyada wax lagu karsado ee birta ka sameysan.

### **Vitamin A**

Wuxuu muhiim u yahay aragga, koritaanka iyo hurumarka ay sameeyeen lafaha. Wuxuu gacan ka geystaa joogteynta maqaar caafimaad qaba iyo xuub axaleed, ilaalinta jirka xubnihiisa waa weyn, wuxuu suurageliyaa habsami u shaqeynta inta badan xubnaha jirka iyo asagoo siiya shaqada difaaca jirka ee ugu wanaagsan (ugu sarreysa).

### **Yaraanta Vitamin A**

Hoos u dhaca iyo la'aanta vitamin A waxay horseedda yaraanshihiisa (VAD). Calaamadaha waa weyn ee yaraanta Vitamin A waa: calaamadaha indhaha (indhaha habeeniso, caabuqa isha, caabuq ku dhaca wiilka isha, dhaawacyo isha ah, iyo indho-qalleyl), calaamadaha



maqaarka (maqaarka oo ruugma (aan sinnayn, maqaar engag), hoos u dhac difaaca jirka (caabuq soo noqnoqda ee cudurada degaanka ku badan sida shuban iyo jadeeco) iyo lumid rabitaanka cuntada iyo waliba dib u dhac ku yimaada koritaanka carruurta.

### **Ilaaha cuntada laga helo Vitamin A**

Qaar ka mid ah ilahaas waa caanaha naaska (gaar ahaan dambarka), wax soo saarka xoolaha (farmaajo, burcad, xabagta cad ee ukunta, caano, hilib khaasatan beer iyo kelyo, iyo kalluun saliideed), khudaarta cagaaran (dabacase, pumpkins, parsley, amaranth, isbinach, iyo moxogga), Miro (cambe, babaay iyo yaanyo), noocyada huruudda ah ee bataati macaanka, galleyda jaallaha ah, qumbaha cas saliidiisa iyo cuntooyinka lagu daray nafaqo dheeri ah sida ismariska (margarine), subagga ka yimaadda khudaarta cagaaran iyo caano boore.

### **Iodine**

Jirku wuxuu u baahan yahay iodine si caadiyan maskaxda iyo jirkuba ugu kobcaan. Iodine

waxay lama huraan u tahay shaqada qanjirka loo yaqaan thyroid kaasoo qaabilsan koritaanka (kobcidda). Iodine waxay kaloo ay luma huraan u tahay koritaanka uurjiifka (kobcidda uurjiifka).

### **Yaraanta Iodine**

Calaamadaha ugu waa weyn waa (qanjirka thyroidka oo balaarta), indhaha oo soo baxa (kor u soo taagma), hypothyroidism (Daal, culeyska qofka oo kordha, tabar darri iyo iskuyaacsanaan maskaxeed) and hyperthyroidism (miisaan lumin, wadna garraacid aad ah, iyo dhibaatooyin la xiriira rabitaanka cuntada). IDD (iskudhex yaacsanaanta ka timaadda la'aanta iodine) xilliga uurka waxay sababtaa cillinimo (dib u dhac ba'an oo ku yimaada maskaxda, hagaasnimo ku timaada koritaanka jirka, madax ballaarnaan iyo dhagoolnimo) ilmaha dhashay ilmaha dhashay.

### **Ilaha cuntada laga helo Iodine**

Cunnooyinka ugu muhiimsan ee iodine-ta laga helo waa kalluunka badda, caano, cawsbadeed, khudaarta cagaaran ee laga beero badda agteeda (khaasatan isbinaajka), cusbada lagu dara iodine iyo biyaha fareeshka (saafiga) ah (waxay ku xiran tahay degaanka).

### **Zinc**

Zinc wuxuu kor u qaadaa koritaanka iyo kobcidda caadiga ah. Wuxuu caawiyaa raysashada nabarrada, wuxuu joogteeyaa habka difaaca jirka oo caafimaad qaba wuxuu kaloo gacan ka geystaa ka hortegga shubanka carruurta yar yar.

### **Yaraanta Zinc-ga**

Calaamadaha ugu waa weyn waa koritaan xumo carruurta ah, timaha oo ka buuba (daata), dhaawacyo kala duwan oo maqaarka ah, maqaar fiifiqan, nabarrada oo ciyaw (dhaqso) u raysan waaya, caabuuq soo noqnoqda, shuban ba'an, cunto rabitaan liita, dhadhan iyo urinta oo luma, daal, iyo ma dhaleysnimo raga ku timaadda.

## **Ilaha cuntada laga helo zinc**

Zinc wuxuu diyaar ugu yahay ilmaha yar caanaha naaska, khudaarta cagaaran, cuntada badda, hilibka (oo uu ku jiro digaaga iyo kalluunka), ukunta and firileyda aan la xanshir bixin iyo digiraha

## **Vitamin C**

VitaminC (oo loo yaqaan ascorbic acid) wuxuu lama huraan u yahy caafimaadka ilkaha, cirridka iyo lafaha. Wuxuu caawiyaa raysashada (bogsashada) nabarrada, soo saaraa unuggyada cascas ee dhiigga, wuxuu dhisaa difaaca jirka iyo waliba la dagaalanka caabuqyada bakteeriyada. Wuxuu caawiyaa sameysanka “collagen” , “shamiintada” isu haysa nudayaasha. Vitamin C wuxuu dardar geliyaa nuugidda jirka ee maadada birta. Yaraanta

Vitamin C waxay horseeddaa cudur loo yaqaan”“Scurvy”.

### **Yaraanta Vitamin C**

Calaamadaha ugu waa weyn waxaa ka mid ah nabarro (sumad si dhib yar kuugu sameysanta), xanuun kala goysyada ah iyo barar, cirridka oo dhiiga, san goror, daal iyo tabardarri, si fudud ku qaadid hergab, dhiig yaraan, dheefshiidka oo liita, scurvy (maqaar nabarro leh oo si fudud u dhiiga, cidiyaha fiiddooda oo dhiigta, raadka nabarro duug ah iyo xubnaha gudaha oo dhiiga, cirridka oo barara, nuglaada oo madoobaada , ilkaha oo bolola, timaha iyo ilkaha oo daata, lafaha oo si fudud u jajaba, nabarrada oo ciyaw (dhaqso) u raysan waaya iyo burbur, rabitaanka cuntada oo luma, tabardarri, daal iyo dhaqso u xanaaqid.

### **Ilaha cuntada laga helo Vitamin C**

Ilaha ugu waa weyn waa miraha (Sida miraha kiwi, oranjada, canabka, liin dhanaanta, strawberry) khudaarta cagaaran (amaranth, isbinaajka, broccoli, kaabij iyo barbarooni) iyo

caleemo kala duduwan (sida Yaaqa). Galleyda cusub, firileyda iyo digiraha sidoo kale mooska iyo moos bukeeniguba waxaa ku jira cadad dhexdhexaad ah oo vitamin C ah.

## **Calcium**

Calcium waa macdanta ugu ballaaran ee ku jirta jirka bini-aadamka. Jirku wuxuu u baahan yahay in ka badan marka loo eego nafaqeyayaalka kale ee yar yar ka ah. Calcium waxaa jirku u isticmaalaa dhismaha lafaha, ilkaha iyo ka dhigidda lafaha kuwa xoog badan. Calcium waxaa kaloo loo isticmaalaa fididda iyo ururida muruqyada iyo xinjirowga dhiigga.

## **Yaraanta Calcium-ta**

Calaamadaha ugu waa weyn waa tabardarri ilkaha oo ay si fudud u daataan, hurdo la'aan, xanuun caadada ka hor, dhiig kar, foolka wajiga oo ballaarta, xabadka (laabta) oo diisanta, xabadka oo soo buurma, lafobolol (lafaha oo si fudud u burbura sida lafaha oo is burburiya

culayska dartii), tuur dhabarka ah, lafdhabarta oo soo qaloocata, garbaha oo goobo oo kale noqda, qofka oo gaabta oo awoodi waaya inuu is toosiyo.

### **Ilaaha cuntada laga helo Calcium**

Caanaha naaska hooyada ee ilmaha yar yar, caanaha iyo waxa ka soo baxa sida farmaajada iyo caanaha la khamiiriyeey, rootiga, doqonka, biyaha cusbada leh and lafaha malayga ku jira biyaha macaan (sida saaradiin and sprats) iyo biyaha adag. Digiraha (digir iyo salbuko) iyo Khudaarta cagaaran waxaa ku jira xaddi yar oo calcium ah.

### **Vitamin D**

Shaqada ugu weyn ee Vitamin D waa inuu joogteeyo heerka caadiga ah ee Kaalshiyamka iyo foosforka ku jira dhiigga. Vitamin D wuxuu caawiyaa nuugista jirka ee kaalsiyam; asagoo gacan ka geysta sameysanka iyo joogteynta lafo adag.

### **Yaraanta Vitamin D**

Hoos u dhaca ama la'aanta Vitamin D-ga jirka ku jira wuxuu horseedda yaraanshaha Calciamta. Vitamin D wuxuu ka hortagaa hogfoobidda (rickets) ee carruurta (lafaha dabacsan ee carruurta oo u qaloocda si aan caadi ahayn, hogfo) iyo Osteomalacia ku dhacda dadka waa weyn (lafo tabar daran, lafo xanuun, lafaha ricirraha lafdhabarta oo xanuuna, xanuun lafaha miskaha ah, muruqyo xanuun, lugaha oo qaloocsama iyo lafaha xanuun) kuwaasoo ah cuduro lafaha ku dhaca oo keena cillad horseedda lafaha oo nuglaada.

### **Ilaha cuntada laga helo Vitamin D**

Ukunta inteeda hurdiga ah, cuntooyinka nafaqooyin kale lagu xoojiyey sida buurada (margarine), farmaajo, caano, burcad, saliidda beerka kalluunka, hilib iyo beerka ayaa ah ilaha ugu wanaagsan ee laga helo Vitamin D.

### **La socodka heerka Nafaqo**



waa hab lagula socdo isbeddellada xaaladda nafaqada ee dadka ama koox gaar ah si joogto ah. La socodka heerka nafaqo waxay ku lug leedahay xog ururin, habayn, falanqayn, fasiraad iyo xiriir. La socodka heerka nafaqada waa hannaan muhiim ah xilliyada caadiga iyo xilliyada xaaladaha degdeg ahi jiraan.

### **Nafaqodarro.**

Nafaqodarrada waxaa lagu qeexaa xaalad uu xannib ku yimaado shaqadii

jirka ilaa uusan gudan Karin si wax ku ool ah hawlaha ay ka mid yihiin korriinka, uurka, nuujinta, shaqada muruqa, iska caabbinta iyo ka reysashada cudurka (Pacey and Payne, 1985)

### **Nafaqo-hooseysa**

Nafaqodarro waa inaan lagu qaldin nafaqo-hooseysa, taasoo ka turjumeysa yaraansho ku yimaado heerka cunto qaadashada guud marka loo eego xaddigii looga baahnaa in ruuxu qaato maalinkii.

## **Dadka barta nafaqada iyo qiimaha ay leeyihiin?**

- 1. Registered dieticians:-**waa qof ku takhasusay quudinta waxa dajiyaa waxa ay quudan lahaayeen dadka ku nool meela gaar ah si goobaha caafimaad, iskuulada, iyo meelaha la mid asaga oona kormeeraya heerka nafaqo ee dadkaas.
- 2. Certified clinical nutritionist:-** waa qof bartay dadka sida siiyo nafaqo dhameystiran iyo in dadka uu u qorsheeyo nafaqada ay cuni lahaayen sida dadka qaba sokorta.

Sida awgeed ku soo dhawaaw dunida cajiib ka leh, xiisahana badan leh ee barashada cilmiga nafaqeynta (nutrition).



## CUTUBKA 2<sup>AAD</sup>

### NUUCYADA NAFAQADA IYO SHAQADOODA

Nafaqo ayaa guud ahaan waxa ay tahay sheey ama kimiko aad cuneyso si aad uga hesho tamar, caafimaad iyo koritaanka jirkaaga si aad u sii noolaato.

Nafaqada ayaa guud ahaan waxaa loo kala qeybiyaa labaa nuuc oo waaweyn oo kala ah :

- a) kuwa tamar looga baahan yahay oo loo yaqaan **energy giving food**
- b) iyo kuwa kale oo aan tamar looga baahneyn oo ayagana loo yaqaan **non-energy giving food.**

**Energy giving food** waxaa ka mid ah sadexdaan nuuc ee nafaqo ah:-

- a) Carbohydrates
- b) Fats
- c) Proteins

**Non-Energy giving food** wax aka mid ah kuwaan hoos ku xusan:-

- a) Vitamins
- b) Minerals
- c) Water

### **Carbohydrates:-**

Waa nuuca koowaad ee nafaqada taasoo laga helo tamar, kimikal ahaane waxa ay ka sameysan tahay **C,H,O**. **C- carbon, H-hydrogen, iyo O- oxygen**. Tamarta laga helo carbohydrates waxaa lagu qiyaasaa **4 caloir**

**per gram. Acalorie:-** waa halbeega lagu cabiro tamarta. Carbohydrates waxaa loo kala qeybiyaa sadex nuuc ayada oo loo eegaayo tirade sokorta ku jirta:-

1. Kuwa ka kooban hal sokor waxaa loo yaqaana **monosachrides**, waxaana ka mid ah *glucose, fructose, galactose*.
2. Kuwa ka kooban laba sokor oo loo yaqaan **disachrides**, waxa tusaale u ah *maltose, sucrose, lactose*.
3. Kuwa ka kooban sokor badan waxana loo yaqaan **polysachrides**. Waxaana kamid ah *starch, glycogen, and cellulose*.



**Glucose:-**

waa nuuc ka  
mid ah hal  
sokorlaha  
nuuca loo  
yaqaan waana  
mida ugu  
muhiimsan ee  
qof uu ka  
helo tamarta  
jirkana waxa

looga helaa tira go'an oo u dhaxeysa (**64-128 mg\dl**). Waxaa ku haya tiradaa go'an hormona loo yaqaan insulin iyo glucagon.

**Insulin** waxa uu hoos u dhigaa heerka sokorta jirta asaga oo galinaaya unugyada jirka waxi ka badana keydinaaya halka **glucagon** uu badiyo heerka sokorta jirka

asaga oo yareynay isticmaalaka sokorta iyo asaga soo majuujinaya sokorta ku keydsaneyd beerka oo loo yaqaano glycogen. Cilad ku qaab loo maamulo ama heerka insulin ta jirka oo yaraata waxa ay keeni kartaa cudurka loo yaqaan kaadi macaanka (diabetic mellitus). Meelaha laga helo carbohydrates Grains and grain products( rice and bread)

### **Fats:-**

Waa nuuca labaad eek a mid ah nafaqada laga helo tamarta, sida carbohydrates oo kale waxa ay ka sameysantahay C,H,O, waxana la gu qiyaasa tamarta jirka ay siin karto 9 calorie per gram. Waxa ayna ka sameysantahay **fatty acid and triglycerides**. Shaqada fats waxaa ka mid ah in ay jirka siiyaan tamar iyo ay ka qeyb qaataan sameynta xuubabka unugyada. Hadii ay jirkaaga



ku badato fats ka jirkaaga waxaa ku dhacayo obesity. Foods that are rich in fats include butter, salad oil, cheeses and many meats.

### **Proteins:**

Waa nuuca sadexaad ee nafaqada laga helo tamarta. si la mid ah sida carbohydrates, fats ka Waxa ay ayadana kasameysan tahay C,H,O, balse waxa ay dheertahay N- nitrogen. Waxa ugu yare e ka sameysan tahay proteins waxaa loo yaqaanaa amino-acids. Dunida waxa jira 20 nuuc oo amino-acids ah. 20 nuuc ee aminoacids waxa loo kala qeybiyaa laba nuuc kuwa waa nuuc uusan jirka sameysan Karin muhiimna aya tahay in uu jirka banaanka ka keensado kuwaa waxaa loo yaqaan **essential aminoacids**, waaana toban xabo. Halka toban ka kale uu jirka sameysan karo jirkana muhiim u ma ahan in uu banaanka ka keensado sidaa awgeed waxaa loo

bixyay **Non-essential amoni acids**. Shaqada jirka ay u qabtan proeinks waxa kow ka ah tamar siin, mida labaadna in ay jirka dhisaan. Hadii essential amino-acids qaar ka mid ah la waayo qof ka waxaa ku dhici doono wax loo yaqaan Protein-Energy Malnutrition (PEM). Meelaha laga helo proteinka **Milk, meats, fish, eggs,**

Essential amino acids	Non-essential amino-acids
<b>Leucin</b>	<b>Threonine</b>
<b>Lysine</b>	<b>Tryptophan</b>
<b>Methionine</b>	<b>Valine</b>
	<b>Histidine</b>

**Non-Energy giving food** wax aka mid ah kuwaan hoos ku xusan:-

- a) Vitamins

b) Minerals

c) Water

**Vitamins:-**

Waa nuuc ka le oo ka tirsan nafaqada aan laga helin tamrta taas oo asal ahaan laga helo dhirta marka laga reebo vitamin D kaas oo maqaarkaaga uu sameysto asaga oo isticmaalayo falaaraha qoraxda ee loo yaqaan ultra-violet rays (U.V light).

Vitamins waxaa loo kala qeybiyaa laba nuuc oo kala ah kuwa biyaha ku milma (water soluble vitamins) iyo kuwa cadiinta ku milma (fat soluble vitamins).

**Fat soluble vitamins:-** waxaa loo kala qeybiyaa laba nuuc oo kala ah:-

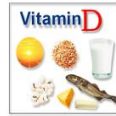
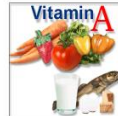
1. Vit. B.complex
2. Vit. C

**Water soluble vitamins:-** waxa loo kala qeybiyaa afar nuuc

oo kala ah:-

**Water-Insoluble Vitamins**

1. Vit. A
2. Vit. D
3. Vit. E
4. Vit. K



Waxaa loo soo gaabiyaa **A.D.E.K.**

**2. Minerals :-** waa nuuca labaad ee nafaqada aan laga helin tamarta taas oo asal ahaan aan laga keenin dhirta.

**3. Biyaha ( water):-** waxa uu ka mid yahay nafaqada kuwa ugu muhiimsan oo aan laga maarmi Karin.

## CUTUBKA 3AAD

### NAFAQO DARO (Malnutrition)

**Nafaqo xumo:-** waa xaalad qofka aysan ku fineyneyn ama ay ku bateen nafaqada uu qaatay. Waxa ay noqon kartaa calorie ahaan ama protein, carbohydrates, fats, ama minerals.

Malnutrition waxaa ay noqon kartaa in ay ku badato oo loo yaqaan **overnutrition**, sida obesity ama diabetic mellitus aan horay uga soo hadalnay, balse malnutrition waxaa caan ku ah nafaqo yari oo loo yaqaan **undernutrition**.

Sidaa awgeed mawduucaan waxaa uga hadli doonaa undernutrition oo kali ah.

**Sidee lagu ogaadaa qofka in ay nafaqa darro heyso iyo in kale?**

Si aad u sameeysid qiimeyn heerka nafaqada qofka waa in aad sameysaa 5 qodob.

- 1) Wareyso xaaladiisa caafimaad.
- 2) Wareyso warbixintiisa cunto iyo cunitaankiisa.
- 3) Fiisito (examination) u same.
- 4) Usamee anthropometric measurements.
- 5) Una dir sheeybaar (biochemical data).

### **Wareyso xaaladiisa caafimaad.**

Waxaad weydiisa xaaladiisa hore ee caafimaad sida cuduradi hore in uu qabi jiray, dhaqaalaha xaafada iyo qaab noloeedka cida.

### **Wareyso warbixintiisa cunto iyo cunitaankiisa.**

Waxaad wax ka weydiinaysaa wax yaabahaan soo socda sida:-

- 1) Appetite kiisa.
- 2) Goorta uu wax cuna, malinle iyo isbuucle.
- 3) Iyo inta calorie uu qaato maalintiba ama isbuuciiba.

### **Fiisito (examination) u same.**

Usamee baaritaan calaamadaha qofka nafaqa darada heyso sida timahiisa oo khafiif noqda, afka nabro yar yar ku yeesha iyo qofka oo dhamaada.

### **Usamee anthropometric measurements.**

Anthropometric measurements waxaa la isku dhahaa wax yaabahaan soo socda sida:-

- Weight for age.
- Height for age.
- Weight for height (z-score):-
- MUAC ((mid upper arm circumference).

- BMI.

**Una dir sheeybaar (biochemical data).**

Waxa ugu muhiimsan aad ka baareysid waa

**Albumin.**

**Nafaqo xumada, nuucyadeeda iyo sida loo  
maareeyo.**

Nafaqo xumada waxaa loo kala qeybiyaa laba  
nuuc oo kala ah mid waqti yar heysay qofka  
(**Acute malnutrition**) iyo mid waqti dheer soo  
heysay qofka oo loo yaqaan (**chronic  
malnutrition**).



## **Acute malnutrition**

Waa nuuc ka mid ah nafaqo xumadaa taas oo qofka ku dhacday waqti yar ka hor sida maalin, labo maalin ilaa iyo isbuuc oo kale. Waxana loo kala qeybiyaa **moderate acute malnutrition (MAM)**, waa nuuc xaaladoodu ay wali roontahay iyo **severe acute malnutrition (SAM)**, waa ku wa kale oo ay nuuooda halis tahay. waxaa asagana loo sii kala qeybiya laba nuuc oo kala h kwashikor ama marasmus.

### **Maxaa keena nafaqo xumada?**

- 1. Immediate causes:-** waxaa laga wadaa waxa keena waxyaaba deg deg ah sida qofka oo cuntadaba waaya ama cuduro ku dhacaan.
- 2. Underlying causes:-** waxa ayaga toos uma keenan nafaqo xumada balse ayaga waxeey gogol dhig fiican u yihin nafaqa xumida sida in

ay hoos u dhacdo wax yaabahaan hoos ku xusan:-

- Food (cuntada)
- Health (caafimaadka)
- Care (xananeynta hooyada iyo dhalaanka).

**3. Basic causes:-** waxyaaba aasaasi ah ayaa keena nafaqa xumida markaan waayo waxaa maqaan waxyaaba aasaasi ah sida fahanka nafaqada iyo meshi laga heli lahaa nafaqada sida meelaha baadiyah ah.

**Criteria lagu jiiifiyo caruurta qabta nafaqa darada.**

Cunug kastoo oo aad rabto in ka baarto nafaqa darada waa in aad ka baartaa waxyaabahaan soo socda sida weight, height, weight/height(z-score) iyo MUAC.

1. Bilatera edema (barar labada lugood ah).
2. MUAC asna waxaa lagu ogaadaa carruurta nafaqa darada ay heeyso oo ka yar 5 sano, MUAC waxaa aqriyaa sadex qeyb:-
  - 11.5 wixii ka yar- severe malnourished.
  - 11.5-12.5 moderate malnourished.
  - 12.5 -13.4 risk for malnourished.
3. Z-score:- hadii uu gaaro -3.
4. Hadii uu la socdo fuuqbax (dehydration).

**Waxyaabaha aad u Qabaneysid markaa aad bukaanka seexineysid:-**

1. Hubi marka hore calaamadaha nolosha (vital signs).
2. Bukaanka warbixin iyo baaritaano dhameystiran.

3. Waxaad so sartaa waxa keenay nafaqo xumada.

4. Waxaad sameysaa appetite test.

5. Sii daawooyinka loogu tala galay xaaladahaas aad aragtay.

- bukaan kasta oo SAM ah sii glucose 10% sii looga hortago sokortiisa oo dagta (hypoglycemia).

**Daawooyinka la siiyo dadka nafaqo xumada qabo.**

1. Vitamin A.

2. Albendazole

3. Mebendazole

4. Measles vaccine

5. Iron/folate

6. Amoxicillin, gentamycin, iyo chlorophenicol.

**Sida loo daaweeyo caruurta ay hayso nafaqa xumada:-**

- 1) Daaweey am aka hortag hypoglycemia.
- 2) Daaweey am aka hortag hypothermia.
- 3) Daaweey am aka hortag dehydration ka.
- 4) Sax electrolyte imbalance.
- 5) Daaweey am aka hortag infection ka.
- 6) Sax micronutrient deficiency.
- 7) Bilaaw cautious feeding.
- 8) Achieve catch up growth.
- 9) Waxaad siisaa sensory stimulation & emotional support.
- 10) Waxaad u diyaarisaa fallow up ka dib recovery.

Waa 10 steps ay dajisay W.H.O oo lagu daaweeyo nafaqa darada.

## CUTUBKA 4<sup>AAD</sup>

### Cabiraadda Heerka Nafaqada

- ❖ Qiimaynta nafaqadu waa habka lagu ogaado heerka tayada nafaqada ee qofka. Afar hab ayaa loo siticmaalaa kuwaas oo lagu naanayso ABCDda qiimaynta nafaqada: Qiimaynta cabiraada jirka (anthropometric assessment)



- ❖ Qiimaynta iyadoo la isticmaalayo Shaybaar (biochemical)
- ❖ Qiimaynta calaamadaha muuqda (clinical assessment)
- ❖ Qiimaynta cunto qaadashada (dietry assessment)

## Qiimaynta Cabbiraadda jirka

Jir cabbirku waa hab lagu cabiro xajmiga jirka waxaana loo isticmaalaa in lagu fahmo heerka nafaqo ee qofka. Cabiraadahan soo socda ayaa badanaaba la isticmaalaa. Culays: Isbeddelka ku yimaada culayska ilmaha wuxuu tilmaan muhiim ah u yahay caafimaadka guud iyo ladnaanta bulshada. Si kastaba ha ahaatee xilliyada duruufaha gaarka ah waxaa muhiim noqon kara in la cabiro da'aha kale. Jiif ama Joog: Dhererka ilmuhu wuxuu isla beddelaa wakhtiga isagoo ku xiran nafaqeyayaalka la qaatay iyo sida jirku uga faa'iidaystay.

Dhexroorka bartamaha cududda sare (MUAC): kani waa cabbir deg-deg ah waxtarna u leh in la saadaaliyo carruurta dhimashada khatarta ugu jirata da'dooduna u dhexayso 12 – 59 bilood. MUAC waa aalad baaritaan oo muhiima u ah go'aaminta ilmaha khatarta ku jira xilliga masiibooyinku jiraan. Tusaha cufnaanta jirka (BMI): waa aalad muhiim ah marka la cabirayo

heerka nafaqada dadka waaweyn. Cabbirka culayska iyo dhererka ayaa la qaadaa ka dibna waxaa lagu xisaabiyaa tusaha. Isticmaalka BMI ee dadka waaweyn waa mid aan lagu kalsoonaan karin

waayo saxnaanta dhererka ayaa waxaa carqaladeeya arrimo da'da la xiriira sida soo godashada lafta dhabarka (spinal curvature). Sidaas awgeed MUAC-gu waa cabbiraadda ugu haboon maadaama ilaa xad aanu ku xirnayn da'da. Barar(oedema): Ururitaanka dheecanada aan caadiga ahayn unugyada dhexdooda wuxuu tilmaamaa nafaqo-darro halis ah.

### *Da'du waa tilmaame*

Da'da waxaa loo isticmaalaa in lagu soo saaro tilmaamayaasha nafaqada iyadoo ay weheliso cabbiraad jireedyo sida dhererka iyo culayska. Qiimaynta nafaqada xilliga masiibooyinka carruurta ka yar 5 sano ayaa la cabbiraa madaama ay u nugul yihiin waxyaabaha saameeya nafaqada sida jirrooyinka iyo cunto yarida.



***Tilmaamayaasha la xiriira cabbiraadda jirka***

Cabbiraadda jirka ee culayska, dhererka iyo da'da waxaa loo roгаа tuseyaal nafaqo. Si loo sameeyo tilmaamayaashaas, labo kastoo ka mid ah doorsoomayaasha la cabiray ayaa la xiriiriya. Taasoo ah culayska, dhererka iyo da'da sida soo socota;

- Dhererka loo eegayo culayska
- Da'da loo eegayo culays
- Da'da oo loo eegayo dhererka

➤ *Dhererka loo eegayo culayska(W/H)*  
*Wuxuu cabiraa 'macaluul' ama*  
*nafaqodarro 'cusub'*

- Waxay sharaxdaa culayska ilmaha ee la xiriira dhererka.
- Ilmaha da'doodu 5 sano ka yar tahay, xiriirka u dhexeeya culayska iyo dhererku inta badan waa joogto iyadoo aan loo eegayn jinsi, qolo, waxayna la raacdaa horumar joogto ah markay korayaanba. Hab caalami oo la isku raacay

laguna ogaado dhererka iyo culayska ilmaha ka yar 5ta sano ayaa la helaa

- Culayska jirku wuxuu u nugul yahay isbeddelka dhakhsaha ah ee ku yimaada xaaladda cuntada iyo jirrooyinka, halka dhererku uu isu beddelo si gaabis ah.

- In culaysku ka yaraado dhererka waxay astaan u tahay baaba'a iyo lumitaanka

baruurtii muruqyada, waxay tilmaantaa caato waxayna sheegtaa nafaqo-darro cusub.

- Tani waa tilmaanta ugu muhiimsan ee baaritaanka iyo wajihidda dadka nugul xilliga masiibooyinka. Waxay kaloo tilmaame muhiim ah u tahay ka bixidda iyo soo gelidda barnaamijyada quudinta

- . •Marka barar la socdo waa tan ku haboon ee lagu ogaado jiritaanka nafaqo-darrada ama in hadda ay nafaqo-darradu ku bilaabatay bulshada.

***Da'da loo eegay dhererka (H/A)***

***Waxaa lagu ogaadaa Hagaas/ragaas ama nafaqodarro dabadheeraatay***

- Tani waa cabbiraadda nafaqo-darrada soo jiidantay (chronic malnutrition) taas oo ah nafaqo-darro wakhti dheer jirtay joogtana ah sida badanna ay la xiriirto dhacdooyin wakhti hore jirey sida fakhri iyo cudurro soo noqnoqday.

- Ilmaha dhererkiisa waxaa loo barbardhigaa dhererka dhexe ee dadka ay isku da'da iyo jinsiga yihiin si loo soo saaro tusaha da'da loo eegay culayska. Ilmaha ka hoos mara barta jaangooyada ee -2 Z iyadoo loo eegayo cabirka dhexe ee kuwa ay isku da'da yihiin waxaa lagu qiimeeyaa inuu da'diisa aad uga gaaban yahay ama uu yahay hagaas.

Da'da loo eegay culays (W/A)

*'Waxaa lagu cabiraa isdhinka miisaanka'*

- Waxay tilmaantaa xiriirka ka dhexeeya culayska iyo da'da

- Tusaha da'da loo eegay culayska waxay muhiim u tahay la socodka korrimada iyo horumarka ilmaha

. •Marka la isticmaalayo lasocodka korriimada ee baraha caafimaadka da'da loo eegayo culayska ee ilmaha ayaa waxaa lagu calaamadiyaa garaafka loo yaqaan Waddada korrinka caafimaadka. Tani waxay ogolaanaysaa in si wanaagsan loo fahmo in ilmuhu si wacan u korayo iyo in kale.

- Heerka bulshada, cabbiraadda waxaa lagu soo saaraa saamiga guud ee ilmaha miisaankoodu isdhimay

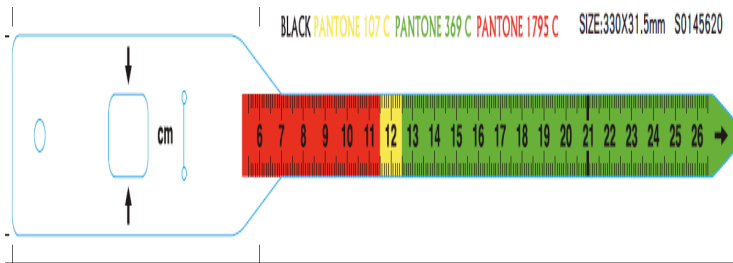
## **Barar**

- Waa xaddi badan oo dheecaan ah oo si aan caadi ahayn ugu urura unugyada dhexdooda.

- Waa fure muujiya nafaqo-darro khatar ah oo inta badan ku xiriirsan heer dhimasho sarraysa ee carruurta ah.

- Bararku wuxuu siyaadiyaa miisaanka ilmaha. Sidaas awgeed isagu wuxuu qariyaa sawirka runta ah ee nafaqada ilamaha.
- Dhamaan kuwa bararka leh waa in laga soocaa kuwa kale xilliga falanqaynta loona tixgeliyo/ daweeyo sida nafaqo-darro khatar ah.
- Bararka waa in had iyo goor loo isticmaalo shuruud weyn ee gelitaanka barnaamijyada quudinta.

### **Dhexroorka bartamaha cududda sare (MUAC)**



- Habkani waa odoroska ugu muhiimsan ee lagu ogaado khatarta dhimasho ee degdega ah

. •Waa aaladda ugu horraysa ee xulashada barnaamijyada quudinta maadaama ay fududahay dhakhsano loo isticmaalo.

•Wuxuu muhiim u yahay meelaha dadka in la gaaro ay adag tahay dhaqaaluhuna yar yahay ama in la sameeyo cabbiraadda dhererka iyo culayska aanay suurto gal ahayn.

•Natiijada MUAC waxay tilmaan ka bixisaa xaaladda nafaqada, waana laga saxsan yahay.

### **habka loo cabiro wareega gacanta ama cududa ( MUAC)**

- hooyada ka codso in ay ilmaha ka saarto sharka ama marada saran gacanta bidixd hadii ay suutro gal tahay waxaa fiican in ilmuhu si toosan u istaago, qofka cabiraanayana dhinaca ilamha istaago.
- Qiyaas meesha ku began cududa ama gacanta qeybta u sareysa.
- Xaji gacanta ilmaha, kuna xish gacan cabiraha( MUAC) cududa ilmaha, waxa aad xaqiijisaa in lambarkudusha soo marsan yahay, waxa kale oo aad xaqiijisaa

in gacan cabiru dulsaaran yahay gacanta ilma si siman ( eego sawirka ku tusinaya sida loo cabiro MUAC.

- La soco giigsanaanta gacan cabiraha ( MUAC) aad saartay gacanta ilmaha, xaqiiji in MUAC si saxa giigsan yahay, waa in una si xaddhaaf u giigsanayn ama u dabacsaneyn, waa in aad ku celcelin kartaa hadii loo baahdo.
- Marka aadxaqiijiso in giigsanaanta MUAC, in ay tahay gacantii la rabay hadaba akhri waxa aad aragtay.
- Waain aad markiiba diiwaan galisaa natiijada.

## **Hababka Bayoloji Kiimiko ahaaneed**

Tani waa cabbiraadda nafaqada dhiigga, kaadida iyo muunado kale oo bayoloji ahaaneed. Marka la barbardhigo hababka kale ee baaritaanka

nafaqada habkani wuxuu bixiyaa tan ugu saxan oo tirsiimo ahaan loogu muujiyo xogta heerka nafaqada. Waxtarka habkani waa inuu muujiyo tilmaamaha nafaqo-darrada ka hor intaan calaamadaha muuqda iyo tilmaamuhu soo shaacbixin. Wuxuu kaloo baritaankani muhiim u yahay ansixinta xogta marka dadka la waraysanayo ay wax ka dhimayaan ama ku kordhinayaan warbixinta waxa ay cuneen. Sidaas daraadeed, baaritaanadani waxay si gaar ah muhiim ugu yihiin in lagu daro laguna ansixiyo sahamada la xiriira cunto qaadashada.

Faa'iido darrada ugu weyn ee habkani leeyahay waa inuu yahay mid adag, qaali ah una baahan khibrad heer sare ah.

## **Qiimaynta Calaadaha Muuqda**

Calaamadaha muuqda ee qiimaynta heerka nafaqadu waxay ka yimaadaan la'aanta



nafaqeyayaalka ama sababo aan nafaqada ku taxaluqin. Tilmaamaha iyo calaamadaha waa in la baaro lana raaciyo jir cabbir, qiimayn cunto iyo in lagu baaro hab Bio-kimiko (Sheybaar) si loo helo falanqeynta iyo fasirka xogta oo sax ah.

**Qiimaynta calaamadaha muuqda waxaa ku lug leh:**

a) Raadraac caafimaad

b) Raadraac cunto iyo

c) Baaritaan jir ahaaneed oo uu sameeyo shaqaale caafimaad, si loo ogaado calaamadaha iyo tilmaamaha la xiriira nafaqo-darrada.

**Raadraaca Caafimaadka** ee qofka la wareysanayo waa talaabada koowaad ee falanqaynta calaamadaha muuqda. Taas waxaa lagala soo bixi karaa:

- In la helo xaaladda caafimaad ee qofka wakhtiyadii hore iyo xilliga la joogaba. xaaladda nafaqada cudurro badan ayaa saameyn kara sida malaariyada, jadeecada, qaaxada, iyo HIV/AIDS.

- Ogaanshaha xaaladaha shubanka iyo la'aanshaha rabitaanka cuntada (lack of appetite).
- Qiimaynta da'da cunuga, ama raadraaca xiliyadii ay haweenaydu uurka lahayd.
- Falanqaynta taageerada dhaqan-dhaqaale, iyo u sahlaanta daryeel caafimaad Raadraaca cuntada waxaa ku jira go'aaminta habdhaqanka cunitaanka ee qofka la waraysanayo. Tusaale wakhtiyeynta soo noqnoqoshada raashinka, dhadhanka raashinka, xasaasiyad, awoodida helitaanka cuntada jir ahaan iyo dhaqaale ahaan, sida cuntada loo diyaariyey iyo sida loogu qaybiyey qoysska.

**Aqoonsashada heerka Nafaqodarada xilliyada qiimaynta Calaamadaha muuqda.**

**Nafaqodarrada waqtiga gaaban (hadda taagan)**

Middaani waa hab nafaqo-darrada ka mid ah oo la xiriirta qaadashada cunto jirku ka helayo

Borotiin iyo tamar yar, nafaqo-darrida mudada gaaban waa midda ugu caansan nafaqodarrada. Magacu wuxuu tilmaamayaa astaamo muuqda oo ballaaran kuwaasoo ka dhashay qaadashada tamar, Borotiin iyo nafaqeeyayaalka kale oo aan ku filnayn. Noocyada ugu khatarsan ee nafaqo-darrida ka timaada yaraanta tamarta laga helo Borotiin waa MALIIL (Marasmus) iyo Caga barar.

**Maliil (marasmus)** tani waa qaab aad khatar u ah oo nafaqo-darro astaanteeduna tahay miisaanka oo aad u luma ama daciifid iyo maliilid. Waxay u baahan tahay daweyn degdeg ah.

### ***Caga Barar (Kwashiorkor)***

tani waa hab aad khatar u ah oo nafaqo darida mudada gaaban ah, calaamadihiisana waxaa ka mid ah barar, niyad xumo iyo lumista rabitaanka

cuntada. Waa xaalad la xiriirto inta badan yaraanta qaadashada Borotiinka ama ku filaansho la'aan isku xirxirka Borotiinka jirka. Xaaladaasi waxay u baahan tahay feejignaan deg deg ah.

### *Barar*

Tani waa dheecaan ku ururray jirka nafaqodarro khatar ah awgeed. Bararku waa tilmaamaa nafaqodarrada mudada gaaban. Bararka waxaa lagu aqoonsan karaa in suulka lagu riixo cagta dusheeda meel ka sareysa

### *Yaraanta nafaqeeyayaalka yar-yar*

Tani waa yaraanshaha ka yimaada ku filnaan la'aanta qaadashada nafaqeeyayaalka jirku uga baahan yahay xaddi yar oo loogu baahan yahay fulinta shaqada caadiga ah ee jirka. Yaraanta nafaqeeyayaalka yar-yar ee caafimaadka bulshada waxaa ugu weyn ku yaraanta birta dhiiga (Iron Deficiency Aneamia), yaraanta fitamin A (VAD), yaraanta maadada Ayodhiin (Iodine) (IDD) iyo yaraanta maadada Zinc. Yaraanshaha maadooyinkaasi waxay si joogto

ah waxyeelo ugu gaystaan caafimaadka waxayna keenaan dhimasho. Faafitaanka noocyada kale ee la'aanta nafaqeeyayaalka yar-yar ayaa mar mar dhaca xilliyada masiibooyinka sida fitamiin C (scurvy) Niacin, (Pellagra) iyo Thiamine (beriberi).

## **CUTUBKA 5<sup>AAD</sup>**

### **MAAREYNTA BUKAAN SOCODKA QABA NAFAQODARADA**

1) Waqtiga diyaar garoowga.

Shaqaalaha fidinta caafimaaka waxaa looga baahan yahay in ay sameeyaan diyaargarow ku saabsan barnaamijka daaweynta bukaan socodka nafaqodarada qaba, qalabka loo baahan yahay iyo saadka u yaala si loo bixiyo adeega daaweynta bukaan socodka nafaqadarada la il daran, shaqooyinka looga baahan yahay waxaa ka mid ah :

A) In la firfircooni-galiyo shaqaalaha sida mutadawacnimada ah ugu shaqeeya caafimaadka bulshada gudaheeda (VCHWs) si shaqaalaha aan soo sheegnay loo adeegsado waqtiga sahminta, wacyi-galinta bulshada iyo waliba in

kontoroolaan in lagu soo buuqin shaqaalaha shaqada daaweynta haya.

- B) Shaqaalaha sida mutadawacnimada ah ugu shaqeeya bukshada gudaheeda ( VCHWs) waa in la siiyaa tababar iyaga oo shaqadooda sii wadanaaya, gaar ahaan sida sahrinta loo sameeyo lana siiyo qalab lagu cabiro gacanta ( MUAC tape).
- C) In la xaqiijiyo qalabkan iyo saahdan in goobta caafimaadka yaalaan.

2) Nidaamka barnaamijka daaweynta bukaan socodka qaba nafaqo darada.

a) Kala saarida iyo jiifinta bukaanka ( screening and admission)

❖ **Talaadaba koowaad:**

Waa in la cabiraa caruurta iyada oo la isticmaalayo qalabka cabirka jidhka ( anthropometric) lagana hubiyaa barar laba lugood ah, marka howsha la sameeyana waa in mudnaanta la siiyaa caruurta aadka u liidata.

- Caruurta ay da'dooda u dhaxeeyso 6 bilood --- 18 sano waa in laga baraa barar, la cabiraa miisaankooda, lana cabiraa wareega cududooda.
- Caruurta ay da'doodu ka yar tahay lix bilood waa in laga baraa barar iyo in la fiiriyo macluusha daran ee ka muuqata jidhkooda( sever wasting)

❖ **Talaabada labaad :**

Waa in la go'amiyaa in ilmuhu nafaqodaro hayso iyo in kale, hadii ilmaha ay da'diisu ka yar tahay lix bilood lagu arko barar lugaha ah iyo



muuqaalkiisa oo u muuqda in ilmahaasi qabp macluul aad u liidata, ilmahaasi waxa uu qabaa nafaqodaro aad u daran, loomana baahna in lagu sii sameeyo baaris, sida in la tijaabiyo cunto qaadashadiisa, iyo xaalado kale oo cakiran.

Caruurta u dhaxeeyso 6 bilood ilaa 18 sano hadii cabirka wareega gacanta ilamaha ( MUAC) u dhaxeeyo 11—12 cm, bararna lahyin ( oedema) ilmahaas wax uu qabaa nafaqo daro sahlan( moderate malnutrition) ( MAM).

**Talaabad uu ilmahaas u baahan yahay** – waa in hooyada lagala taliyo habka quudinta ilmaha iyo daryeelkiisa loo gudbiyo meesha ugu dhaw ee uu ka jiro barnaamijka bixiya cuntada lagu kobciyo caruurta liidata(TSFP).

Hadii cabirka wareega gacanta ( MUAC) ka yar yahay 11cm ama uu lee yahay barar labada lugood ah ilmahaas wax uu qabaa nafaqo daro aad u xun ( severe Acute malnutrition) ( SAM)

**Talaabada loo baahan yhaay-** waa in la raaca nidaamka daaweynta xaaladda aad ka u daran ee nafaqodarada (TFP) sida hoos ku xusa

❖ **Talaabada sadexaad:**

Caruurta ay dadoodu u dhaxeeyso 6 bilood—18 sano qabana nafaqodaro xad dhaaf ah, hadii algu arko calamadahaan cakiran ee soo socda waa in loo dugbiyaa meesha la jiifiyo bukaanka qaba nafaqodarada

(TFU/SC)

<p><b>CALAAMADAHA / XAALADAHA CAKIRAN</b></p>	<p><b>ILMAHA WAA IN LOO GUDBIYAA QEYBTA BUKAAN JIIFKA MARKA LAGU ARKO MID KA AH KUWAAN SOO SOCDA</b></p>
<p>Caalamadaha guud ee khatarta ah sida -----</p>	<p>In uu wax kasta oo matago, gariir, qeylo, miyir la,aan ama uu cunto qaadan kari waayo.</p>
<p>Severe pneumonia</p>	<p>Shafka ama xabadka oo ilamha gota ama dhisma . Neeftuur lagu arko ilmaha ( waxaana neeftuurka ilmaha lagu cabiraa da'da daqiiqadii inta ay neesanayaan.</p> <ul style="list-style-type: none"> <li>• Ilmaha jira 6 bilood –12 bilood ( daqiiqadii 50 iyo wixii ka sareeya)</li> <li>• Ilmaha jira 12 bilood ---- 5 sano (daqiiqadii iyo wixii ka sareeya )</li> <li>• Ilmaha 5 jirka wayn</li> </ul>

	( daqiiqadiiba 30 iyo wixii ka sareeya)
Shuban dhiig( dysentery)	Hadii saxaro dhiig ku jiro
Xumad/qandho ama kuleylka jirka hoos u dhaca	-heerkulka jirka ( qandho) hadii u la mid yahay ama ka sareeya 37.5 ama gacanta lagu garan karo in uu qandheesan yahay -hadii heerkulka jirka ka hooseeyo ama la eg yahay 35 c <sup>0</sup> ama gacanta lagu dareemi karo qabowga jirka.

❖ **Talaabada afarad:**

Waa in caruurta yar yar e ay da' doodu u dhaxeeyo 6 bilood---- 18 sano loo sameeya tijaabada cunta qaadashada, gaar ahaan kuwa aan qabin calaamadaha cakiran marka la samenayo tijaabada cunto qaadashada waa in

raacaa nidaamka (**tijaabada cunto qaadashada eek u cad shaxda labaad** )

- A) hadii ilmuhu ku dhaco tijaabada u gudbi goobta bukaan jiifka.
- B) Hadii ilmuhu ku baaso tijaabada u gudbi talada labaad ee ilmuhu u baahan yahay.

❖ **Talaabada Shanaad :**

Waa in la go'aamiyaa in ilmaha lagu daaweeyo barnaamijka bukaan socodka (OTP) iyo in loo gudbiyo goobta bukaan jiifka( TFU/SC).

- Waa in la kala saaraa caruurta iyada oo lagu saleenaayo da' dooda, shuruudaha u yaala cabirka jirka, calaamadaha khatarta ah iyo nidaamka tijaabada cunto qaadashada iyada oo la raacaayo nidaamka shaxda hoos ku xusan.
- Dabadeed waa in go'aamiyaa in ilmuhu ka mid noqonayo barnaamijka bukaan socodka ( OTP) iyo in loo gudbinayo

goobta bukaan jiifka sida xarumaha caafimaadka, cusbitaalada si uu u helo adeega bukaan jiifka qaba nafaqo darada qaba ( TFU/SC) lana racaa shaxda soo socta.

- Waa in la gudbiyaa dhamaan caruurta u liidata nafaqodarada una dheer tahay xaalad caafimaad oo aad u daran, loona gudbiyaa cusbitaal ama xarun caafimaad oo leh barnaamij quudinta, dhamantoodna sii warqada gudbiska.
- Hadiise qofka ilmaha haaya uu diido in ilmaha la gudbiyo, waa in aad waqti siisaa si aad ugala hadli lahaay, hadiise uu mar labaad kuu diido, waa in lagu daaweeyaa barnaamijka halkaa ka jira ee bukaan socodka ( OTP) ado racaya nidaamka, kuna qor kaarka daaweynta qeybtiisa natiijada ( outcome) war bixinta sheegeysa in qof kaasi ku diiday in ilmahaas la gudbiyo.

## CUTUBKA 6<sup>AAD</sup>

### MAAREEYTA CARUURTA NAFAQADOODA LIIDATO

#### ❖ Talaabada kowaad:

Ilmaha hala diwaan galiyo kuna buuxi kaarka bukaan socodka qaba nafaqodarada

#### ❖ Talaabada labaad:

U sharax hooyada ama qofka wada ilmaha sida hoos ku xusan

- Ilmaha u miis cunto dhan todobaad iayada oo lagu saleenaayo ilmo kasta miisaankiisa, cuntadaas oo ah mid loo diyaariyay barnaamijka loo isticmaalo,
- Ku tali hooyada ama qofka wadda ilmaha qodobadaan soo socda oo ah baraarujin caafimaad.  
--cuntadan ilmaha la siinaayo waxaa loo diyaariyay caruurta qabta nafaqodarada

waxaana ku jirta daawo sidaas darted  
lalama isticmaali karo.

-- arinta ku saabsan Naaska waa in ilmaha la  
siiyaa naaska inta aan la siin cuntadan diyaarsan  
ka kor iyada oo ;agu egayo baahida ilamaha.

--cuntada sida gaarka ah loo diyaariyay waa in la  
siiyaa ilmaha inta aan la siin cunto kale, waa in  
maalintiiba 3—4 jeer lagu celceliyaa.

--markasta oo ilmuhu cuno cuntadan waa la  
siiyaa biyo nadiif ah oo ku filan

--- wa in hooyada ama qofka ilmaha quudinaya  
saabuun ku meerto inta uusan quudin ka hor.

--Nafaqada cuntada la ilaaliyaa lana daboolaa

---- inta badan ilmaha buka waxa u nugul  
yahay qabowga sidaas darteed waa in ilamaha la  
da'daa si loo ilaaliyo heerkulka jidhkiisa



**FG:**

- Waa in aad marka hooyada u dhameyso cashiradan aad weydiisaa su'aalo kala duwan si aad u ogaato in hooyadu fahantahy iyo in kale.
- Adiga oo isticmaalya shaxda ka waramaysa xadiga dawada ah ee la siinayo ilmaha waa in aad si jooqta ah u siisaa.

Daawo	Daaweyn
Fitamiin A (Vitamin A)	--Weydii hooyada hadii la siiyay lixdii bilood ee ugu danbeysay. -- hadii aan horey loo siin hal dose sii waqtiga la jiifinaayo
Kaniinka dhiig yarida( folic acid)	Hal dose hala siiyo waqtiga la jiifinaayo

CILIMIGA NAFAQADA

Qalajiye ( Amoxicillin)	Hala siiyo hal dose waqtiga la jiifinaayo iyada oo kormeeruhu dul joogo+7 maalmood oo kale oo uu guriga u qaato
Gooryaan dilista ( Deworming)	Hal dose hala siiyo todobaadka labaad ( booqashada labaad )
Duumo ( malaria)	Xadiga la siinaaya waxa uu ku xidhan tahay nidaamka daaweynta maleriyada ee qaranka
Jadeecada da'da 9 bilood iyo iyo kuwa kaweyn	Weydii hooyada il ilmaha la talaalay iyo in kale, hadii ay hooyadu tiraahdo lama talaalin, ilmaha talaal todobaadka afaraad( booqashada afaraad)
Kaniinka dhiig yarida ( iron)	Iron looma baahna waayo waxa ay ku jirtaa la diyaariyay

❖ **Talaabada sadexaad:**

Waa in hooyadda ama qofka wada ilamaha la balamiyaa todobaadkiiba hal mar, si loola socdo xaalda.

**FG:**

Waa in vitamin A la siiyo caruurta la seexiyo oo dhan marka laga reebo ilmaha leh bararka iyo caruurta iyagu qaatay vitamin A lixdii bilood ee la soo dhaafay.

## CUTUBKA 7<sup>AAD</sup>

### LA SOCODKA XAALADDA CARUURTA BUKAAN SOCODKA

Dhamaan caruurta ku taxan barnaamijka bukaansocodka qaba nafaqodarada waa in ay todobaadkii hal mar yimaadaan goobta caafimaadka ee barnaamijka ka socdo sidaas darteed shaqaalaha fidinta caafimaadka ee halkaa jooga waa in uu cayimaa maalin gaar ah oo xitaa caruurta barnaamijkaas ku taxan lagula socdo xaaladooda.

#### ❖ **Talaabada koowaad:**

Wagtiga lagu jiro booqashada, hooyada waydii in ay jirto ama ilamaha lagu arko

- Shuban, matag, qandho ama waxkasta oo dhib ah oo ku cusub ilmaha.
- In ilmuhu dhameeyay cuntadii diyaarsaneed ee loogu tala galay (RUTF)

❖ **Talaabada kabaad:**

Waydii in ay jirto ama ilmaha lagu arkay

- Hadii ay jirto xaalad xun oo lagu arkay ilamaha .
- Heerkulka jirka ilmaha ama neefsiga ilmaha
- Miisaanka ilmaha, wareega cabirka gacanta ilmaha iyo barar
- Kuna samey ilmaha tijaabada cunta qaadashada.

❖ **Talaabada sadexaad:**

Waa in aad qaadaa tilaabo ( ficil) adiga o ku saleenaya wixii aad aragtay markii aad ilamaha ku sameenaysay indha-indhayta iyo daba galida,

- **Balse gudbi hadii aad ku aragto mid ka mid ah xaladahaan**
  - ✓ Xaalada ilmaha oo ka sii dareysa
  - ✓ Ilmaha hadii aad ku arato cunto qadashao la'an ka dib markii aad ka tijaabisay

- ✓ Hadii ilmaha bararku ku nsii kor dhaayo
- ✓ Miisaanka ilmaha oo ka sii daraya ( laba booqasho oo isku xigta)
- **Hadiise aynan jirin wax loo gudbiyo ilmaha waa in aad sii wadaa la socoshadiisa todobaad laha ahayd ee adeega barnaamijka sida:**
  - ✓ In loo dhameys tiro dawadii loo qoondeeyay
  - ✓ Raashiinkii uu ku jiray lawska ( pulmpy nut)
  - ✓ In la siiyo balnkii todobaadka danbe
  - ✓ Iyo in wixii warbixina lagu qoro kaarka.

Hadiise ilmuhu ka maqan yahay guriga waqtiga booqashada waxaa u sheegtaa shaqaalaha mutadawacnimada u shaqeeya caafimaadka bulshada(VCHWs), in uu boqdo guriga warbixintan u keen shaqaalahaas fidinta caafimaadka jooga halkaas.

- **Waa in bukaanka la bixiyaa ama laga saaraa barnaamijka hadii uu buuxiyo shuruudaha soo socda.**
- A) Hadii ilmaha la soo seexinayay u bararsanaa, waa in hadii laga waayo wax barar ah mudo laba todobaad ah ama laba booqasho (14) waa la fasaxaya ilmahaas.
- B) Hadiise ilmuhu una lahyin wax barar ah markii la soo jiidnaayo waa in la saaraa ( discharge) marka u buuxiyo miisaankii laga rabay.
- C) Hadiise ilmuhu ku guuldareysto in uu buuxiyo shuruudaha lagu saari lahaa mudo ka badan laba bilood waa in loo gudbiyaa goobta barnaamijka ee nafaqodarada.
- D) Markasta oo aad ilmaha ku jira barnaamijkan fasaxaysid waa in aad eegtaa shuruudahan soo socda:
  - I. In hooyadu ilmaha wadatay la baray habka quudinta iyo daryeelka ilmaha.
  - II. In hooyadu heshay shahaadadii lagu sharfayay, u dhameystirka daawada lmaha.

III. In ilmaha la diwaan galiyay waqtiga bixitaankiisa iyo xaaladiisa in ilmaha la diwaan galiyay waqtiga bixitaan iyo xaaladiisa.



## CUTUBKA 8<sup>AAD</sup>

### Naasnuujinta

#### ❖ Cunto-qaadashada hooyada

Cunto gaar ah oo habaysan uma baahna naasnuujintu. Talooyinkani waa qaar faa'iido leh:

- Dooro cunto kala duwan oo caafimaad leh iyo macmacaan maalin kasta. Cuntada habboon ee aad cuntaa waxay caawin doontaa adiga iyo ilmahaaguba inaad wanaagsanaataan.
- Cun 4 ilaa 5 jeer maalin kasta cuntada laga sameeyo caanaha. Waxad ku darsan kartaa cuntada kaalishiyam dheeri ah oo aad dawo ahaan u cunto.
- Cab biyo amase sharaab markaad harraaddan tahay.
- Qaado fiitamiinka dhalhada horteeda sida uu dhakhtarku kugula taliyey.

- Iska ilaali ama yaree kafa’iinta amase macaaneeyaha artafiishalka ah inaad ku darsato cuntada. Kafa’iintu waxay ku jirtaa nacnaca qaarkii, kafeega iyo shaaha. Macaaneeyaha artafiishalka ahi waxay ku jiraan cabitaannada fudud qaarkood amase cuntooyinka la habeeyey qaarkii.
- Cunto kasta oo aad cunto waxay ku qaadataa 4 ilaa 6 saacadood si ay ugu darsanto caanaha naaska. Haddii reerkiina cid ka mid ahi leedahay ellerji amase ilmahaagu u muuqdo in aanu wanaagsanayn kadib markaad cunto gaar ah cunto, cuntadaas dib ha u cunin, oo markaas eeg in ilmahaagu wanaagsanaado. • Carruurta qaarkood waxay dhibsadaan marka hooyadu cunto cuntada ka timi caanaha xoolaha qaarkeed amase khudaarta sida “borokoli”, digirta basasha ama basbaaska. Haddii dhibaataadu sii jirto, kala hadal dhakhtarkaaga
- . • Iska ilaali cuntada loogu talo galay in baruurta la iskaga rido. Si aad u dhuubato, soco in badan oo lugee, iskana ilaali cuntooyinka ay ku badan tahay tamartu.

❖ **Bilowga**

Dambarka, oo ah caanaha ugu horeeya ee jidhkaagu sameeyo, aad buu ugu fiican yahay ilmahaaga. Dhawrka maalmood ee ku xiga, naasaha waxa aad dareemi doontaa barrar ama buuxsanaan, waxana aad yeelan doontaa caano intii hore ka badan. Caanaha aad samaysaa waxay ku xidhan yihiin sida uu ilmahaagu u jaqo naaska. Marka uu ilmuhu naaska badsado jiqidiisaba, jidhkaagu wuxu soo saaraa caana kasi badan intii hore. Kalkaalisooyinka caafimaad waxay kaa caawin doonaan adiga iyo ilmahaagaba inaad barataan naas nuujinta. Nafis oo sii naftaada waqti aad ku barato. Ilmahaagu waxa laga yaabaa inuu hurdo bato maalmaha hore. Maadaama ay caloosha ilmahaagu yartahay, wuxuu u baahnan doonaa in dhowr jeer maalintii la quudiyo. Waxad dareemi doontaa harraad markaad nuujinayso ilmaha iyo hurdo marka ilmuhu ku jaqayo iyo ilma-galeenka oo si debeansan u dareento ayaamaha hore ee naasnuujinta.

Ka ilaali ilmahaaga inaad masaasad wax ku siiso, ha ahaadaan caanaha naaskaaga amase kuwa la qooshay e, ilaa 3-4 toddobaad ee hore, ama inta ilmahaagu baranayo inuu naaska jaqo. Nuugista masaasaddu waa qaab kale oo afku u dhaqaaqo. Nuugista masaasaddu waxay wax u dhimi kartaa habka ilmahaagu naaska u jaqo. Sadex ilaa 4 toddobaad ka dib, waxad ku dayi kartaa inaad ilmahaaga ku siiso caanaha naaskaaga masaasad haddaad sidaa jeceshahay. Haddii ilmahaagu aanu naaska jaqi karin, waxad soo dhuri kartaa caanaha naaskaaga oo aad ku siin kartaa masaasadda amase aad ku kaydin kartaa caanahaas weel xidhan si aad hadhow u siiso.

### ❖ **Baaqyada cunto-doonista**

Ilmahaagu wuxuu ku tusi doonaa astaamo uu ku muujinayo in uu gaajoonayo, oo la yidhaahdo baaqyada cunto doonista. Baaqyadaas waxa ka mid ah:

- Gacmaha oo duubo
- Gacmaha oo uu afka gashado

- Dibnaha oo uu leefleefo
- Gacmaha iyo lugaha oo uu dhaqdhaqaaqiyo
- Inuu madaxa usoo dhoweeyo jidhkaaga
- Codad
- Oohin

Isku day inaad u bilowdo quudinta inta aanu/ aanay bilaabin inuu ooyo.

**❖ Sidee ilmahaygu u wadaa jaqista naaska?**

Eeg in ilmahaagu si fiican u haysto ibta naaska oo uu caanaha si fiican u cabbaayo.

Calaamadaha aad ku garan karto waxa ka mid ah:

- Dhaqdhaqaaq degdeg ah oo dhabanda/ daamanka ilmaha aad ka aragto in uu marka hore nuugayo naaska deedna liqaayo caanaha, oo markaa ka dib si deggan uu ilmuhu u qudhqudhinayo caanaha.

- Dhaqdhaqaaqa agagaarka dhegaha iyo dhafaorka iyadoo ilmuhu uu daanka hoose kor iyo hoos u dhaqdhaq aajinayo.
- Adoo arkaya, dhagaysanaya ama dareemaya sida ilmahaagu caanaha u leqayo.
- Adoo ka dareemaya in naaska caana ka socdaan.

### ❖ **Ilmahu caano ku filan ma helayaa?**

Haddii ilmahaagu caano ku filan helayo, naasahaagu markasta waxay noqdaan qaar caano ka buuxaan, oo jiqista ka dib noqda qaar debecsan, haddana dib u buuxsama. Ilmahaagu wuxu:

- Naaska jiqi doonaa 6 jeer ama in kabadan 24 kii saacadood •
  - Seexan doonaa inta u dhaxaysa laba jaqsiinood
- Saxaroon doonaa in kabadan laba jeer maalintii

- Miisaan ku kordho

Ilmo caafimaad qaba, oo dhammays ah oo caanihiisa qaadanayaa uma baahna in la siiyo biyo amase cunto kale oo diyaarsan oo dheeri ah. Ha siin ilmahaaga waxyaabo kale oo dheeraad ah haddii aan dhakhtarku kugula talin sidaas.

Kala hadal dhakhtarka ilmahaaga ama kalkaalisada caafimaad amase qof ku takhasusay quudinta caanaha haddii aanad hubin in ilmahaagu caano ku filan helaayo.

**❖ Immisa goor baa ilmahu quudan doonaa?**

Quudinta ilmaha waxa laga muddeeyaa bilowga quudin ilaa ta xigta. Marka hore isku day inaad ilmaha siiso naaska 2 dii ilaa 3 dii saacadoodba mar maalintii iyo galabtii, iyo ugu yaraan 4 tii saacadoodba mar habeenkii. Haddii ilmahaagu ku tuso baaq cunto-doon, jaqsii ilamahaaga. Waxaa laga yaabaa in ilmahaagu doono dhowr jeer oo jaqsiin ah oo aad isugu dhow. Dhammaadka toddobaadka kowaad, ilmahaaga

waxaad jaqsiin doontaa 8 ilaa 12 jeer 24 kii saacadood. Marka ilmahaaga iyo caanahaaguba koraan, way soo yaraataa inta jeer ee maalintii uu ku jaqayaa. Xattaa marka carruutu wakhti dheer seexan karto, marmar waxa hurdada ka qasa reyo, gaajo ama maalin howl badan. Filo in ilmahaagu kici doono habeenkii lagana yaabo inuu u baahanyahay in quud la siiyo. Carurtu waxay leedahay hamuun korta 6 da bilood ee u horraysa aadna wax bay u quudanayaan muddadaa. Quudashadaa badan awgeed jidhkaagu wuxuu samynayaaa caano intiii hore ka badan si uu u daboolo hamuuntaa koreysa. Hamuuntaasi waxay badanaa qaadataa 3 ilaa 5 maalmood.

### ❖ **Caafimaadka Caruurta iyo Caanaha Naaska**

- Caanaha naasku waa waxa ugu wanaagsan ee ilmaha lasiinkaro
- Ilmaha waa in aad siisid caanaha naaska kaliya ilaa uu gaadho afar (4) bilood; haka joogin



naaska ilaa uu cunugaagu gaadho ugu yaraan sanad jir.

- Cuntada adag ama calaaliska waxaad ugu bilowdaa marka cunugu gaadhdo afar ilaa lix bilood.
- Marka aad cunto cusub u bilaabayso ilmaha, mid kaliya sii dhowr cisho ilaa uu barto kabacdi mid cusub u bilow.
- Hakuseexin cunuga isaga oo jaqaya misaasada waayo waxay ka halaynaysaa ilkaha.
- Caruurta naaska jaqdaa wayka cuduryartahay kana caafimaad badantahay caruurta cabta caanaha kale.

## CUTUBKA 9<sup>AAD</sup>

### TALAALKA

Waa maxay Erayga **Immunization**?

- ❖ **Qeexis**:- waa midka ugu muhiimsan dhaqalahan horumarinta caafimadka carrurta iyo dhalintaba.

Waa maxay erayga **Immunity**?

- ❖ **Qeexis**: - waa awooda jirka uu ku garanayo, ku burburinayo, kagana takhalusayo jeermis ka taas oo u horsed doonta in uu la haado is ka cabin xagga cudurada. Jeermis ku waxa uu noqon karaa bacteria, virus, iyo protein.

#### Difaaca jirka (immunity)

**Nuucyadiisa**:-

- a) Difaaca jirka mid gaar u ah cudura gaar ah waxa loo yaqaana **specific immunity**.

b) Difaaca jirka mid la dagaalama wax walbo oo aan jirka ka tirsaneyn (antigen) waxa loo yaqaan **Non-specific Immunity**.

<b>Isbar-bardhiga Nuucyada Difaaca Jirka</b>		
<b>Nuuca</b>	<b>Non-Specific Immunity</b>	<b>Specific Immunity</b>
Waqtiga uu hawl galo	Waqti Hore	Waqti danbe
Gaar nimada uu u yahay cudurada	Caam	Khaas
Awooda	A wood yar	Awood badan
Tusaale	1. Skin 2. Tear	1. Antibody 2. WBC

### **Guulaha Talaalka**

1. 1979 aduunku waxa uu ku guuleystay dabar-goynta cudurka Smallpox

2. Waxa uu hir-galin yareynta cudurada badan oo aad dhib weyn ugu hayay addunka.

### **Nuucyada Difaaca Jirka ee gaar-ka ah iyo shaqadooda (Immunoglobulins)**

1. **Ig M**
2. **Ig A**
3. **Ig G**
4. **Ig E**
5. **Ig D**

**Acronym: - MAGED**

### **Nuuc yada difaaca jirka ayada oo loo fiirinaaya waqtiga:-**

1. **Primary Response** :- waa weerar koowaad ee lagu antigen, 3-10 maalin ugu horeysa. Waxaana hawshaa is ka leh Ig M.
2. **Secondary Response** :- waa weerar celis ka dib mar ki uu ku filnaan waysay dagaal ka koowad. Waxaana shaqadaa leh Ig G.

**Nuuc yada Immunity (difaaca Jirka): -**

**a) Passive Immunity:-**

- i. **Natural:-** waa mid dabiici ah oo aad ka hesho hooyadaa ayadoo kuu soo maraaya xudunta iyo caanaha naaska.
- ii. **Acquired:-** waa difaaca jirka aad heleysid marka laguugu duro **Immunoglobulis.**

**b) Active Immunity:**

- i. **Natural:** waa mid dabiici ah oo aad hesho marki ay kugu dhacaan infectionada, waxa ay noqon karaan ku wa waqti dheer jira sida measles ama jadeecada.
- ii. **Acquired:** waa mid aad hesho marka lagu duro **Vaccine.**

## Tallalka (Vaccine)

**Vaccine**:- waa wax aan ka tirsaneyn jirka markii lagu duro kicinaya difaaca jirka si uu isaga caawiyo infectionada.



**Vaccines are prepared from:**

1. Live attenuated organisms:- noole la khafiifiyay.e.g. **BCG, Salk, Measles,**
2. Killed organisms: noole la dilay. **Sabbin, DPT.**
3. Toxoids: Sun khafiif ah. e.g. **Tetanus Toxoid.**
4. Genetically engineered. Ayada oo lab-ka lagu diyaariyay. E.g **Hepatitis B,**

## EPI

**Expanded Programme of Immunization**:- waa ololo looga hortago cuduro todoba ah kaasoo oo ay dar dar galineyso heyada caafimaad ka adduunka (WHO).

### **Routine vaccination schedule**

1. At birth.
2. 6 weeks.
3. 10 weeks.
4. 14 weeks.
5. 9 months.

<b>Routine vaccination schedule</b>		
<b>NO.</b>	<b>Watiyada tallalada la qaato</b>	<b>Inta tallal ee la qaadanaayo.</b>
1.	At birth.	BCG
	6 weeks.	DPT, OPV,
	10 weeks.	DPT, OPV,
	14 weeks.	DPT, OPV, Hepatitis, H. Infleuza
	9 months	MMR.

**Give these 4 Key Messages  
to the Care-giver**



1. What vaccine was given and what disease it prevents (e.g. BCG for preventing TB)
2. When to come for the next visit.
3. What are the minor side-effects and how to deal with them.
4. To keep the vaccination card safe and to bring it along for the next visit

**Tallaalka ma ahan 100% mid wax tar leh oo k**

**Dhibaataada uu leeyahay tallalka:-**

1. Qandho
2. Meesha laga duray oo cuncunta
3. Cunugi oo neefta dhib ta

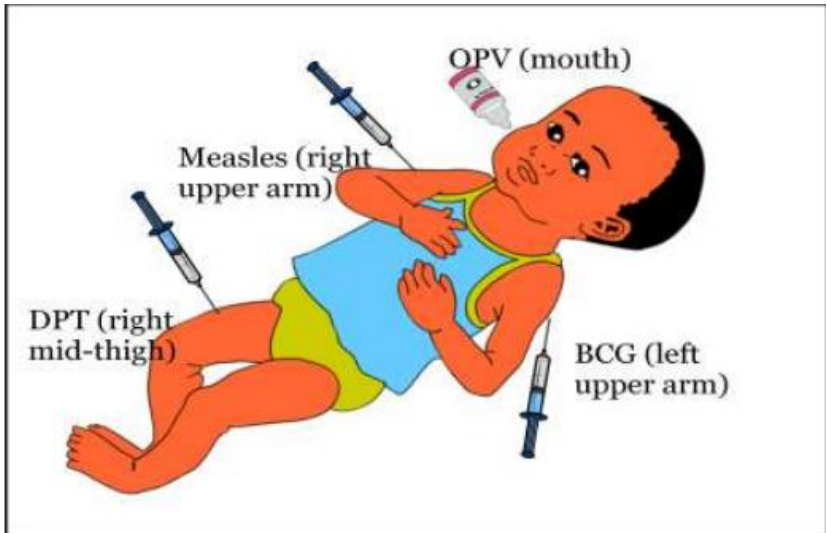


#### 4. Qallal

#### **Waxa keena ciladaha ka yimaada tallalka:-**

1. Vaccine reaction.
2. Program error
3. Co-incident
4. Injection reaction
5. Unknown

# **Nuucyada Tallalada & waxa loo isticmaalo**



## **BCG (Bacillus Calmette Guerin)**

### **Disease: Tuberculosis**

**Age:** Give at birth or as early as possible in the first 12 months. do NOT give BCG if child is over one year old.

**Route:-** Intra-dermal Injection

**Site:-** Left Upper Arm



**Side Effect:-** small scar

**Dose:** 0.1 ml (0.05ml for less than 1 month);

**Diluent:** 1 ml sodium chloride; **Vial:** 20 doses



**Dose:** 0.1 ml (0.05ml for less than 1 month);  
**Diluent:** 1 ml sodium chloride; **Vial:** 20 doses

## **OPV (Oral Polio Vaccine)**

**Disease:** Polio

**Age:** Birth till 15 days, 1 ½ mths (6 wks), 2 ½ mths (10 wks), 3 ½ mths (14 wks).

**Route:-** Oral administration.

**Site:-** Mouth



**Side Effect:-** small scar

**Dose:** 2 drops; **Vial:** 20 doses

**Two types of oral  
polio-Vaccine**

- 1. Sabin - Killed  
Vaccine, IM.**
- 2. Salk - Life  
Attenuated,**



**DPT (Diphtheria, pertusis, Tetanus)**

- ❖ **Diphtheria:** Sore throat with gray patch(es) in throat
- ❖ **Pertussis (whooping cough):** repeated & violent coughing, with: cough persisting

for 2+ weeks, fits of coughing, cough followed by vomiting, typical whoop in older infants.

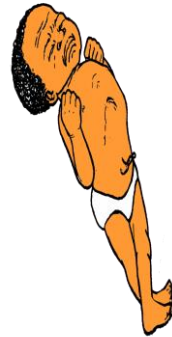
- ❖ **Tetanus**: suck & cry in first 2 days of life, Illness
- ❖ between 3- 28 days of life, Inability to suck foll. by stiffness of neck & body &/or muscle jerking



**Diphtheria**



**Pertussis**



**Tetanus**

**Age:** - 1 ½ mths (6 wks), 2 ½ mths (10 wks), 3 ½ mths (14 wks)

**Route:-** Intramuscular Injection

**Site:-** Outer Mid-thigh (Antero-lateral side of mid-thigh)

**Dose:** 0.5 ml; Vial: 10 doses

**Side effects:-** tenderness, pain, redness, swelling at Injection site

**Give Cold cloth at injection site. Give Paracetamol**



## Measles

**Disease:** - Measles fever with rash with cough or running nose or red eyes.

**Age:** - 9 months completed - 12 months (39 – 52 weeks). *If a child does not receive Measles before the 12th month, give a dose as soon as possible before 5 years of age.*



**Route:- Subcutaneous Injection**

**Site:- Right Upper Arm**

**Dose:** 0.5ml; **Diluent:** 2.5 ml double distilled water;

**Vial:** 10 doses

**Side effect:-** slight skin rash



This is a sign that the vaccine has been effective.  
Do not treat.

Give with Vitamin A supplementation.

## Tetanus

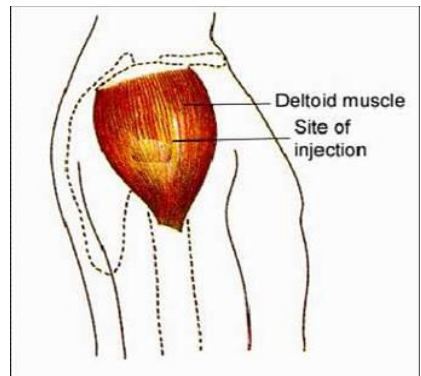
**Disease:-** Illness between 3- 28 days of life,  
Inability to suck foll. by stiffness of neck &  
body &/or muscle jerking.

## **Tetanus Toxoid**

**Early in pregnancy and 4 weeks later For  
women of childbearing**

**Age (15-49 years)-**

- ⊕ **TT1**
- ⊕ **TT2- after four  
weeks of TT1**
- ⊕ **TT3- after six  
months of TT2**
- ⊕ **TT4 after one  
year of TT3**
- ⊕ **TT5 -after one year of TT 4**





**Stretch skin flat between finger and thumb on either side of injection site**

**Site:- Deltoid Muscle**

## CILIMIGA NAFAQADA

### Immunization Schedule (NIS) for Infants, Children and Pregnant Women

Vaccine	Disease(s) Prevented	When to give	Dose	Route	Site
For Women of Child Bearing Age (15-49 years) and Pregnant Women					
TT-1	Tetanus	when childbearing age is reached or earliest in pregnancy	0.5 ml	Intra-muscular	Upper Arm
TT-2*		After 4 weeks of TT-1* (expected protection: 1-3 years)	0.5 ml	Intra-muscular	Upper Arm
TT-3		After 6 months of TT-2 (expected protection: 5 years)	0.5 ml	Intra-muscular	Upper Arm
TT-4		After 1 year of TT-3 (expected protection: 10 years)	0.5 ml	Intra-muscular	Upper Arm
TT-5		After 1 year of TT-4 (expected protection: all childbearing years)	0.5 ml	Intra-muscular	Upper Arm
For Infants					
BCG	Childhood Tuberculosis	At birth or as early as possible till 1 year of age	0.05ml until 1 month age (0.1ml afterwards)	Intra-dermal	Left Upper Arm
OPV-0	Poliomyelitis	At birth or earliest within first 15 days	2 drops	Oral	Oral
OPV 1, 2 and 3		At 6 weeks, 10 weeks and 14 weeks	2 drops	Oral	Oral
DPT 1, 2 and 3	Diphtheria, Pertussis, Tetanus	At 6 weeks, 10 weeks and 14 weeks	0.5 ml	Intra-muscular	Antero-lateral side of right mid thigh
Measles (9-11 months)	Measles	9 completed months-12 months	0.5 ml	Sub-cutaneous	Right upper Arm
Measles (12-59 months)		12-59 months	0.5 ml	Sub-cutaneous	Right upper Arm

\*Give before 36 weeks of pregnancy. However, give even if 36 weeks have passed. Give TT to a woman in labour, if she has not previously received TT.

# **Cold Chain (Qalabka lagu keediyo talaalka)**

**keydiyo Tallalka)**

**Cold Chain:** waa qaab lagu keydiyo & laguna tallalada ayada oo la siinayo tallal walba heerkulka uu doonayo laga bilaabo barti tallalka



lagu sameeyay ilaa meeshi lagu isticmaali lahaa.

Wax yaabaha wax yeeleeya tallalka

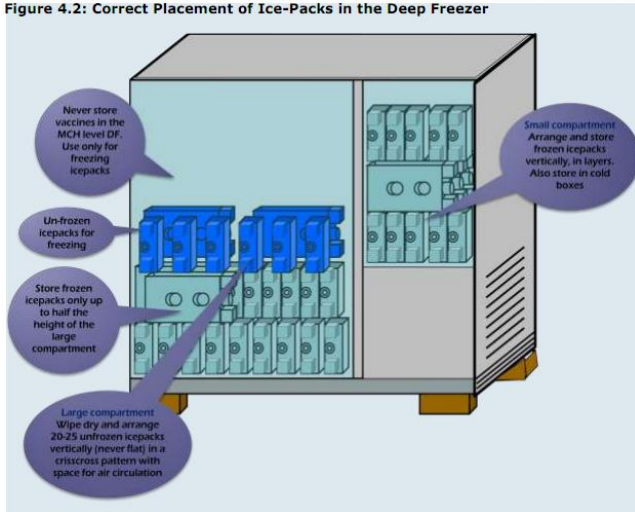
1. Kuleelka
2. Qabowga xad ka baxa ah
3. Ileyska

**Qalabka lagu keydiyo Tallalka : -**

**Deep freezer:-** waa qalab weyn oo lagu keydiyo tallalka heer kulkisuna uu u dhaxeeyo

**-15oC to -25 oC.**

Figure 4.2: Correct Placement of Ice-Packs in the Deep Freezer



**Ice barges:-** waa caag ay ku juraan biyo la barafeeyay oo loo isticmaalo baraf ahaan si ay wax u qaboo jiyaan.



**Cold boxes:-** waa weel lagu qaado tallalka kaaso ay garabka ku wataan badanaa dadka tallaalada qeybiya.





**Expended Program Of Immunization**  
**EPI program**