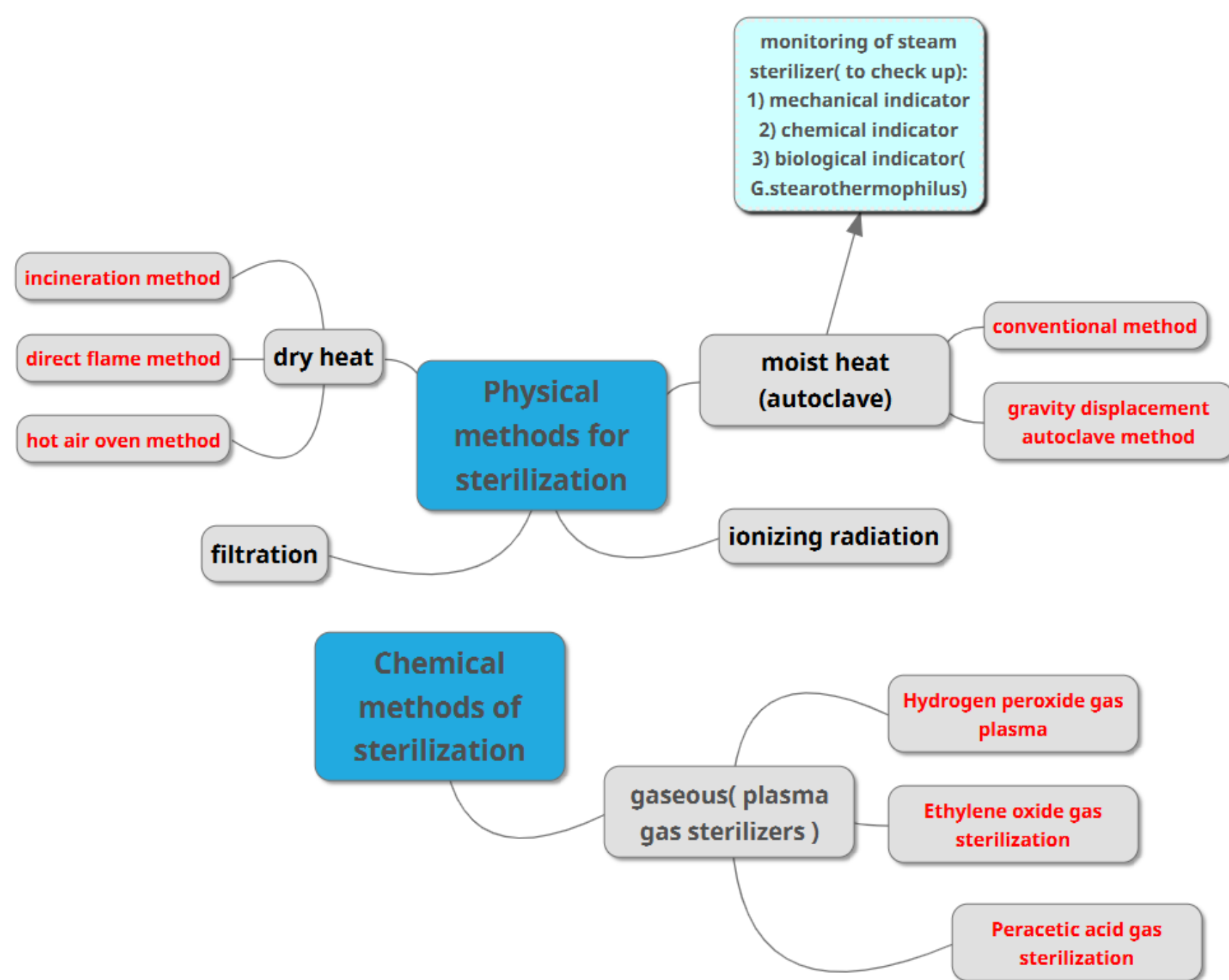


Micro Lec 7 summary

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وَتَوَكَّلْ عَلَى الْحَيِّ الَّذِي لَا يَمُوتُ وَسَبِّحْ بِحَمْدِهِ
وَكَفَىٰ بِهِ بِذُنُوبِ عِبَادِهِ خَبِيرًا



Notes regarding the lecture :

- *glutaraldehyde 2% for 20 min --> **high level disinfectant***
- *glutaraldehyde 2% for 10 hrs --> **sterilization***
- *plasma: ionized gas*
- *peracetic acid : acetic acid + hydrogen peroxide*

Physical method	Moist heat above 100	Dry heat	Radiation	Filtration
Simplified explanation :	High temp → pressure → steam , leads to: denaturation+ coagulation	1) Burning (incineration) or 2) Direct red flame or 3) Hot air (will talk about this)	Cobalt 60 → gamma rays → DNA damage	Remove microorganisms from fluid through filter membrane
Conditions	Time : 20min Temp:121 Pressure :2	temp:160 – 2hr or temp :170-1 hr	-	The membrane of the pores is made of cellulose ,nitrate ,polyester
Uses:	Surgical instruments /dressing Gauze Cotton Bed linen (اختصار اول حرف) (SCBG)	surgical instruments (better that autoclave) glass tools powders oils (SOPG)	surgical sutures Catheters(قسطرة) Gloves (SCG)	Operation rooms Drug filling cubicles (OD)
Advantages	High penetration Latent heat Non-toxic Rapid	Not expensive Not corrosive Non-toxic	-	-
disadvantages	Not suitable for all objects+ produce rust	Slow heat penetration time consuming not suitable for heat-sensitive objects	-	-

Chemical method	Hydrogen peroxide gas plasma	Ethylene oxide gas sterilization	Peracetic acid gas sterilization
Mechanism :	Insert the gas under pressure → into the chamber → expose to microwave → gas evaporating → free radical → kill of all organism	Same	Same + it causes : denaturation oxidation disrupt cell wall (it is the best sterilant)
Condition :	-	Temp: 55 time: 3-6 hr then: exposed to air(aerated) for 8-12 hr	It exists in liquid or gas form
Uses	Heat sensitive devices plastic laparoscopes (مناظير البطن) arthroscopes (مناظير المفصل)	It's a highly lethal alkylating agent → kills all organism (even spores)	-
Advantages	Non-toxic suitable for heat-sensitive objects	-	-
Disadvantages	Total time : 50min , long lasting	-	-