



Improving Life on Nutrition Support



Using IV Infusions for Fluids and Nutrition

HISTORY

Sir Christopher Wren 1632-1723

- ▶ Ale
- ▶ Beer
- ▶ Opium



- ▶ Infused through a pig bladder into the vein using a pen quill

HISTORY

WWII



Men died because their bodies lacked sufficient nutrient stores to sustain life during traumatic injury

HISTORY

- 1960-1964

Residents at U Penn

Successfully feed beagle
pups intravenously through
Central Venous Access and
TPN is born



BIOMEDICAL HISTORY: WHERE WE'VE BEEN



BIOMEDICAL INNOVATION: WHERE WE ARE

- Pump Options

- CADD
- Gemstar
- Curlin
- Bodyguard 323



- Tubing/Extension Options

- Pump Specific Tubing, Filters
- Y sites, PICC Extensions "Curly Tubing"



Spectrum of Nutrition Support

- Oral Nutrition
- Enteral Nutrition
- IV Hydration
- Home Parenteral Nutrition



WITH PROGRESS...COMES THE CHALLENGE



Challenges of Home IV Hydration

- Reimbursement
- IV Access
- Nursing care and education
- Complications of therapy

What about Hydration Therapy??



"C'mon, c'mon—it's either one or the other."

Types of IV Lines and Complications

- Peripheral Lines
 - * Hand or arm placement
 - * Short term (3-5 days)
 - * Limited
 - * Skilled Nurse with frequent visit to Insert or maintain



Types of IV Lines and Complications

PICC Lines

- * Usually in Upper Arm
- * Placed in IR/Hospital with X Ray to verify placement
- * Can not get wet/ go swimming
- * Risk of infection/complications



Types of IV Lines and Complications

- Port A Caths
 - * Usually placed in upper chest
 - * Surgery for placement/removal
 - * Port Needle change every week
but can be taken out to swim/bath



Types of IV Lines and Complications

- Tunneled Catheter:
 - * Usually in Upper Chest
 - * Surgery to place/remove
 - * Limited ability to bath/swim
 - * Complications, Risk of Infection



Unique to Mito.....

Possible:

Skin Sensitivities → Skin breakdown → Infection

Altered Immune Response → Risk of Infection

Clotting Issues → Line Clogging → Loss of use of
line → Risk of infection

Infection → Hospitalization → Worsening Symptoms/
other system complications

Catheter Occlusion Treatment

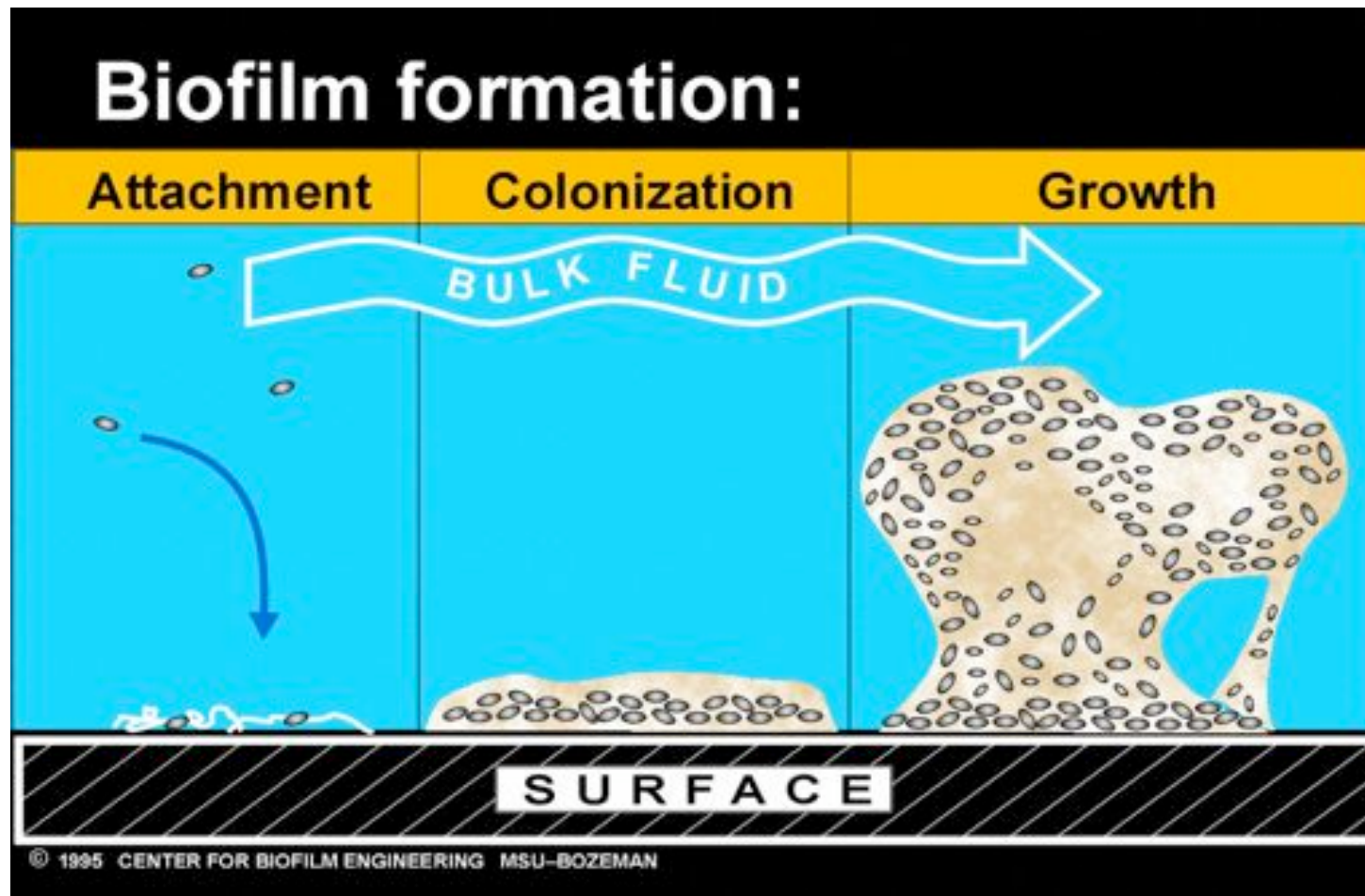
>60% of all clogged
Central Lines is due to
Thrombotic Occlusions
or 'Blood clot'

CathFlo Activase® is used
to clear the clog

Catheter Occlusion Treatment

- **For Lipid Occlusions:**
3.0 ml of 70% Ethanol
- **For Mineral Occlusions:**
3.0 ml of 0.1N HCL

BIOFILM: WHAT IS IT??



TREATMENT OF CRBSI'S

- **IV antibiotics: course of treatment and drugs**
- **Systemic Antibiotics**
- **Antibiotic Locks**
- **Sometimes CVL Removal**

PREVENTION OF CRBSI's

- **Ethanol Locks/What's the Buzz**
 - 25 - 98% solution of Ethanol instilled into catheter and withdrawn after 2 to 12 hours
 - Contraindicated use with cisapride, diabinase
- **Antibiotic Impregnated Catheters**
 - Rifampin and Minocycline
 - Cuffs
- **Chlorhexidine Impregnated Patch**
 - Example: Biopatch
 - Used at site of catheter insertion



Keep Me Safe!!

KEEP ME SAFE

Scrupulous hand washing between patients and before procedures.

Assess and organize operations separating clean procedures from things like opening packages. Once you apply your gloves don't touch packages or other dirty items, think first.

Fraction to the hub! Always scrub access points with alcohol or tincture of iodine prior to injecting medications, flushing solutions or connections.

Establish and maintain sterile to sterile fluid pathway. Only touch sterile pieces to sterile pieces.

KEEP ME FREE OF INFECTION

I have a lot of living to do!

Patients have been taught these basic principles and deserve this level of care.

Endorsed by:



INNOVATIONS IN LINE CARE

- BioPatch®



Alcohol Swab Caps™



CUROS CAPS™

