Nuchal Cord:

Occurs when the UC wraps around the fetal neck.

- **TYPE A:** The Umbilical Cord is wrapped around the neck 360 degrees.
- **TYPE B:** Potential to become a True Knot

Incidences of NC among fetuses should be sent for weekly NST testing and Doppler Flow Rates. Heart rate decelerations, decreased fetal movements, hypoxemia, and fetal demise are complications that can detrimentally affect fetal well-being.

It is imperative for the expectant mother to have the basic understanding of antenatal care, the ability to ask pertinent questions, and the right to receive any and all information regarding the care of herself and her unborn. Establishing your goals, wants, and needs is key in developing your birthing plan from conception to delivery. These will only aide you and your obstetrician in eliminating poor prognosis and decreasing term stillbirth.

Color Doppler allows for detection of NC and should not be taken lightly!

Questions To Ask:

- Where does the Umbilical Cord insert?
- What is the position of the Umbilical Cord?
- Vessels within the Umbilical Cord: 1, 2, or 3?
- What is the diameter?
- What is the coil index: hypo or hypercoiled?

In Loving Memory of

Samantha Rielle Barnes
08/12/2010

PYRAMID OF CHANGE

The Fetal Medicine Foundation

PREGNANCY INSTITUTE

INNERMOST SECRETS

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Umbilical Cord Awareness

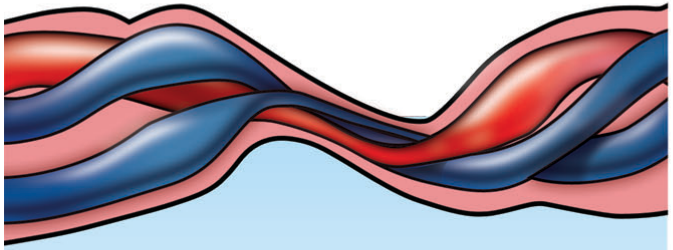
When Knowledge Saves Lives

Anatomy of the UC:

The Umbilical Cord, UC, is the fetal lifeline between the placenta, mother, and fetus. The integrity of the UC is essential for proper provision of oxygen and nutrients to the fetus in order to sustain life within the womb.

The UC forms within the first 5 weeks of gestation. It is visualized through ultrasound starting at 8wks and lasting until term.

The UC consists of one large vein, spiraled with two smaller arteries encased in the amnion and a connective tissue known as Wharton's jelly.



Normal Dimensions:

DIAMETER: 1-2cm

Can be imaged and measured through the use of high frequency ultrasound.

LENGTH: 40-60cm

Theoretically determined by the amount of amniotic fluid. Standard Amniotic Fluid Index, or AFI, is between 10-20cm using the 4-quadrant approach.

Short Cord Dangers:

Less than 35cm

When detected, the following should be addressed immediately by your physician:

- Oligohydramnios
- Other anomalies
- Compression of the Umbilical Cord
- Fetal distress
- Failure of fetal descent

Long Cord Dangers:

Longer than 80cm

When detected, the following should be addressed immediately by your physician:

- Polyhydramnios
- Nuchal Cord
- True Knots
- Umbilical Cord Prolapse
- Compression
- Torsion

False Knots:

Due to the blood vessels within the UC developing longer than the Umbilical Cord itself.

True Knots:

A true knot is formed by the looping of the Umbilical Cord over the fetal head or shoulders. This can be a common finding among fetuses presented with polyhydramnios, increased levels of amniotic fluid, monoamniotic twins, and IUGR, Intrauterine Growth Restriction.

Pulsed Wave Doppler on ultrasound will show blood flow within the UC to rule out cord compression.

UC Masses:

Rare, but can be detected through sonography!

- Hemangiomas
- Hematomas
- Thrombosis
- Omphalomesenteric Cyst
- Gastroschisis
- Omphalocele/Exompahlos
- Herniation
- Aneurysm