



**HAL**  
open science

## Use of oxytocin after spontaneous onset of labor in France

Corinne Dupont, Didier Riethmuller, Catherine Deneux-Tharaux, Rémi Beranger, Anne A Chantry, Laurent Gaucher, Camille Le Ray, Chloé Barasinski, Françoise Vendittelli, Bénédicte Coulm, et al.

► **To cite this version:**

Corinne Dupont, Didier Riethmuller, Catherine Deneux-Tharaux, Rémi Beranger, Anne A Chantry, et al.. Use of oxytocin after spontaneous onset of labor in France. 31st International Confederation of Midwives (ICM) trienal congress, Jun 2017, Toronto, France. hal-01564458

**HAL Id: hal-01564458**

**<https://univ-rennes.hal.science/hal-01564458v1>**

Submitted on 18 Jul 2017

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Distributed under a Creative Commons Attribution - NonCommercial 4.0 International License

Corinne Dupont<sup>6, 1, 2</sup>, Didier Riethmuller<sup>11</sup>, Catherine Deneux-Tharoux<sup>5</sup>, Rémi Beranger<sup>4</sup>, Anne A. Chantry<sup>5, 13</sup>, Laurent Gaucher<sup>1, 2</sup>, Camille Le Ray<sup>8</sup>, Chloé Barasinski<sup>9</sup>, Françoise Vendittelli<sup>9</sup>, Bénédicte Coulm<sup>5</sup>, Véronique Tessier<sup>3</sup>, Anne Rousseau<sup>12</sup>, Antoine Burguet<sup>10</sup>, Catherine Fischer<sup>8</sup>, Camille Guillou<sup>14</sup>, Fabienne Leroy<sup>15</sup>, Coralie Chiesa-Dubruille<sup>5</sup>, Emmanelle Phan<sup>16</sup>, Anne Evrard<sup>16</sup>, Marion Carayol<sup>7</sup>

## Introduction

- France had no clinical guideline for oxytocin usage during spontaneous labor
- **58% of French women** in spontaneous labor received oxytocin (2010).
- Oxytocin is probably overused due to obsolete definition of normal labor and misuse
- Oxytocin usage might have serious consequence for mothers and newborns

## Objectives

- To define normal and abnormal labor
- To specify the indications, dosage, procedures and effects of oxytocin administration
- To describe the adverse maternal and perinatal effects associated with it

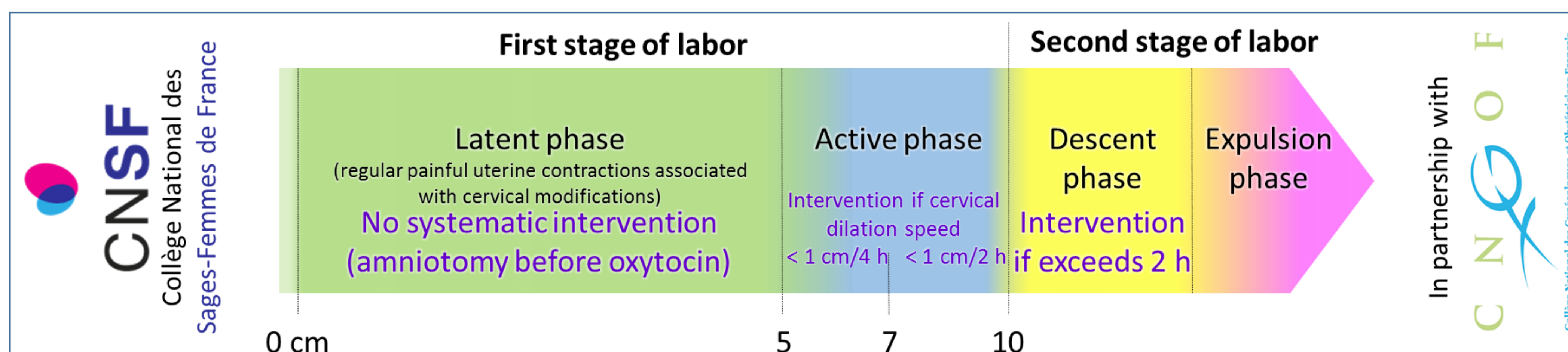
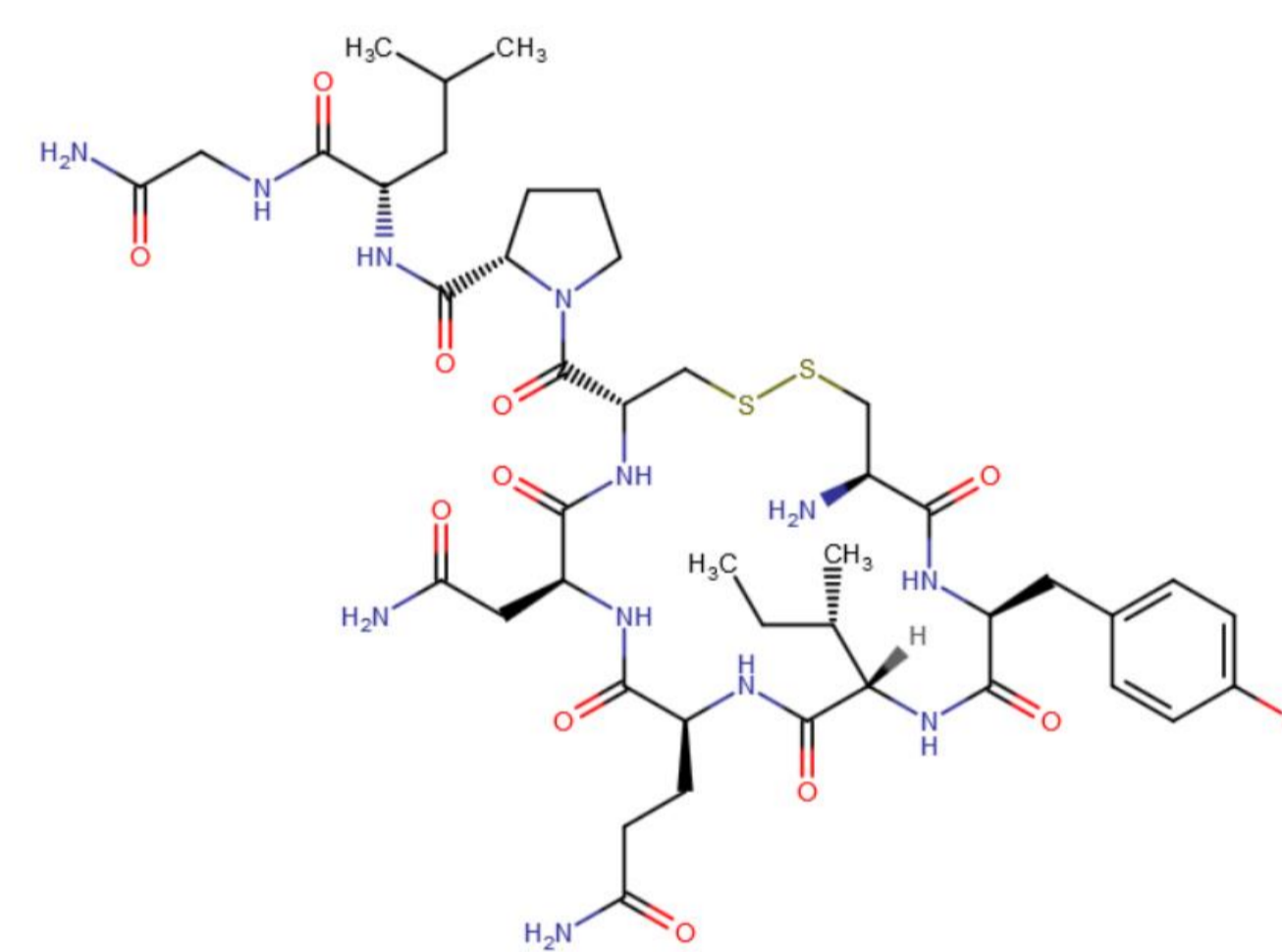
## 1. Normal and abnormal labor

### 1<sup>st</sup> stage of labor (one latent and one active phases)

- No labor dystocia during the latent phase
- Active phase start at **5-6cm** of dilation
- Dilation speed should be considered abnormal if
  - slower than 1 cm/ 4 h before 7cm
  - slower than 1 cm / 2h after 7cm

### 2<sup>nd</sup> stage of labor (one descent and one expulsion phases)

- The maximum duration of the descent phase of the second stage of labor cannot be determined from the literature
- But the risk-benefit balance becomes less favorable after 3 hours



Reference: Dupont C et al. Oxytocin administration during spontaneous labor: Guidelines for clinical practice. Guidelines short text. J Gynecol Obstet Hum Reprod. 2017 May 2 (online).

## 2. Oxytocin administration

- Oxytocin should be administered **at ruptured membrane** in case of labor dystocia or in case of 2<sup>nd</sup> stage prolonged beyond 2 hours
- Oxytocin should be administered at the minimum effective dose
- Uterine response and fetal heart rate must be taken into account
- Amniotomy should be performed 1h before oxytocin administration
- No routine amniotomy or oxytocin **before 5cm** of dilation
- Epidural is **not a reason** for routine oxytocin administration
- Oxytocin administration should be considered as indicator for monitoring **quality of care** in delivery room

## 3. Procedure for administration

- Intravenous, using dose flow-rate control equipment
- Oxytocin should be administered at an **initial dose of 2mU/min**
- The oxytocin dose should be **increase by 2mU/min**, waiting at least **30min** between each increase, until cervical modification or 5 effective uterine contractions / 10min
- Dose should not exceed 20mU/min

## 4. Maternal and fetal adverse effects

- Oxytocin administration is associated with increased risk of uterine hyperactivity, post-partum hemorrhage, rupture of unscarred uterus, and neonatal acidosis
- We observed no evidence of causal relation with pain, women dissatisfaction with their birth experience, neonatal morbi-mortality (industrialized countries), hyponatremia, neonatal jaundice, or autism spectrum disorder.
- Oxytocin perfusion and the condition of its use should be analyzed during morbidity and mortality conferences

Logo	
5 IU oxytocin in 50 mL glucose 5%	
Flow (mU/min)	Speed (mL/h)
2	1.2
4	2.4
6	3.6
8	4.8
10	6.0
12	7.2
14	8.4
16	9.6
18	10.8
20	12.0

Oxytocin administration during spontaneous labor

**Clinical Practice Guidelines 2016**

Minimum 30 min between each level  
Do not exceed 20 mU/min